

MID-MONTH

JUNE 1954

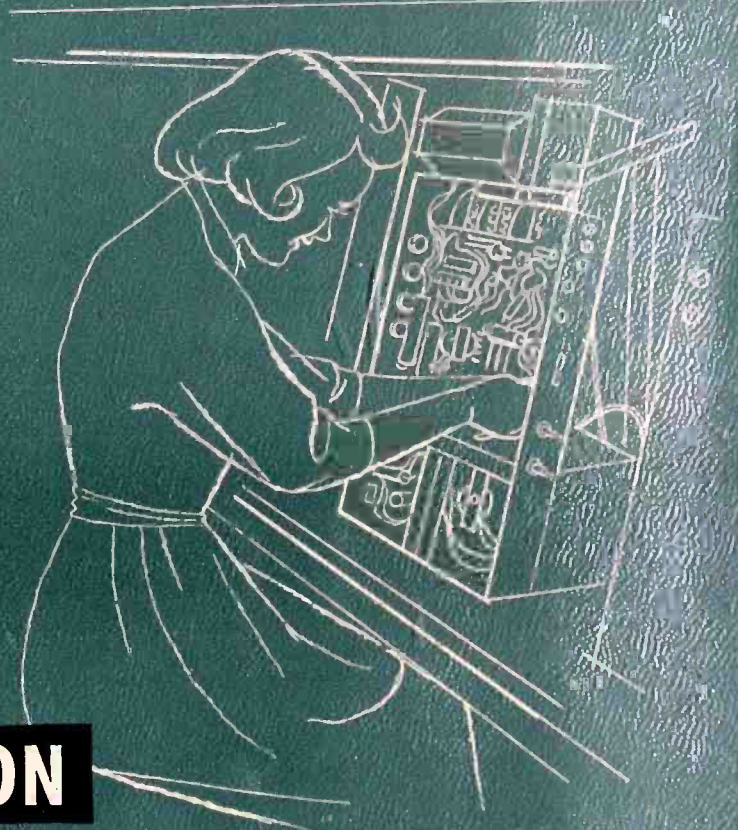
PRICE 3 DOLLARS

electronics

BUYERS' GUIDE ISSUE

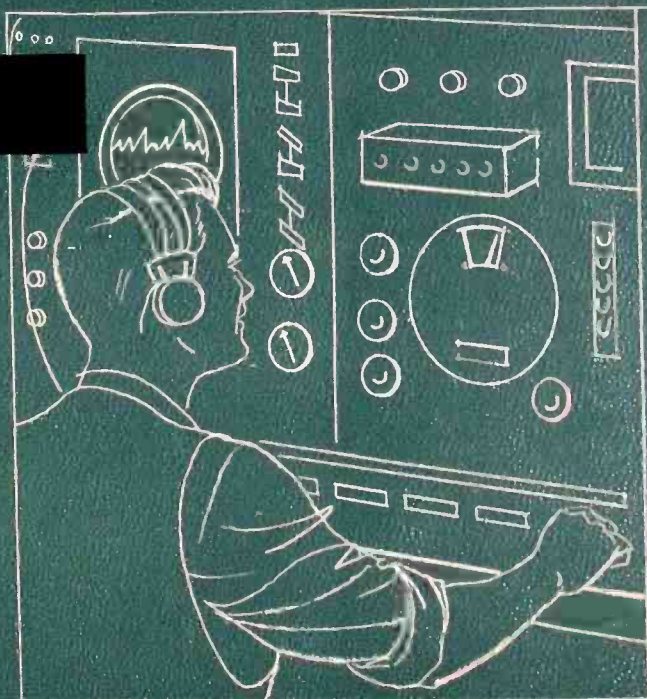


DESIGN



PRODUCTION

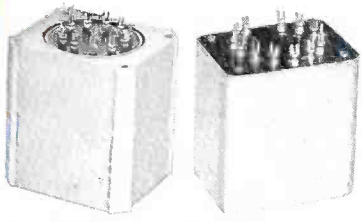
USE



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HIGHEST FIDELITY



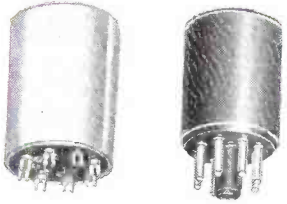
Linear Standard Hipermalloy



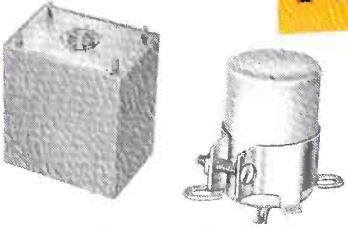
TRANSFORMERS REACTORS · FILTERS

FROM STOCK...

COMPACT

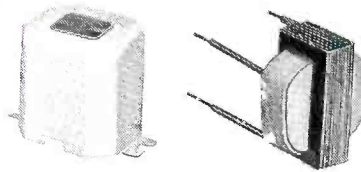


Ouncer Plug-In



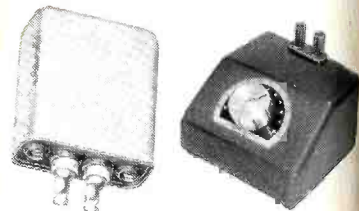
Magnetic Amplifiers Multi-Shielded Inputs

AMATEUR MINIATURE

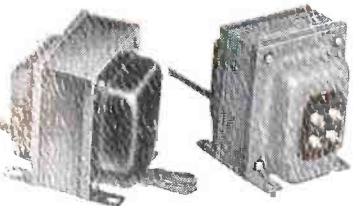


Special Series Sub-Ouncer

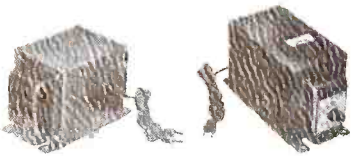
HI-Q TOROIDS



Inductors Decades

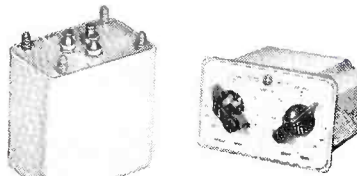


Replacement Signaling and Control



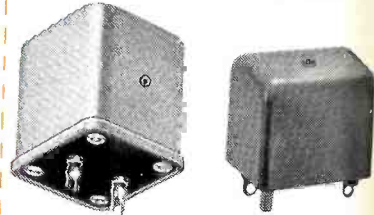
Stepdown Line Adjustors

CONTROLLED RESPONSE



Filters Equalizers

VARIABLE INDUCTORS



Non-Hermetic Hermetic

RUGGED... INDUSTRIAL

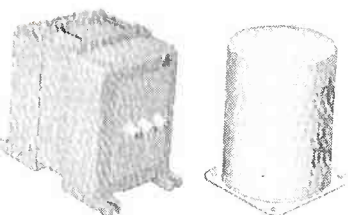
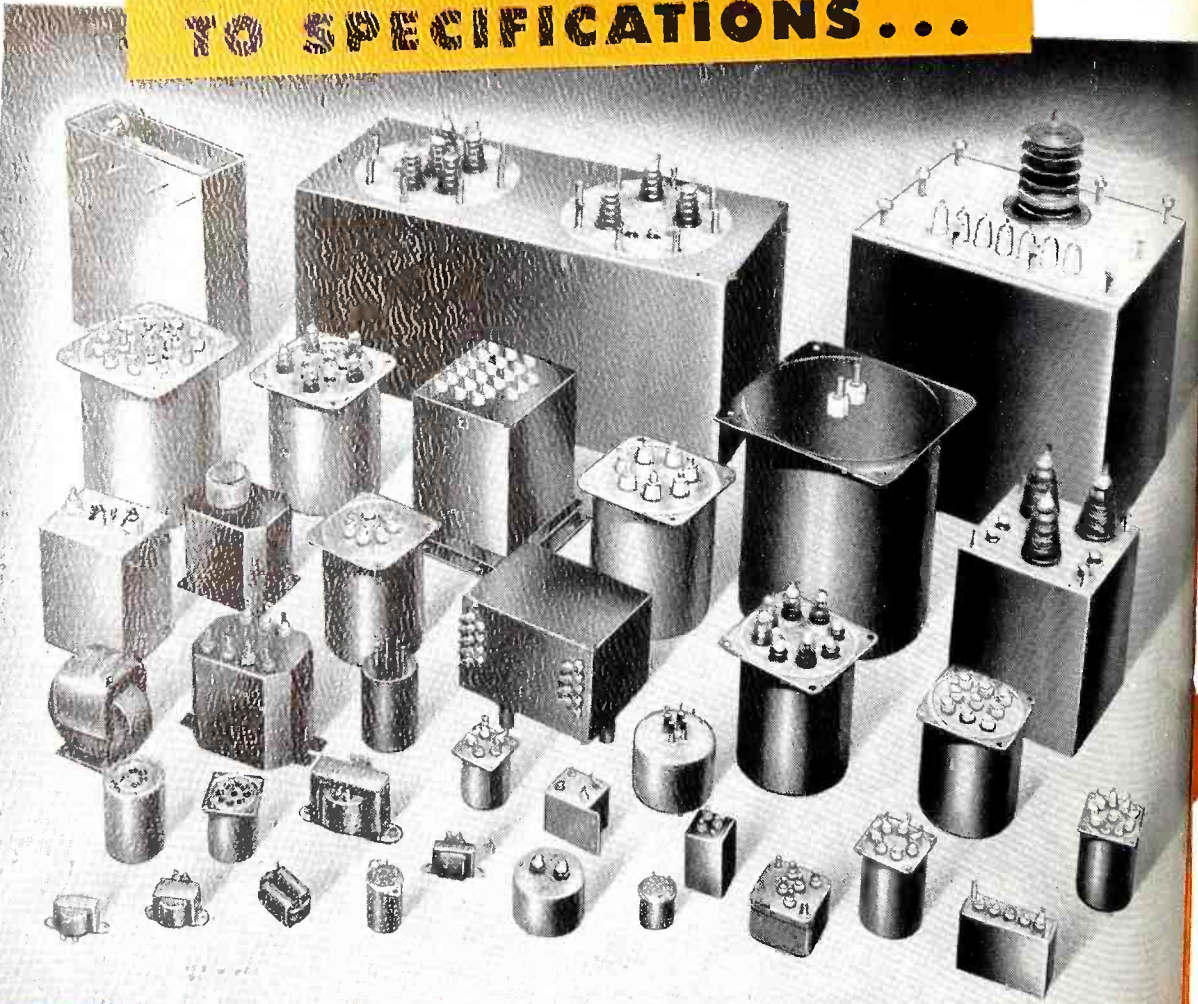
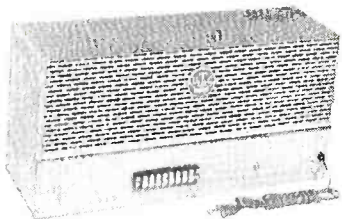


Plate Audio

TO SPECIFICATIONS...

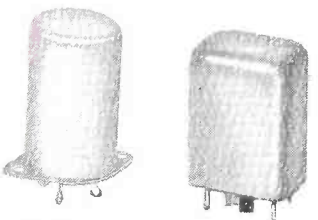


HIGHEST FIDELITY



Amplifier Kit

HERMETIC... MIL-T-27



Audios Pulse Units

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EXPORT DIVISION: 13 EAST 40TH STREET, NEW YORK 16, N. Y. • CABLES: "ARLAB"

electronics BUYERS' GUIDE

JUNE MID-MONTH • 1954

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GENERAL ELECTRIC

**ELECTRONIC COMPONENTS, EQUIPMENT AND ALLIED PRODUCTS
FOR ALL COMMUNICATION AND INDUSTRIAL APPLICATIONS**

General Electric has been building high-quality electronic components and equipments for many years. Both are available not only for communication use and radar, but also for industrial electronic applications such as high-frequency heating, controls, etc.

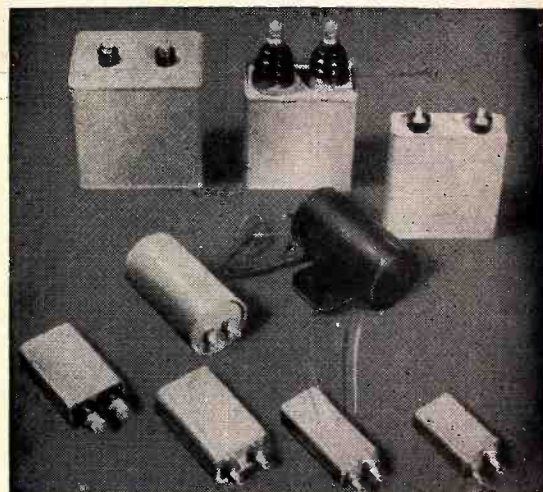
Each component line manufactured by General Electric is backed up by our capable design engineers, finest manufacturing facilities, and renowned development and research laboratories. Components and equipments listed below are merely representative of the complete line. For further information, please get in touch with the nearest General Electric Sales Office.

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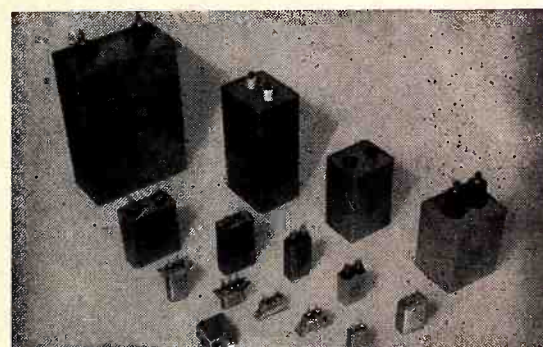
CAPACITORS



STANDARD COMMERCIAL TYPES Fixed Paper-dielectric Capacitors

A-c/d-c dual-rated Pyranol* capacitors for motors, controls, electronic equipments, and other applications will reduce inventories, simplify design problems, and increase standardization. Capacitors in the voltage ranges 236 through 660 volts, a-c, and 400 through 1500 volts, d-c, are now dual-rated and can be used for either a-c or d-c applications. Other a-c and d-c ratings available: 0.01 to 75 mu f, 236 to 660 volts, a-c, and 100 to 100,000 volts, d-c.

Write for Bulletin GEC-809.



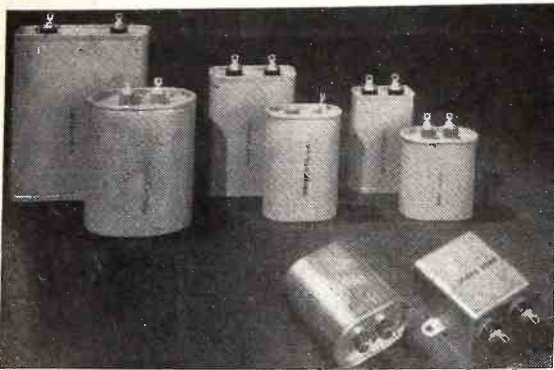
G-E CAPACITORS TO MEET MIL-C-25A SPECS 100 to 12,500 Volts, D-c—0.01 to 15 Microfarads

These fixed paper-dielectric capacitors are designed to meet the rigid requirements of the joint Army-Navy specifications for use in electronic equipment for the armed forces. Hermetically sealed in metallic containers, these capacitors for d-c applications are available in Characteristics E and F and in case styles CP-53, -54, -61, -63, -67, -69, and -70. In addition to regular applications, these units may also be used at higher temperatures, higher voltages for short-life applications, and with a-c voltages. Write for Bulletin GEC-810.

*Registered trade-mark of General Electric Co.

CAPACITORS

G-E DRAWN-OVAL CAPACITORS (DUAL A-C, D-C RATED) 330 A-c/600 D-c to 660 A/c



1500 D-c Volts, 1 to 10 Microfarads

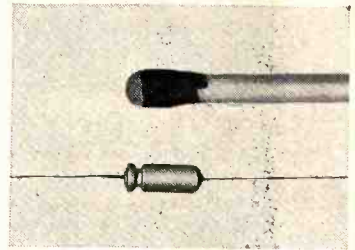
These are dual-rated a-c/d-c capacitors in drawn seamless containers. They are designed to supersede present rectangular case types (shown left with smaller drawn-oval units). Drawn-oval capacitors are smaller, lighter, mechanically stronger, use less critical material, and cost 10 to 20 per cent less than standard fixed paper-dielectric capacitors. Write for Bulletin GEA-5777.

G-E TANTALYTIC CAPACITORS

The Tantalitic capacitor was developed to fit certain direct-current, low-voltage applications where aluminum electrolytics and paper capacitors have not proven entirely satisfactory, and is suggested for applications where superior performance and small size are the major factors.

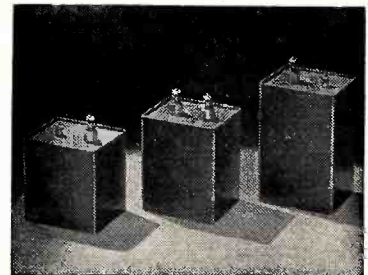
The Tantalitic capacitor is a foil-type, tantalum-electrode, electrolytic unit, similar in construction to an aluminum electrolytic capacitor, but, because of the characteristics of tantalum foil and the electrolyte employed, is smaller in size. The Tantalitic capacitor has lower leakage currents, longer shelf life, and a wider range of temperature operation (-55°C to $+85^{\circ}\text{C}$), without derating, than the conventional aluminum electrolytic capacitor. Tantalitic capacitors, in a wide range of ratings, are currently being used in telephone equipment and military communication and electronic equipment.

Write for Bulletin GEC-808.



MICRO-MINIATURE TANTALYTIC CAPACITORS

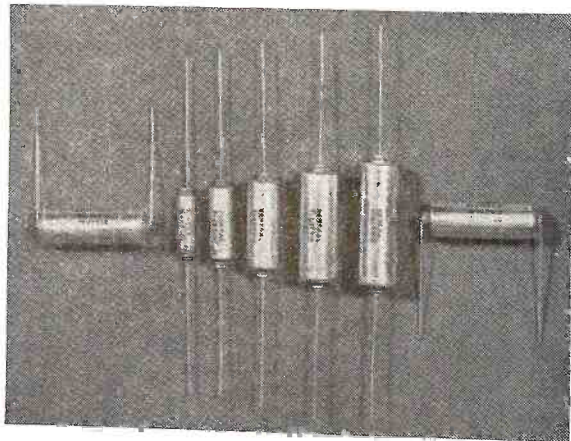
Designed for low-voltage, applications where superior characteristics and size are important. Applications: In miniaturized assemblies with transistors: In hearing aids, and military applications employing transistors.



ENERGY STORAGE

These d-c Pyranol* capacitors for phototube and similar light-duty energy-storage applications are the result of years of experience in the design and manufacture of capacitors for this type of service. They are relatively lightweight, small, stable capacitors having a life consistent with the application involved. Write for Bulletin GEA-4646.

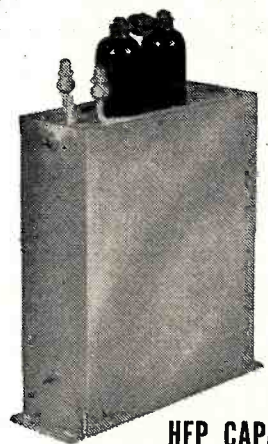
SUBMINIATURE METAL-CLAD TUBULAR CAPACITORS



Subminiature metal-clad tubular capacitors are available with Permafil solid dielectric for operation from -55°C to $+125^{\circ}\text{C}$, or with Pyranol* liquid dielectric for operation from -55°C to $+85^{\circ}\text{C}$, without derating. Silicone end seals of all welded construction provide maximum resistance to thermal and physical shock and permit soldering up to the bushing without danger of seal damage. Butt welded leads can be supplied either axially or at right angles. Permafil units combine small

size and no liquid leakage with high insulation resistance and ability to withstand extreme temperature cycling. Pyranol units are 20 per cent smaller than comparable oil-filled capacitors. Both types meet performance requirements of MIL-C-25A and can be supplied in standard case sizes in either tab or extended foil designs. Ratings range from .001 to 1.0 uf in voltages of 100, 200, 300, 400, and 600 d-c working. Write for Bulletin GEC-987.

* Registered trade-mark of General Electric Co.



HFP CAPACITORS

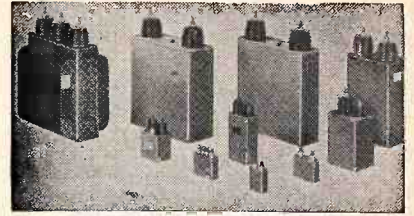
These high-frequency, liquid-filled, parallel-plate capacitors are specifically designed for use in the resonant circuit of high-frequency electronic oscillators, such as those used in electronic-heater applications. They may be operated at relatively high voltages and will carry heavy currents continuously at frequencies of 50 kilocycles to several megacycles. Write for Bulletin GEA-4365.

CAPACITORS

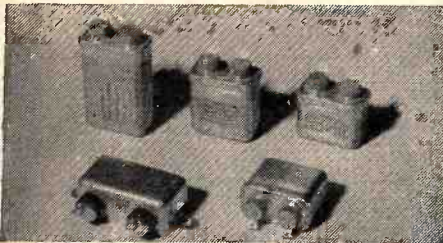
PERMAFIL CAPACITORS: Permafil high-temperature capacitors are designed to meet the performance requirements of MIL-C-25A Characteristic K capacitors, and are suitable for operation in ambient temperatures from -55 to +125 C at full rated voltage.

Permafil, used as the impregnant instead of mineral oil, is a solid resinous material having excellent electrical characteristics over a wide temperature range. Since it is a compound, the processing and manufacture of Permafil capacitors can be controlled to exacting specifications and results in units that are reliable at elevated temperatures. Because the impregnant is solid, it obviates possibilities of leaks. Write for Bulletin GEC-811.

PULSE-FORMING NETWORKS

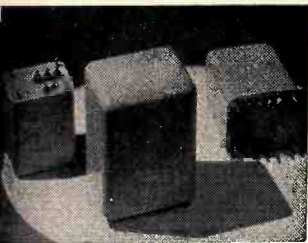


These capacitor pulse-forming networks, Type E, are for applications in radar and industrial equipment where the normal (exponential) capacitor discharge shape is not suitable and where an impulse having a definite energy content and duration is required. Write for Bulletin GEA-4996.

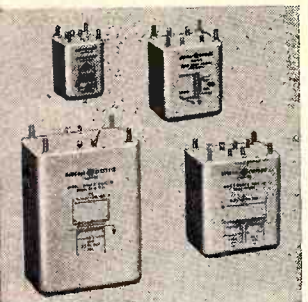


| Ratings | D-c Voltage | Mu f |
|---------------|-------------|--------------------|
| Case Style 53 | 400 | .05 to 1 |
| Case Style 61 | 400 | .10 to 1 |
| Case Style 61 | 400 | .05-.05 to .50-.50 |

SPECIALTY TRANSFORMERS FOR ELECTRONIC EQUIPMENT



HERMETICALLY SEALED: A complete line of hermetic transformers in 11 standardized case sizes was specifically designed to meet the performance requirements of the government MIL-T-27 specifications. These units, featuring drawn-steel cases and silicone bushings, are the most dependable, leakproof transformers it is possible to provide and can be used on a wide range of applications.

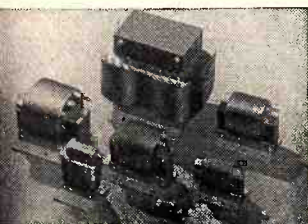


CAST PERMAFIL: The most recent member of the General Electric line of electronic transformers is the "hermetically sealed" group of units called cast permafils. Core-and-coil assemblies of these transformers are completely immersed in a solventless resin, which when "set", provides a tough, shatter-resistant solid structure. They are also approximately 20 per cent smaller and lighter than metal-clad, hermetically sealed units of comparable ratings.

Cast-permafil transformers, which are formed in MIL-T-27 case sizes, offer the protection of metal-clad, hermetically sealed units, yet have no metal cases. Consequently, there is no danger of case puncture and resultant moisture contamination.



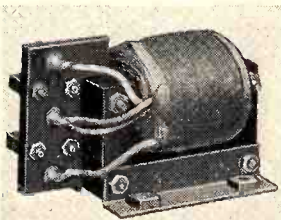
CORE-AND-COIL: Usually applied where moisture resistance is not an important factor, and where size and weight must be kept to a minimum. Composed of automatically wound coils imposed on finest-grade silicon-steel core laminations, they are of the same uniform high quality as our encased transformers. Made to exacting tolerances to provide excellent electrical characteristics. Terminal boards top- or bottom-mounted, or with leads, and with mounting studs or brackets to meet special requirements.



PERMAFIL TYPE: For electronic applications. They utilize a special core-and-coil construction which permits size and weight advantage comparable to and, in many instances, better than conventional core-and-coil unit. Protected by a tough coating of Permafil (a synthetic resin developed by G.E.) which makes them highly moisture resistant. Particularly adaptable to aircraft use where size and weight requirements are extremely critical.

AIRCRAFT TRANSFORMERS

General Electric manufactures a complete line of standard 400-cycle aircraft transformers which includes general-purpose transformers, phase-changing transformers, high-temperature silicone transformers, ballasts for fluorescent lamps, ignition transformers for cabin heaters, de-icers, and jet engines. General Electric builds transformers to individual specifications, both military and commercial.



GOOSENECK FILAMENT TRANSFORMERS

Are used as components of radio and television transmitter equipment, and allied devices which require high operating voltages above ground. Construction type shown in the photograph permits a substantial reduction in size and weight—critical factors in many installations. A cost saving is also effected over similar ratings of enclosed-type construction.



COMPOUND FILLED

Particularly suitable for applications where moisture or humidity is excessive. For such applications, they are far superior to core-and-coil units. If immersion-proof unit is not required, they are more economical than hermetically sealed transformers. They

have wide application in the electronics field, such as in frequency-modulation, carrier-current, and speech-input equipment. An especially useful feature is the universal mounting—the units can be top- or bottom-mounted for open or underdeck wiring.

CONTROL, MACHINE-TOOL, AND SIGNAL TRANSFORMERS

Designed in standard sizes from 0.0075 to 0.200 kva to supply low-voltage circuits for most economical operation of numerous industrial, commercial, and household equipments. A complete standard line of normal reactance, high-reactance, and warp-stop transformers is available to meet most applications. However, special units built from standard parts can be designed for special applications.

A complete line of transformers is available for specific use with machine tools. Designed so that 23 ratings will meet requirements of most foreign, as well as unusual domestic, applications. These units have front-mounted terminal boards and built-in circuit protection.

VOLTAGE REGULATORS

AUTOMATIC VOLTAGE STABILIZERS:



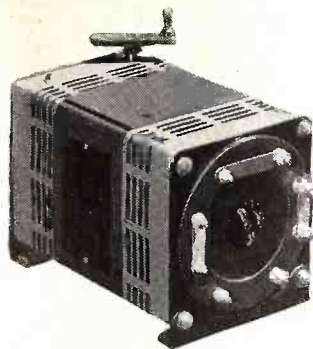
For equipment that requires stable a-c input or for stable output of 115 and/or 230 volts in sizes from 15 to 5000 va, standard G-E stabilizers can be used to cut costs, save space.

With rated load at unity power factor, they maintain output within $\pm 1\%$ for line variations of 95 to 130 or 190 to 260 volts. Quiet, automatic, they provide quick recovery when subject to simultaneous line and load variations, and voltage surges.

Special designs can be furnished in ratings in excess of 5000 va, or with special voltages, if desired.

If your product is composed of one of the following items, it will pay you to investigate stabilizers: television and radio equipment; telephonic apparatus; sound equipment; lighting circuits; photometers; x-ray equipment; rectifiers (full wave); electrochemical apparatus; test equipment; and precision processes; photographic equipment; electronic circuits; calibration devices; color comparators. Write for Bulletin GEA-5754.

INDUCTROLS (Hand or Automatic)



For industrial and electronic applications where voltage or current is to be maintained within very narrow limits or where a source of smoothly variable voltage or current is required, G.E. has developed a complete line of low-voltage, dry-type, induction voltage regulators known as Inductrols. There is a choice of hand operation, manually controlled motor operation, or automatic operation. Inductrols are available for regulation up to 200% raise and 100% lower as tabulated below. Write for Bulletin GEC-795.

SATURABLE REACTORS

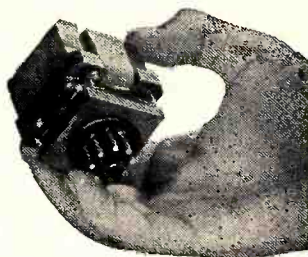


Their features are: 1. provide control in an a-c circuit by means of a direct current. 2. provide a wide range of control with smooth adjustment over entire range. 3. d-c control power required is small, obtainable from any reasonable combination of available current and voltage. 4. very efficient, even at light loads. 5. voltage drop in reactor at full saturation is small, permitting 93% or more of the voltage to be applied to load. 6. compact, sturdy, no moving parts. 7. control power readily obtained from inexpensive rectifier. 8. conveniently installed in least crowded part of the building for remote control operation. 9. provide a means of insulating the d-c control from the a-c circuit. These units are for use as control devices for numerous automatic and manual control applications.

| SINGLE-PHASE, 50/60 CYCLES, INDOOR SERVICE | | | | | | |
|--|---|-----------|-----------|------|------------------|--------------------------------|
| Cat. No. | Load Amperes At % Raise and Lower Regulation | | | | | Approximate Ship wt. Lb. |
| | 120 Volts | | 240 Volts | | | |
| AUTOMATICALLY OPERATED | | | | | | |
| 120/240 Volts§ — 10/20% at 120 Volts, 5/10% at 240 Volts | | | | | | |
| | 10% | 20% | 5% | 10% | 10% (3 wire) | |
| 31D2340..... | 25 | 12.5 | 25 | 12.5 | 12.5 | 58 |
| 31D2342..... | 50 | 25 | 50 | 25 | 25 | 74 |
| 120/240 Volts§ — 15/30% at 120 Volts, 7.5/15% at 240 Volts | | | | | | |
| | 15% | 30% | 7.5% | 15% | 15% (3 wire) | |
| 31D2341..... | 16.7 | 8.3 | 16.7 | 8.3 | 8.3 | 58 |
| 31D2343..... | 33.4 | 16.7 | 33.4 | 16.7 | 16.7 | 74 |
| HAND-OPERATED | | | | | | |
| 120/240 Volts§ — 10/20% at 120 Volts, 5/10% at 240 Volts | | | | | | |
| | 10% | 20% | 5% | 10% | 10% (3 wire) | |
| 31D300..... | 25 | 12.5 | 25 | 12.5 | 12.5 | 40 |
| 31D302..... | 50 | 25 | 50 | 25 | 25 | 58 |
| 120/240 Volts§ — 15/30% at 120 Volts, 7.5/15% at 240 Volts | | | | | | |
| | 15% | 30% | 7.5% | 15% | 15% (3 wire) | |
| 31D301..... | 16.7 | 8.3 | 16.7 | 8.3 | 8.3 | 40 |
| 31D303..... | 33.4 | 16.7 | 33.4 | 16.7 | 16.7 | 58 |
| 120/240 Volts§ — 100/200% at 120 Volts, 50/100% at 240 Volts | | | | | | |
| | 100% | 200% ‡ | 50% | 100% | 100% (3 wire) | |
| 31D304†..... | 10 | 5 | 10 | 5 | 5 | 58 |

* Weights do not include control panel for automatic operation. When furnished, it is separately mounted and its weights are: ship, 35 lb, net 30 lb.
 † This rating is for 60-cycle service only. Rated for intermittent (1-hr) service.
 ‡ 200% raise, 100% lower regulation.
 § Connectable for either 120- or 240-volt service.

AMPLISTAT
Magnetic Amplifier



This amplistat is a complete d-c to d-c magnetic amplifier of the self-saturating type. It is complete with reactors and rectifiers mounted in a metal enclosure on a standard base. The plug feature permits convenience of connection and ease of removal for testing the rest of the circuit. Features include: High Gain—Isolation—Input windings galvanically isolated from output. Reliable—Rugged construction, little, if any, maintenance. Static—No moving parts. No warm-up time—Has no tubes. Compact—Fits easily on control panels and chassis.

Application: This amplistat is a complete packaged d-c amplifier applicable to a wide range of control and instrumentation purposes. The following are a few of the many possible combinations of SIGNAL SOURCES (Thermocouples, Strain Gages, Thermistors, Photocells, Phototube amplifiers, Bismuth-wire magnetic-field sensitive resistors, Shunts, Resistance-type temperature bulbs, other Amplistats) with CONTROLLED DEVICES (Relays, Solenoids, Small-motor fields, Generators, Amplidyne fields, Power Rectifiers, Lamps, Heating elements, other Amplistats).

ELECTRONIC AMPLIDYNE: An extremely responsive amplifier combined with a motor amplidyne set, useful in many types of motor control where precise regulation of current, voltage and speed is necessary or desirable.

APPLICATION—Control speed, limit loads, hold tension, speed up acceleration, position precisely, assure quick stopping. Readily adaptable to programming and processing control.
RATED—As a regulated adjustable-voltage power supply for d-c motors up to 1½ hp. As regulated exciter for large adjustable-voltage drives up to 200 hp. The unit has an output of 1½ kw, 250 volts. Can be arranged for use on 220- or 440-volt, 3-phase, 60-cycle power supply.

The G-E electronic amplidyne is applied as a part of a complete control system. Write for Bulletin GEA-4889A.



HIGH-VOLTAGE COMPONENTS

High-Voltage Radar Transformers and Reactors (Oil-Filled)

SELENIUM POWER SUPPLIES:

These hermetically sealed d-c power supply units employ selenium rectifier stacks. They are suitable for supplying the high potential necessary for cathode-ray tubes, television camera tubes, radar-indicator scopes, electron microscopes and other applications where low regulation, light weight, and small size are primary considerations. Illustrated is a unit rated 7000 volts, 0.1 ma or .35 ma d-c. It is designed for 215 volts, 2000 to 20,000 cycles a-c input. An additional pair of terminals, supplying 45 volts a-c when 215 volts are applied to the input terminals, makes the unit especially suitable for use in the tank circuit of an audio-oscillator.



PULSE TRANSFORMERS—Oil-filled, Hermetically Sealed:

Oil-filled, hermetically sealed pulse transformers in peak voltage ratings of from 10 to 100 kv or higher and in peak power ratings up to 30,000 KW or more are now available for use with either hard-tube or line-type modulators.

These compact units, designed for operation on pulse durations ranging from 0.1 to 20 microseconds—normally for a duty cycle of 0.001—are ideal for such applications as pulse voltage step-up or -down, impedance matching, phase reversing or non-reversing, isolating load from source. The pulse transformers also permit measurement of plate current of transmitter tubes.



RESONANT REACTORS—Oil-filled, Hermetically Sealed: Precision reactors are required for resonant-charging, line-type, radar modulator circuits. They are designed to operate at full d-c load with an a-c current superimposed and insulated to withstand test voltages of two times normal operating voltage. Currently available in peak operating voltage ratings from 5 to 50 kv and current rating up to 3.0 amperes, these sturdy units have a wide range of inductance ratings from 0.25 to 300 henrys which remain constant within 5% from full to 50% full load current.



FILAMENT TRANSFORMERS: Oil-filled filament transformers for special applications or for use with any of the standard high-voltage rectifier tubes. These compact units can be provided with or without tube socket mounted integral with the high-voltage terminal. Illustrated is a hermetically sealed, low-capacitance filament transformer rated 5 volts, 11 amperes, and insulated for 18-kv operation.

FRACTIONAL-HORSEPOWER MOTORS



Synchronous Induction Motors: High torque at slow synchronous speed for remote control devices, indicating instruments, timing devices, etc. For low-inertia applications requiring rapid changes in rotation. Synchronous speed: 75 rpm, 75 oz. in. torque. Motor starts, stops, reverses, within 1/2 cycle of power supply. Smaller size delivers 2 oz.-in. at 100 rpm.

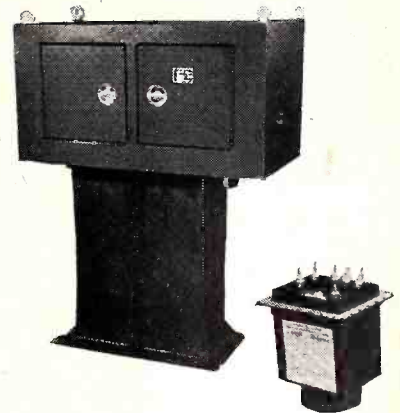
Output: up to 660 V., 165 watts, 5 min. on, 15 min. off duty cycle.



Permanent-Magnet Motors: New permanent-magnet, totally enclosed, shunt motors for aircraft operation (very high ambients), blower, actuator, tuner and other applications. Can be dynamically braked by shorting armature terminals and reversed by use of relays. Explosion-proof, shock-resistant. 0.01 hp, 10,000 rpm, 27.5 V. input, 130 rpm with gear reduction. With radio interference filter.

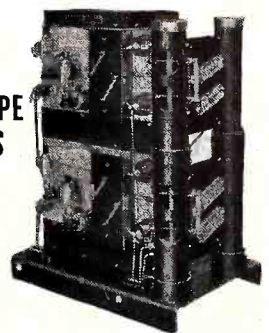
Taxi Dynamotors: Compact, lightweight units convert low-voltage d-c power to high-voltage d-c for mobile radio transmitters in taxis, police cars, trucks, buses, railroads, fire departments, forestry radio transmitters, etc. Input: 6-28

HERMETICALLY SEALED RECTIFIER EQUIPMENTS



Typical of the rectifier equipments now being offered for military and commercial use. Unit on right, rated 3 kv, .068 amp, d-c output, contains a plate transformer, filament transformer, and resonant charging reactor in the same tank, (dimen. are only 6 3/4 x 5 1/4 x 9 in.). Unit on left is a large three-phase full-wave rectifier rated 12 kv, 0.72 amp, d-c output. Lower tank section contains a three-phase plate transformer, filament transformer, and filter reactor. Upper enclosure houses the rectifier tubes and auxiliary equipment.

CASCADE-TYPE RECTIFIERS



In laboratory or factory testing and power-supply applications where smooth high d-c voltages are required, cascade connections of from one to four conventional 35-kv, 32-ma rectifiers can be furnished for single-phase operation from 115—230-v, 50- and 60-cycle power supply. Output-voltage ripple peak to peak not to exceed 0.1% per ma. Control panel furnished which provides smooth output-voltage control over complete range from zero to max. Panel also contains overload relays and meters to indicate output voltage and current and filament voltage.

SWITCHBOARD COMPONENTS

PANEL INSTRUMENTS: 3 1/2-inch Types:



General-purpose, small panel instruments for use in radio and communications equipment where compactness (particularly minimum depth behind the panel) is essential. Internal-pivot design construction with pivots solidly mounted to the inside of the shell moving coil. Element assembly is a self-contained unit supported by a high-coercive fabricated magnet. A strong, compact instrument with fast response and excellent damping. Available

in a variety of ratings, in round and square cases: Type DO-71 voltmeters, ammeters, milliammeters, and microammeters for measuring d-c voltage and current; Type AO-72 voltmeters, ammeters, and milliammeters for measuring a-c voltage and current.

2 1/2-inch Types: Same construction and appearance design as the 3 1/2-inch types. Type DW-71 for d-c measurements: ammeters (1 to 30 amp), milliammeters (1 to 500 ma), microammeters (50 to 500 ua), and voltmeters (1 v to 300 v). Write for Bulletin GEC-368.

4 1/2-inch Types: Internal construction similar to 2 1/2-in. and 3 1/2-in. types. Rectangular case 4 21/32 in. long and 4 1/16 in. high. D-c, Type DO-78, scale length 3 1/2 in., and a-c, Type AO-58, scale length 3 in. Ratings available similar to 3 1/2-in. DO-71 instruments.

| D-C, TYPES DW-71, DO-71, AND DO-78 | | | A-C, TYPES AO-72 AND AO-58 | | |
|------------------------------------|--------------|----------------------------|----------------------------|--------------|----------------------------|
| Type | Rating Range | Approx. Resist. Range Ohms | Type | Rating Range | Approx. Resist. Range Ohms |
| Ammeter | 1 to 50 amp | 0.001 to .05 | Ammeter | 1 to 100 amp | 0.00031 to .138 |
| Milliammeter | 1 to 500 ma | 0.10 to .68 | Milliammeter | 10 to 500 ma | 0.43 to 1060 |
| Microammeter | 20 to 500 ua | 70 to 2030 | Voltmeter | 1 to 500 v | 2 to 100,000 |
| Voltmeter | 1 to 500 v | 1000 to 500,000 | | | |
| Kilovoltmeter | 1 to 5 kv | 1,000,000 to 5,000,000 | | | |

OPERATING TIME METER—Type KT:



Type KT time meters provide an accurate, inexpensive method of measuring the life of electron tubes, record to operating time of the machines or devices to which they are connected. They are available in three forms: for panel switchboard mounting, portable, and conduit mounting. They also can be furnished to measure operating time in hours, tenths of hours, or minutes. These time meters are designed for applications including electron-tube life tests, punch presses, mo-

ing machines, etc. For use on 60-, 50-, or 25-cycle a-c circuits. Voltage rating is from 115 to 460 volts for the three available forms of the meter. Write for Bulletin GEC-472.

GENERAL PURPOSE, AUTOMATIC TIME SWITCH—Type T-27

One of the most versatile of all G-E time switches, the T-27 can control one to three circuits for as many as 10 ON-OFF operations per day. Can be furnished with omitting device to skip a day or more, and with astronomic dial for dusk-dawn operation. Powered by the famous Telechron* motor, the T-27 is available for 25-, 50-, or 60-cycle operation and from 115 to 460 volts. Contacts are rated 35 amperes at 230 volts. Dimensions are 10 3/4 by 5 3/8 by 4 7/8 inches. Write for Bulletin GEA-535.

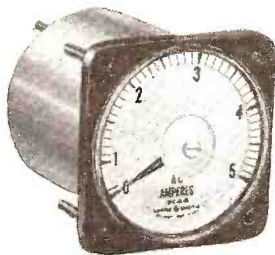


*Registered trade-mark of General Electric Co.

LONG-SCALE SWITCHBOARD INSTRUMENTS

Accuracy ±1%

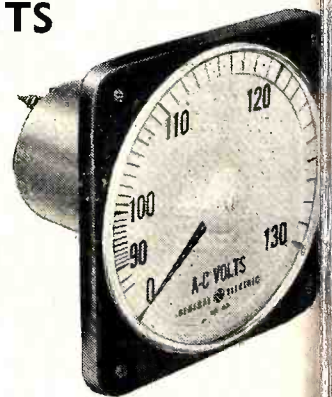
VOLTMETERS • AMMETERS • WATTMETERS



Types AB-18(a-c) and DB-18(d-c)
Size: 4 1/4" by 4 1/4"

Long-scale, compact instruments intended for general switchboard service on large and small equipments. Excellent for control stations, test equipment, and other installation in limited space. 5 instruments can be mounted side-by-side on a 24-in. panel. Drawn-steel, dust-proof covers for semiflush mounting. New convex glass cover, with scale mounted flush with case front, reduces shadows to minimum and results in greater readability. Antiparallax scale and pointer, magnetic damping, and external zero adjusters.

General Electric switchboard instruments include voltmeters, ammeters, wattmeters, frequency meters, power-factor meters, varimeters, synchroscopes, temperature meters, and ground detectors. The above are available as standard instruments in all common ranges and can be furnished in many special ratings and constructions; for example, thermocouple types for measurement of h-f current or rectifier types for high-sensitivity a-c measurements. For a more complete listing and special applications write for Bulletin GEC-218 or contact local G-E Office.



Types AB-16(a-c) and DB-16(d-c)
Size: 8 3/4" by 8 3/4"

WATTMETERS: 25-125 cycle; Accuracy—±1%; Operating Principle—Electrodynamometer; Single-phase and Polyphase Types

VARMETERS: 3-phase, 3-wire; 2-phase, 3-wire; 2-phase, 4-wire; 3-phase, 4-wire; 5 amp; 120-208 v; 25 cycles to all commercial frequencies; Accuracy — ±1%; Operating Principle — Electrodynamometer with autotransformer.

FREQUENCY METERS: 120 v; 60 cycles; Accuracy—22.5-27.5 cy—0.08 cy, 45-55 cy—0.15 cy, 55-65 cy—0.15 cy, 40-65 cy—0.25, 20-90 cy—1.00 cy, 350-450 cy—1.50 cy; Operating Principle—Resonant-circuit.

POWER-FACTOR METERS: 3-wire, 3-phase, 25-125 cycles; 4-wire 3-phase, 25-125 cycles; 5 amp, 120-600 v; Accuracy—±.01 power factor for rated current, voltage and frequency; Operating Principle—Polarized-vane.

SYNCHROSCOPES: 25 cycles with external impedor; 50 and 60 cycles, self-contained; 120 v; 360° rotation; Operating Principle—Polarized-vane.

PORTABLE & RECORDING INSTRUMENTS



PHOTOELECTRIC RECORDER—Type CE: For special temperature measurements, developmental testing, high-speed recording, laboratory investigations, physiological research, and equipment tests. Provides direct ink records, and is ideal for any test where only a small amount of energy is available for the operation of the recorder. Sensitivities obtained as low as 1.0 microampere, full scale. Response periods as fast as 1/5 second. 4 different motor arrangements provide chart speeds from 1/2 inch per hour to 72 inches per minute. Write for Bulletin GEC-254.

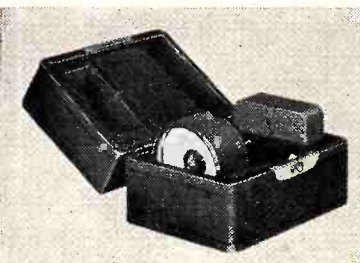
INSULATION-RESISTANCE METER: An electronic instrument designed to measure insulation resistance over a range of 0 to 20,000 megohms. Measurements indicate poor insulating materials and materials contaminated by dirt or moisture. This instrument also makes possible the study of the effects of temperature and humidity on insulation. Consists of an electronic rectifier, a bridge circuit which contains Thyrite* resistance material, and an electronic-tube voltmeter, all in one enclosure. Meter is available in range of 5 to 20,000 megohms and has four scales. Over the range of 5 to 20,000 megohms, tests are made at a constant 500-volt d-c potential; and from 0 to 5 megohms at 0 to 250 volts. The meter is small, compact, portable — convenient for production and service testing, simple to operate. Write for Bulletin GEC-753.

*Registered trade-mark of General Electric Co.



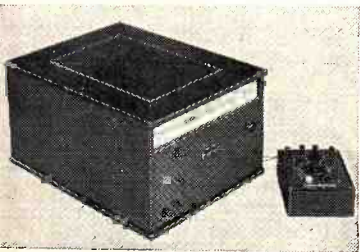
CURRENT LIMITED HIGH-POTENTIAL TESTER: By limiting the output current to a maximum of 5 milliamperes, the tester effectively minimizes most of the hazards encountered with high-potential testing equipment. Features: output current limited to below the maximum current which an operator can let go; non-destructive testing; line surges virtually eliminated in output; indicates voltage on sample regardless of wave shape, internal voltage drop, or variation in line voltage; faults indicated by glow lamp on panel. Output voltage: 0.3500 volts.

RMS. Output current limited to less than 5 milliamperes when shipped. Maximum load for full output voltages: .005 mfd. Write for Bulletin GEC-700.

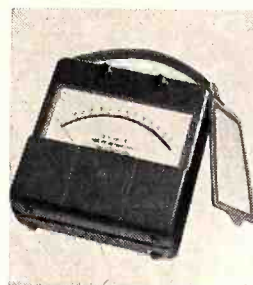


GAUSS METERS: Indicates flux density and direction of flux in magnet gaps. Used for measuring: Flux density in gaps of instrument magnets; of blocked d-c relays and breakers; of blocked rotor-generators or motors. Field gradient across air gaps. Direction and density of leakage flux emitted from perimeter of magnets. Flux density in iron portions of magnetic circuits. Strength and direction of stray fields of many permanent and electromagnets. Magnetic properties encountered in laboratory work. Available in ranges from 25 to 20000 gaussess.

INDICATING FLUXMETER: A convenient means for accurately measuring flux densities and total flux. Determines magnetic properties of permanent magnets and d-c electromagnets. Measures flux distribution in a magnet gap, leakage flux along sections of a permanent magnet or electromagnet.



THERMOCOUPLE VACUUM GAGE Measures pressures encountered in laboratory studies and in many manufacturing and chemical processes. Range of 1 to 200 microns of mercury for glass vacuum systems and from 1 to 500 microns of mercury for metal systems. Valuable for checking pressures for vacuum-tube evacuation, vacuum dehydration, and vacuum-heat treatment of metals, metalizing, and vacuum processing of vitamins. The thermocouple vacuum gage is sensitive to both condensable and noncondensable gases, and does not require recalibration when tubes are interchanged. Three different mountings are offered; portable-case style, relay-rack type, and panel type.



PORTABLE INDICATING INSTRUMENTS

A new line of instruments, functionally designed to give the greatest convenience and readability and using precision stabilized shunts and resistors to achieve sustained accuracy. These high-accuracy instruments are suitable for laboratory use as well as for field applications and production tests where high precision is essential.

Type DP-11: Designed for general testing where a dependable, easily read instrument with 1/2 of 1% accuracy is required. Ideal for trouble shooting and maintenance work where accurate readings must be taken under adverse lighting conditions. Size—7 3/8" x 7 7/8" x 3 1/4". Scale length—5.5 inches. Pointer—Knife edge with mirror scale. Damping—Magnetic. Zero Adjuster—External. Shielding—excellent shielding from stray magnetic fields.

Type DP-12: Specifications are similar to DP-11 above, except accuracy is to 1/4 of 1% full scale.



OSCILLOGRAPH — Type PM-18: Records 2, 3, or 4 rapidly or slowly changing currents and voltages simultaneously. Records steady-state phenomena, such as wave shape of alternating currents and voltages, and also transient phenomena of short duration when the quantity to be recorded can be initiated by the closing or opening of a synchronizing switch provided within the oscillograph.

The PM-18 is regularly furnished with a film-pack holder which produces 12 separate oscillograms, 2 1/4" wide by 3 1/4" long to record spot speeds up to 12,000 inches per second.

Three film holders available to meet almost every recording requirement. A Polaroid-Land film holder that will produce a picture in a minute is also available. Makes finished photographic records in about one minute and eliminates need of a darkroom. For those applications which require a longer record, a continuous drive paper holder is available. Write for Bulletin GEC-580A.

SELENIUM, GERMANIUM, and COPPER-OXIDE RECTIFIERS

General Electric manufactures selenium rectifiers for every type of electronic and industrial application. The G-E selenium cells are produced by a unique "evaporation" process which produces exceptionally good electrical characteristics.

LONG LIFE—Because of their low forward voltage drop and low backward leakage, G-E selenium stacks age less. They offer the design engineer a quality, non-expendable component which will last in service. The characteristics are uniform from stack to stack, assuring better performance of the end equipment.

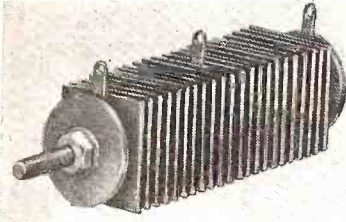
STABILITY AND RELIABILITY are two other important features of G-E selenium rectifiers. They have excellent initial characteristics and do not deteriorate with time and use.

SIZES AND RATINGS are available to meet practically any re-

quirement. They have been used successfully from a few milliamperes at 500,000 volts to over 100,000 amperes at 9 volts. Whenever direct current is required their application should be considered. The three basic types of construction used in G-E selenium rectifiers are shown in the illustrations.

There are many electronic applications for selenium rectifiers. General Electric selenium rectifiers are ideal for voltage doubler circuits, voltage tripler circuits, clipping or slicing operations in electronic applications, or wherever rectification or d-c blocking is required. G-E miniature selenium rectifiers are used for blocking, electronic computer, magnetic amplifier, communication and signal circuits. Other applications include supplying power to operate d-c relays in control circuits and as components in electronic equipment.

STANDARD STACK CONSTRUCTION



Standard construction of a typical G-E selenium stack consists of cells mounted on a metal stud, separated by spacers and spring contacts. Any rectifier circuit or combination of circuits can be assembled in a single stack. Various mounting and screw-terminal connections are available.

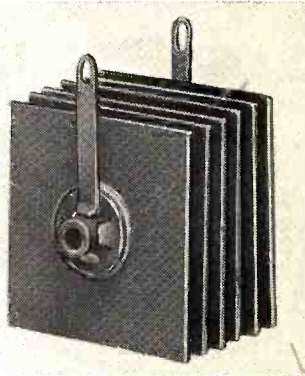
Standard construction is such that the stack can withstand a high-potential test of 1500 volts to ground. However, if required, these stacks can be specially constructed to withstand 2500 volts or higher to ground. After assembly, the stack is dipped in a moisture and corrosion-resistant paint for protection.

In converting a-c to d-c power, they have the following advantages:

LONG LIFE—No replacement necessary over normal operating life of associated equipment.

REDUCED MAINTENANCE EXPENSE—No moving parts to wear out, no lubrication required.

TUBE-MOUNTED CONSTRUCTION



Phenolic tube construction is used when a less expensive and lighter-weight rectifier stack is desired. Good strength can be attained up to 10 cells on a single assembly.

In some cases, where a less expensive and lighter-weight construction is desired, the cells are mounted on a phenolic tube. This eliminates the metal mounting stud and end insulation washers. Because of the reduction in strength of such construction it is recommended that not more than 10 cells be mounted on one tube.

RECTIFIER FEATURES

LOW OPERATING COSTS—High rectifier efficiency.
SIMPLE INSTALLATION—Lightweight and compact.
INSTANTANEOUS OPERATION—No filament to heat.
FLEXIBILITY—Can be used wherever rectification or d-c blocking is required.

General Electric miniature selenium rectifier stacks are specifically designed for use in electronic circuits. To operate at high ambient temperatures, and from $-50C$ to $125C$, these small compact assemblies have stable electrical characteristics. Slow aging and long life is due to their low forward resistance and low reverse current.

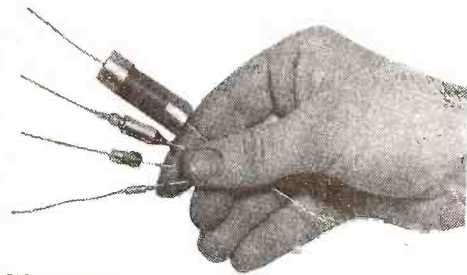
APPLICATIONS include use in blocking, electronic, computer, signal, magnetic amplifier, communication, control circuits, and to operate small relays, solenoids, and precipitators.

Assembled from 3 sizes of small selenium cells: $5/32''$, $9/32''$, and $15/32''$ diam. rated 2 D-c MA, 8 D-c MA, and 25 D-c MA respectively at 26 v RMS. Special construction is available which utilizes a $3/32''$ diam. cell rated at 75 microamps at 26 v RMS.

Assembled without spacer washers in 2 types of totally enclosed casings. Textolite* tubes capped by metal ferrules are satisfactory for normal environmental operating conditions. To meet severe government environmental specifications, hermetically sealed, metal-clad casings are used for the miniature rectifier stacks.

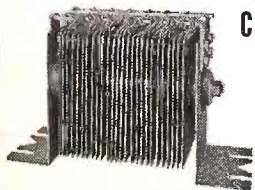
May be used with half-wave rectifiers and in full-wave center-tap or bridge-connected circuits simply by using one rectifier stack for each circuit element. They may also be connected in parallel to obtain multiples of current ratings, or in series to obtain multiples of voltage ratings. Bridge assemblies are available if required.

*Registered trade-mark of General Electric Company.



MINIATURE

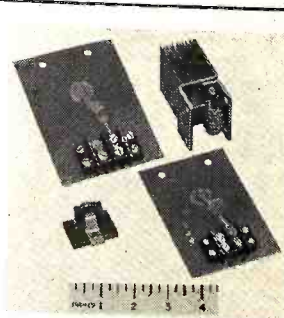
Miniature selenium rectifiers are available in standard ratings of 50 ma and below at 26 volts to 5200 volts RMS. Stacks are available either in Textolite* tubes or metal-clad casings to meet government specifications for environmental protection. Either lead or bracket mountings can be furnished.



COPPER-OXIDE RECTIFIER STACKS

These are five features of Copper-Oxide Rectifiers: no unforming • ability to withstand momentary current overloads • ability to withstand momentary voltage overloads • longest proven life of all existing metallic rectifiers • highest efficiency at low voltages.

The above features make them ideal for the following applications: Magnetizing (Copper-oxide rectifiers are especially suitable for certain types of magnetizing circuits which require the rectifier to withstand high current inrush and momentary voltage overload.) • Circuit breakers (Perhaps the most widespread use of copper-oxide rectifiers is in the field of circuit breaker operation. Here the unique characteristics of copper-oxide rectifiers are especially important.) • Blocking • Metering • Polarization relays • High-speed relays • Electroplating • Electrolytic reduction • Telephone and Telegraph equipment • Control contacts • Low-voltage, high-current power supplies • Testing equipment • High-voltage surge protectors • D-c welders.

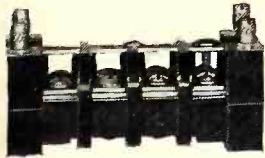


INDUSTRIAL GERMANIUM RECTIFIERS

These new metallic rectifiers are of the broad-area type. Their rectifying properties are instantaneous since they do not require artificial forming. They may be operated at extremely high current densities with a large d-c output obtained from a very small germanium rectifier.

Lowest forward drop per ampere giving best regulation of existing metallic rectifiers • Highest output voltage per cell permitting use of fewer cells • Best current output, smallest size and lightest weight per watt output of existing metallic rectifiers. • High efficiency • No forming required • No

loss of rectification after remaining idle. The regulation is less than 6% when operated at the high current densities permissible with germanium. Usually, with most metallic rectifiers, it is between 15 and 20% at their normal current densities. They have a broad application in power conversion where size and weight requirements are at a premium.



Typical EB-5 board with short-circuit strips



Typical EB-6 board with hinged cover

TERMINAL BOARDS

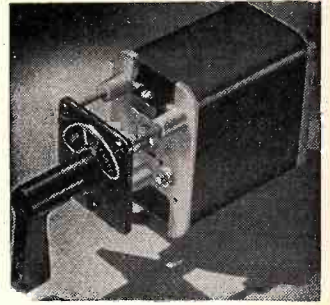
For use where leads are brought to any part for permanent or temporary connection, especially if many wires are involved.

Type EB-5 are fabricated terminal boards. Each is equipped with the necessary washerhead binding screws for circuit-wire connections.

Type EB-6 are fabricated terminal boards of the same construction and dimensions as the

Type EB-5, except that clamp-type connectors are furnished. Boards will accommodate wire sizes from No. 18 to No. 10 inclusive. Where more than 12 poles are required for a particular application, combinations of the standard boards may be used. Write for Bulletin GEA-1497.

CONTROL and TRANSFER SWITCHES



Type SB-1 design is extremely flexible and can be applied to meet special requirements. Features include: square operating shaft with cams to provide positive contact operation; silver-to-silver contacts; better protection of live parts; compact design; ample space for connecting leads; choice of operating handles; permanent-finish Textolite* escutcheons; wide range of stages and contact positions, the number of circuits to be controlled determining the number of stages and contacts needed. Switches having up to 16 stages are commonly furnished. The maximum number of positions, or throws, is twelve.

Rating of Type SB-1 switches is 600 v, 20 amp continuous, 250 amps for 3 seconds. Interrupting rating depends upon voltage and character of circuit, as well as number of contacts in series. Write for Bulletin GEA-4746. *Registered trade-mark of General Electric Co.

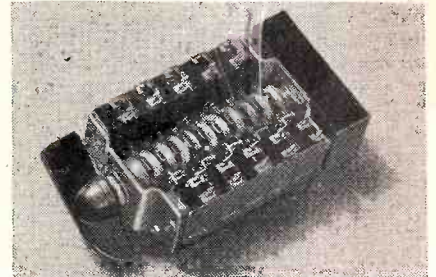


CAST-GLASS BUSHINGS

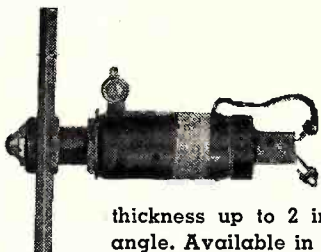
In ratings up to the 15-kv power-transformer impulse level and for currents up to 800 amp, permit the successful design of hermetically sealed electric apparatus. Heat-proof, leak-proof, shockproof bushings for use in vital communication and commercial application where severe operating conditions are continually encountered. Available in a wide variety of sizes and shapes in both single- and multi-conductor designs, they offer the following advantages.

1. Attached directly to apparatus, making gaskets unnecessary and providing a hermetic seal. Designers may utilize all the advantages of present-day insulating materials without fear of reduced dielectric strength caused by the entrance of moisture. 2. Make possible design of more compact, lighter-weight apparatus at lower cost for airborne and other specialized equipment uses. 3. Thermal characteristics of the glass used have been co-ordinated with those of the metal parts which are directly sealed into the bushing to produce strain-free seals which are capable of withstanding thermal shocks far in excess of operating conditions.

CAM-OPERATED SELECTOR SWITCHES



These small, compact switches can be used to control from one to 20 circuits, in any operating sequence within the limit of 12 positions (30 degrees apart). The contact mechanism consists of one to 10 two-circuit G-E Switchettes. Snap-action, double-break contacts provide a high current rating and minimize arcing. Light weight, easy mounting, positive and reliable operation make this device ideal for aircraft application. Meets 50-hour salt-spray test in accordance with Spec. AN-QQ-S-91. Also available is a line of lightweight limit switches specially designed for aircraft and electronic applications.



INDICATING LAMPS

Types ET-5 and ET-6 offer high visibility, low wattage, and long life. Consist of telephone-type lamp with contacts mounted within an insulated tube and with a vitreous-enamel resistor for any standard voltage up to 660 v. For any panel

thickness up to 2 in. Color cap provides excellent vision from any angle. Available in 6 colors.

ULTRASONIC GENERATOR

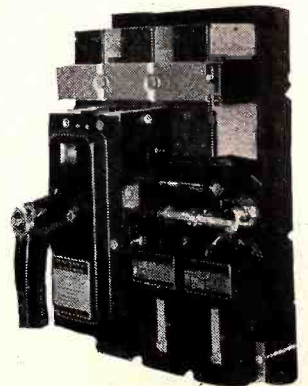
For Cleaning Small Parts:

Quickly and thoroughly removes oil, grease, chips, dirt, lapping compounds, and other contaminants from surfaces, corners, and small holes of precision-built, irregularly shaped parts. Time, labor and floor space are saved.

Equipment comprises an electronic power unit (essentially a high-frequency oscillator) in a 45-inch-high cabinet. A transducer assembly with a quartz crystal is housed in a 4-inch round diameter well. Parts are cleaned in any suitable container placed in this well. Operated at 300 kc, 500 kc, 750 kc, or 1 mc. Power input is 500 W at 115 V, 50/60 cycles. Write for Bulletin GEA-6056.

AIR CIRCUIT BREAKER

Switching and better protection of power circuits is secured by using air circuit breakers. Type AK-1 breakers are available for switchboard mounting for use, for example, as main power-supply breaker in TV transmitters or are individually enclosed for isolated installations. Current ratings from 15 through 400 amperes up to 600 volts a-c and 250 volts d-c. See GEA-5915 for full details.



CONTROL ACCESSORIES



A-c or D-c SOLENOIDS, CR9503

Simplify complex installations: in direct or remote control requiring short powerful thrusts. Wide selection: 32 different sizes of solenoids of uniform construction are available for push- or pull-type operation and for use on a-c or d-c circuits up to and including 550 volts. Used to push or pull in a straight line, or to provide mechanical motion at a remote or inaccessible location. They may be operated remotely from a push-button station or automatically by limit switches, pressure switches, float switches, or other pilot circuit devices. Cut-out switches are available for use on d-c circuits. Write for Bulletin GEA-5163.



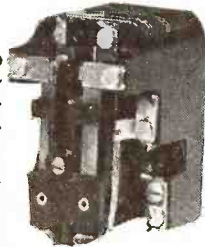
15-AMP. CONTACTOR, CR2810-1265

For small motors; this normally open, single-pole, single-throw contactor is small, self-contained, and inexpensive. The coil is of the layer-wound type, requires only a few watts of power, and is connected directly across the line. The connections are easily made: all terminals are in the top molded part. A form is available which includes a non-insulated interlock, permitting the use of a momentary-contact push button for operating the contactor; the combination provides under-voltage protection. Complete line of magnetic motor starters available.

| Type | 110 v | 220 v |
|----------|-------|-------|
| Open | 1/2 | 1/2 |
| Enclosed | 1/2 | 1 |

GENERAL PURPOSE RELAYS, CR2790E

Used to control pilot circuits in response to remote control switch or thermostat, or for direct control of small motors driving pumps, fans, etc., and as a FHP motor starter, or in conjunction with a magnetic switch controlling larger motors, and signal systems. Comes in open or in general purpose case. Explosion-proof and water-tight case available as kits. 3 contact arrangements available; double-pole, double-throw; double-pole, single-throw; single-pole, single-throw. Protection against hazard from restarts after power failures can be provided with the double-pole form when one pole is used as a holding interlock in the coil circuit together with a momentary-contact push-button station. Enclosed forms have convenient conduit entrances at top and bottom. Write for Bulletin GEC-257.



PUSH-BUTTON STATIONS

For control circuits of magnetic controllers designed for push-button control. Standard- and heavy-duty stations available which may consist of various combinations of momentary-contact buttons, maintaining-contact buttons, selector switches, and indicating lights, for surface or flush mounting. Standard-duty station recommended for use with contactors rated up to and including 150 amp. Write for Bulletins GEA-3469 (Standard Duty) and GEA-5043 (Heavy Duty).



OILTIGHT PUSH-BUTTON UNITS A new push-button unit with building-block construction. It provides flexibility to meet requirements for special units by simple combination of the basic elements, which consist of separable operators, a removable color ring for identification, and a basic contact block. Operators and contact blocks are furnished separately. Single, double, or tandem contact blocks are quickly and easily attached to any type of operator. Write for Bulletin GEA-5779.

G-E CALROD* SOLDERING IRONS

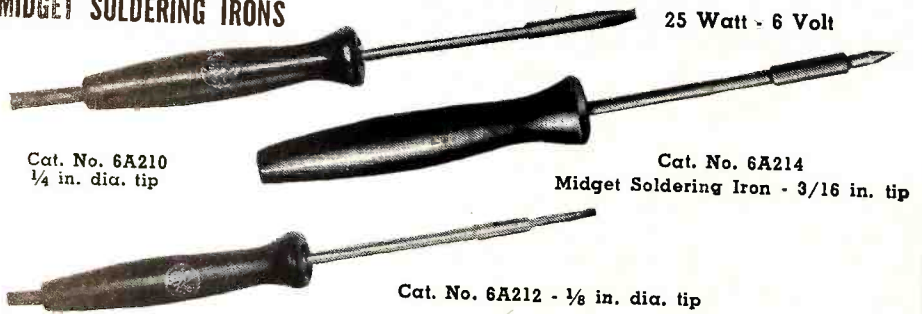
General Electric soldering irons are highly efficient for all work requiring soft soldering. Reserve-heat capacity of G-E irons makes them outstanding for continuous, high-speed production soldering.

FEATURES

- CALORIZED COPPER TIPS**
Durable, interchangeable, designed for extra-long life.
- Calorized coating retards corrosion and oxidation, prevents freezing of tips to tip holder—increases tip life.
- IRONCLAD COPPER TIPS**
Couple quick heat transfer of copper with long-wearing qualities of iron—for extra-long life.
- CALROD HEATING ELEMENTS**
Provide quick, dependable heating.
- STAINLESS-STEEL SHELL**
Provides high corrosion resistance and low heat loss.
- PLASTIC HANDLE**
Cool, easy to grip.
- CORD STRAIN INSULATOR**
Will withstand pull of 35 pounds.

* Registered trade-mark of General Electric Co.

MIDGET SOLDERING IRONS



Cat. No. 6A210
1/4 in. dia. tip

25 Watt - 6 Volt

Cat. No. 6A214
Midget Soldering Iron - 3/16 in. tip

Cat. No. 6A212 - 1/8 in. dia. tip

LIGHTWEIGHT INDUSTRIAL IRONS



Cat. No. 6A273
1/4 in. dia. chisel tip

60 Watt - 120 Volt

Cat. No. 6A283
3/16 in. dia. pyramid tip

INDUSTRIAL SOLDERING IRONS



75, 100, 110, 125 W.
115 or 230 V.

6A161 - 6A162 Series

6A200, 6A201, 6A202 Series
100, 200, 300 W. 115 or 230 V.

115-VOLT TRANSFORMERS

Specially designed, 115-volt transformers available as optional equipment in two types. Single-tap transformer Cat. No. 6A362,

for one soldering heat. Four-tap transformer, Cat. No. 6A364, gives wide range of heats for close temperature control of tips.

ELECTRONIC TIMER, CR7504-A142

For 60- and 50-cycle, 115- or 230-volt, a-c circuits. Three standard models, with selection from 0.06 to 120 seconds in ranges of 20:1. Relay may be connected to be normally energized or normally de-energized during the stand-by period; it is always de-energized during the timed period and energized after timing out. Extremely useful for timing operations of short duration or to provide automatic control for various stages of industrial processes. Repetitive accuracy:

±2% on all settings above 0.5 second.

The unit includes one standard vacuum tube and a magnetic relay with double-pole, double-throw contacts rated 10 amperes a-c at 230 volts. Time setting is adjustable by a potentiometer with dial which reads directly in seconds. Potentiometer and dial-plate assembly may be removed easily for remote counting, if desired. Write for Bulletin GEA-5255.

SELSYNS, CR9890

Indicating or control selsyns are a reliable, accurate, and rapid means of communication. They are used successfully in such applications as indicating the positions of valves, governors, bridges, turntables, dampers, etc. Selsyns have been very successful in servo systems where the selsyns operate to guide the action of the power units. Two types of selsyns are available—the high-accuracy type which has an accuracy of ± 1 degree and the general purpose type which has an accuracy as close as ± 5 degrees. Selection can be made from a variety of sizes suited for each application. A complete line of indicators and transmitters including selsyns is available. Write for Bulletin GEA-2176.



HERMETICALLY SEALED RELAY CR2791G

1-, 2-, 3-, and 4-pole, double-throw, 6-pole normally open 1 to 300 V, D-C, 5 AMP:

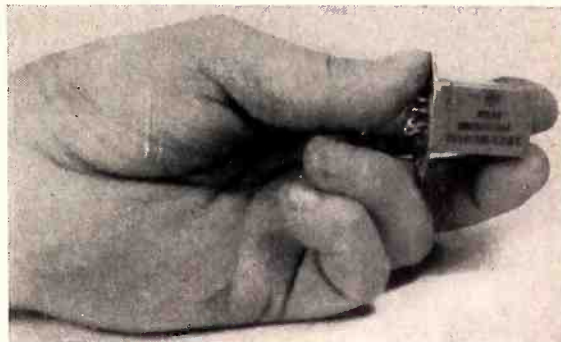
The G-E hermetically sealed relay operates in its own atmosphere, completely independent of conditions outside its rugged electro-tin plated, drawn-steel housing. During manufacture, the interior has been exhausted, vacuum baked to remove all moisture, filled with dry nitrogen to a pressure of one atmosphere and sealed. Thus, it always operates in the same clean, dry atmosphere, and at a constant pressure. Result, reliability of operation and extended service life. Operating mechanism is sealed and completely impervious. Used in the electrical systems and electronic equipment of military and civilian aircraft, in shipboard and portable land-based electronic equipment.

Ambient temp . . . -55 C to 125 C; Vibration . . . Withstands vibration from 10 up to 500 cps at 10 g with max. excursion of 0.060 in.; Shock . . . over 50 g; Mechanical damage . . . over 100 g; Terminals . . . Compression-glass header (solder hook or plug-in pins). Designed to meet or better all provisions of MIL-R-6106 (Joint Military Service Specifications for Relays) and AN3304, and performance requirements of MIL-R-757B. Glass reinforced Polyester compound for stack insulation provides greater dielectric strength and arc resistance plus superior impact strength—added life for the relay. Relay will withstand instantaneous voltage surges up to 1500 volts without failure. Write for Bulletin GEA-5729.



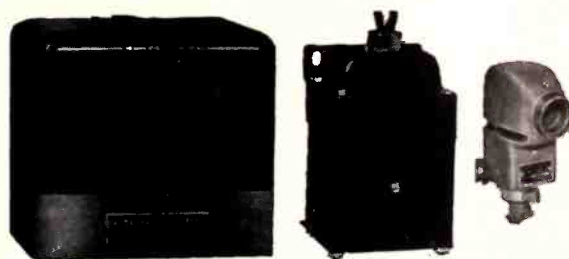
| Load Type | Normally Open Contacts | Normally Closed Contacts |
|-----------------------------------|------------------------|--------------------------|
| Resistive (28 v d.c.) | 5 amperes | 5 amperes |
| Resistive (115 v, 400 cycle A.C.) | 5 amperes | 5 amperes |
| Inductive | 1.5 amperes | 1.5 amperes |
| Motor | 1.5 amperes | 1.5 amperes |

RELAYS SUBMINIATURE RELAY

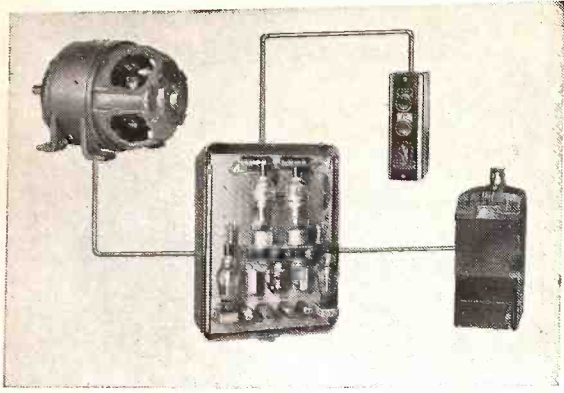


For electronic applications where high shock and vibration resistance, high speed, and low capacitance are essential. Ambient temperature range from -55 C to +200 C. Available with wide range of coil voltage for either DC or 400-cycle AC operation. Contacts single-pole, double-throw, rated 2 amp resistive at 28 volts DC or 115 volts AC. Vibration from 5 to 500 cps at 10 g acceleration with maximum excursion of 0.060 in. Available with plug-in or solder hook terminals. Size 3/4 in. dia, 1 in. high.

GENERAL-PURPOSE PHOTOELECTRIC RELAY



This general-purpose, photoelectric relay, CR7505—K100G3, including a double-pole, double-throw magnetic relay, operates from the interruption of a beam of light, making it simple for items on a production line to be counted easily and quickly. The relay also makes possible automatic weighing with a beam scale and automatic signaling for elevators or doors to save valuable time. Available with a complete line of accessories to operate over light-beam distances of 9 to 30 feet, up to 150 operations per minute. Write for Bulletin GEA-3533D.



THY-MO-TROL* DRIVE

Electronically Operated, Adjustable-speed Drive; Full-range, Stepless Speed Control Standard Ratings from Fractional- to 30-hp Larger Sizes Available

A complete equipment consisting of an anode transformer as required, control station, a rectifier panel, a control station, and a suitable d-c motor. It operates from any power line. Starting, stopping, reversing, and adjustment of speed are all controlled from the single compact control station. Acceleration is automatic, and motor protected against overload.

*Registered trade-mark of General Electric

Operating Features

- 1. FULL RANGE**—A single dial—small as a radio volume control, mounted in the push-button control station—gives complete adjustment of motor speed, from low to maximum, without steps. Gives exact speed wanted.
- 2. HOLDS SPEED**—Regardless of ordinary load fluctuations, Thy-mo-trol electronic circuits hold speed constant within extremely narrow limits. Provides both full speed-range and flat speed-load characteristics.
- 3. CURRENT-LIMIT ACCELERATION**—Regardless of the speed-control setting when the START button is pushed, full-wave Thy-mo-trol acceleration is smooth because of electronic current limiting. Starting is extremely fast because of sustained maximum torque during acceleration. No sudden application of excessive torque; therefore, no shock to the machine. No current peaks on the line.

4. FULL TORQUE—Although motor may be scarcely turned over, it can deliver full torque right up to the current-limit point. This means maximum machine output.

5. OTHER THY-MO-TROL ADVANTAGES—Speed can be preset before starting; saves space; no stop for speed change; easy to control automatically; operates direct from a-c line, no d-c supply needed.

Applications

Drill presses, to increase speed range and variety of work handled. Grinders, for precise speed selection and improved finish. Milling machines, to increase work range handled, and to simplify design. Propeller testing, for accurate, smooth speed control. Cable reels, to maintain constant tension. Conveyors, to match speed and many other applications.

FOR INFORMATION ON G-E APPARATUS PRODUCTS NOT SHOWN IN THESE PAGES

Space does not permit description of all G-E products related to the electronic field. Listed below are those not shown in preceding pages. For full details and bulletins write your nearest G-E Apparatus Sales Office.

| | | | |
|---|---|---|--|
| Amplifiers | Register GEA-5079 | Material Thickness GEC-485 | Pots and Tanks, Heating GEC-10 |
| PhotoCell Write for details | Register Cutter GEA-4371 | Nuclear Radiation GEA-5735 | Power Supplies, GEC-10 |
| Servo Write for details | Smoke & Combustion GEA-5254 | Photographic Exposure GEC-4926 | High Voltage GEC-751, GEC-7 |
| Strain Gage Write for details | Temperature GEC-1005 | Positioning GEA-2176 | Pyrometers and Potentiometer |
| Analizers | Vacuum GEC-1009 | Power Level Write for details | Pyrometers GEA-5534, GEC-7 |
| Noise GEC-665 | Converters | Pressure Write for details | Recorders |
| Surface Analyzers and | High Frequency GEA-5604 | Shorted Turn GEC-964 | Material Thickness Write for details |
| Comparators GEC-774 | Low Frequency GEA-5551, | Smoke & Combustion GEA-5254 | Potentiometer GEC-2 |
| Vibration GEC-853 | GEC-491 | Sound Level GEC-665 | Temperature GEA-55 |
| Wave Write for details | Detectors | Strain GEC-888 | Regulators |
| Arresters, Lightning GEA-2977 | Alpha } | Telemetering GEA-5233 | Current Write for details |
| Battery Chargers GEC-826 | Beta } GEA-693 | Temperature GEC-665 | Voltage GEA-21 |
| Bearings, Jewel GEC-370 | Flaw and Defect GEC-706 | Timing GEA-5108 | Rheostats GEC-4 |
| Bearings, Miniature GEC-370 | Leak GEC-233 | Vacuum GEA-4313 | Shunts, Meter GEC-2 |
| Blowers, Small Write for details | Vibration GEC-853 | Inverters Write for details | Spectrometers, Mass } GEC-5 |
| Bridges, Capacitance GEC-930 | F.H.P. Dynamometers } GEC-635 | Jewels, Glass GEC-370 | Spectrometers and } GEC-5 |
| Capacitors | Electrodynamometers } GEC-635 | Magnetic Analysis | Spectrographs |
| High Frequency GEA-4621 | Fatigue Testing Machine | Equipment GEC-777 | Spectrophotometers GEC-3 |
| Steatite Tube Write for details | Vibration GEC-309 | Magnetometers Write for details | Speedometers, Electric |
| Single Bushing, Case Style | Freq. (Constant) Controls GEC-910 | Meters | Write for details |
| Write for details | Furnaces | d'Arsonval GEC-368 | Switches |
| Chokes | High Frequency GEC-1005 | Decibel GEC-665 | Float Type GEC-10 |
| Audio } GEC-481 | Gages | Distortion and Noise GEC-665 | Lever Write for details |
| Filter } | Comparator GEC-774 | Field Intensity GEC-777 | Pressure Operated GEC-10 |
| Power } | Ionization Write for details | Field Strength GEC-777 | Toggle and Pushbutton GEA-152 |
| Communication Systems, | Paint Depth GEC-319 | Footcandle GEA-4926 | Vacuum GEC-10 |
| Carrier Current GEA-4691 | Pressure Write for details | Light GEA-4926 | Synchros GEA-21 |
| Controls | Strain Write for details | Phase Angle Write for details | Tachometers, Electronic GEC-2 |
| Counting Write for details | Vacuum GEA-4313, GEC-385 | RF Power Write for details | Telemetering Systems, |
| Elevator Leveling Write for details | Calvanometers GEC-694 | Sound Level GEC-665 | Electronic GEA-52 |
| Frequency GEC-910 | Generators | Vibration GEC-285 | Terminal Strips Write for details |
| Heat Treating GEA-3301 | Gas-engine-driven GEA-5299 | Viscosity GEC-339 | Testers |
| Humidity GEC-588 | Induction and Dielectric | Motors | Coating Thickness GEC-3 |
| Illumination Write for details | Heating Write for details | Fractional hp GEC-1009 | Coil GEC-9 |
| Inspection Write for details | Motor GEC-302 | Servo GEA-2176 | Insulation GEC-612, GEC-7 |
| Liquid Level GEA-6766 | Impulse Write for details | Synchronous GEA-5426, GEC-344 | Meter GEC-2 |
| Loop Regulation Write for details | Heating | Oscillographs | Thermocouples, Pyrometric GEC-7 |
| Machine Safety Write for details | Electronic—Accessories & | Recording } GEC-449 | Thermometers, Resistance GEC-56 |
| Material Thickness GEC-485 | Associated Equipment GEC-921 | Ovens, Electric Write for details | Timers |
| Mechanical Switch GEC-799 | Electronic Induction GEA-4945 | Photoflash Equipment, | Automatic Cycle GEC-48 |
| Motors GEC-1009 | Indicators | Electronic GEC-337 | Automatic Interval GEA-510 |
| Package Wrapping GEA-4371 | Antenna Position GEA-2176 | Photometers GEC-412 | Automatic Reset GEC-48 |
| Photographic Exposure GEC-287 | Broadcast Volume GEC-368 | Pilots, Automatic Write for details | Motor Operated GEC-52 |
| Positioning GEA-2176 | Dew Point GEC-583 | Pots, Soldering GEC-1005 | Sequence Write for details |
| Pressure GEA-821 | Film Thickness GEC-319 | | Vibration Analysis |
| Printing GEA-4683 | Illumination GEA-4926 | | Equipment GEC-285, GEC-85 |
| | Liquid Level GEA-3883 | | |

General information may be secured from the following bulletins: Industrial Heaters, GEC-1005; Measuring Equipment for laboratory and production testing, GEC-1016; Motors and Control, GEC-1009.

THERE'S A G-E ELECTRONIC TUBE FOR EVERY PURPOSE

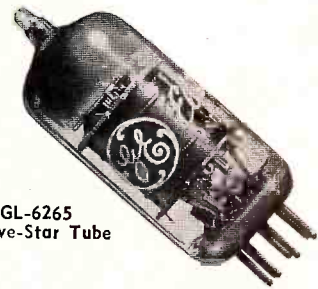
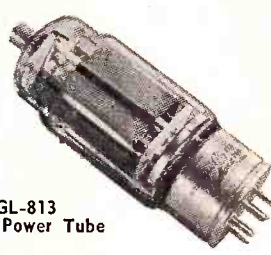
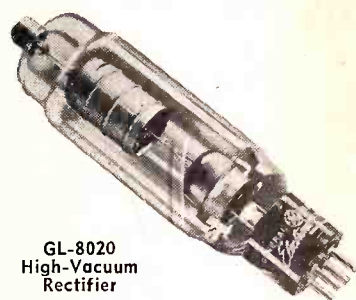
Essential Characteristics of Typical G-E Industrial and Transmitting Tubes, With Special Section on Recommended Receiving and Cathode-Ray Types and Five-Star High-Reliability Tubes.

FULL INFORMATION, DETAILED DATA ON THESE OR OTHER G-E TUBES SENT ON REQUEST.



THYRATRONS—Grid-controlled Gaseous-discharge Rectifier Tubes

| Type No. | No. of Electrodes | Cathode | | Anode | | | Control Characteristics | | Temp Range |
|---------------|-------------------|-------------|--------------|--------------------|--------------|------------|-------------------------|--------------|-----------------|
| | | Volts | Amp | Peak Inverse Volts | Peak Amp | Avg Amp | 100 V | 1000 V | |
| GL-2D21 | 4 | 6.3 | 0.6 | 1300 | 0.5 | 0.1 | -1.8 | -4.2@450V. | -55-+90* |
| GL-3C23 | 3 | 2.5 | 7.0 | 1250 | 6.0 | 1.5 | -2.5 | -5.5 | -40-+80§ |
| GL-5C21/C6J | 3 | 2.5 | 21.0 | 1250 | 12.8 | 6.4 | — | — | -55-+75§ |
| FG-27-A | 3 | 5.0 | 4.5 | 1000 | 10.0 | 2.5 | -2.0 | -8.0 | 40-80§ |
| FG-81-A | 3 | 2.5 | 5.0 | 500 | 2.0 | 0.5 | -3.0 | -5.25@500V. | -20-+50* |
| FG-97 | 4 | 2.5 | 5.0 | 1000 | 2.0 | 0.5 | +0.5 | -13.0 | 40-80§ |
| FG-98-A | 4 | 2.5 | 5.0 | 500 | 2.0 | 0.5 | -5.0 | -11.0@500V. | -20-+50* |
| FG-105 | 4 | 5.0 ±5.5 | 10.0 11.0 | 2500 750 | 40.0 77.0 | 6.4 2.5 | +1.0 +1.0 | -9.0 -9.0 | 40-80 30-95§ |
| FG-154 | 4 | ±5.5 | 10.0 | 10000 | 16.0 | 4.0 | +1.0 | -9.0 | 25-50§ |
| FG-172 | 4 | 5.0 ±5.5 | 10.0 11.0 | 2000 750 | 40.0 77.0 | 6.4 2.5 | +1.0 +1.0 | -9.0 -9.0 | 40-80 30-95§ |
| GL-393-A | 3 | 2.5 | 7.0 | 1250 | 6.0 | 1.5 | -2.5 | -5.5 | -40-+80§ |
| GL-414 | 4 | 5.0 | 20.0 | 2000 | 100.0 | 12.5 | 0 | -10.0 | 40-80§ |
| GL-502-A | 4 | 6.3 | 0.6 | 1300 | 1.0 | 0.100 | -1.0 | -3.5@650V. | -55-+90* |
| GL-5544 | 3 | 2.5 | 12 | 1500 | 40.0 | 3.2 | 0 | -7.0 | -55-+70* |
| GL-5545 | 3 | 2.5 | 21 | 1500 | 80.0 | 6.4 | 0 | -7.0 | -55-+70* |
| GL-5557/FG-17 | 3 | 2.5 | 5.0 | 5000 | 2.0 | 0.5 | -2.0 | -7.0 | 40-80§ |
| GL-5559/FG-57 | 3 | 5.0 | 4.5 | 1000 | 15.0 | 2.5 | -1.75 | -6.5 | 40-80§ |
| GL-5560/FG-95 | 4 | 5.0 ±5.5 | 4.5 4.5 | 1000 1000 | 15.0 30.0 | 2.5 0.5 | +1.0 +1.0 | -9.0 -9.0 | 40-80 40-80§ |
| GL-5662 | 3 | 6.3 | 0.15 | 200 | Fuse Tube | | -3.5 | -5.0@160V. | -55-+90* |
| GL-5663 | 4 | 6.3 | 0.150 | 500 | 0.06 | 0.020 | -1.5 | -2.5@500V. | -55-+90§ |
| GL-5720/FG-33 | 3 | 5.0 | 4.5 | 1000 | 15.0 | 2.5 | +9.5 | +9.5 | 35-80§ |
| GL-5727 | 4 | 6.3 | 0.60 | 1300 | 0.5 | 0.1 | -1.0 | -3.5@450V. | -75-+90* |
| GL-5728/FG-67 | 3 | 5.0 | 4.5 | 1000 | 15.0 | 2.5 | +4.0 | 0 | 40-80§ |
| GL-5830/FG-41 | 3 | 5.0 | 20.0 | 10000 | 75.0 | 12.5 | +8.0 | +2.0 | 40-65§ |
| GL-5855 | 3 | 2.5 | 34.0 | 1500 | 150 | 12.5 | +8.0 | -9.0 | -55-+70* |
| GL-5948 | 3 | 6.3 | 30.0 | 25000 | 1000 | 1.0 | — | — | -50-+75* |
| GL-6011 | 3 | 2.5 | 9.0 | 1250 | 30.0 | 2.5 | 0 | -6.0 | -40-+80§ |
| GL-6044 | 3 | 2.5 | 17.0 | 500 | 77.0 | 6.4 | -0.5 | -2.5@500V. | -55-+85* |
| GL-6130 | 3 | 6.3 | 2.3 | 3000 | 35.0 | 0.045 | — | — | -50-+90* |



*Temperature ratings are expressed in terms of the ambient temperature range over which the tubes will operate.
 †These ratings apply only when the tube is used for ignitor firing.
 ‡These ratings apply only when the tube is used in thyatron welding-control service.
 §Temperature range condensed mercury C.

IGNITRONS—High-peak current, Pool-cathode Tubes

| Welding-Control Types* Water-Cooled | Size | Supply Volts | Maximum Ratings | | | |
|-------------------------------------|------|---|-----------------|--|------------------------------------|--------------------------|
| | | | Kva Demand | Corresponding Average Anode Current, Amp | Maximum Average Anode Current, Amp | Corresponding Kva Demand |
| GL-5550/GL-415 | A | 250-600 rms | 300 | 12.1 | 22.4 | 100 |
| GL-5551/FG-271 | B | 250-600 rms | 600 | 30.2 | 56.0 | 200 |
| GL-5552/FG-235-A | C | 250-600 rms | 1200 | 75.6 | 140 | 400 |
| GL-5553-A | D | 250-600 rms | 2400 | 192.0 | 355 | 800 |
| GL-5822 | C | 220-600 rms | 424 | 20 | 70 | 188 |
| GL-6346 | B | Temperature-controlled types. Ratings same as for 5551/FG-271, 5552/FG-235-A, and 5553/FG-258-A respectively. | | | | |
| GL-6347 | C | | | | | |
| GL-6348 | D | | | | | |

| Power-Rectifier Types† | Typical D-c Output Voltage | Maximum Ratings | | | |
|------------------------|----------------------------|-----------------------------|----------|------------------------|----------------------|
| | | Peak Inv. and Forward Volt. | Peak Amp | Continuous Average Amp | Average Amp 1 Minute |
| GL-5564/GL-507 | { 300△ 600△ | 2100 | 3600 | 400 | 800 |
| GL-5779 | { 125△ 350 | 2100 | 2400 | 300 | 600 |
| GL-5554/FG-259-B | { 300△ 600△ | 2100 | 900 | 100 | 200 |
| GL-5555/FG-238-B | { 300△ 600△ | 2100 | 600 | 75 | 150 |
| GL-5630 | { 300△ 600△ | 2100 | 1800 | 200 | 400 |
| GL-6228/GL-506 | { 17500○ 17500○ | 20000 | 1200 | 150 | 300 |
| | | 20000 | 200 | 50 | 50 |
| | | 20000 | 900 | 150 | 300 |

* Ratings are for voltages of 600 volts rms and below.
 † For frequency-changer welding control. Peak current = 1500 amperes, peak inverse and forward voltage = 1200 volts.

† Typical ignitor requirements for power-rectifier ignitrons are 75-125 volts, 15-20 amperes. Maximum requirements are 150 volts, 40 amperes. ○ Six-phase double-way circuits. △ Six-phase double-wye single-way circuits.

All data subject to change without notice. The listing of any G-E tube type does not necessarily imply availability.

GRID-CONTROLLED HIGH-VACUUM TUBES—For Use as Modulators, Amplifiers, Oscillators



GL-6347
TEMPERATURE-CONTROLLED
IGNITRON



GL-6182
5 Kilowatt UHF-TV
Transmitting Tube



GL-1Q26-A
REFERENCE CAVITY



71EP4-B
G-E ALUMINIZED PICTURE TUBE

| Type No. | No. of Electrodes | Cathode | | Plate | | | | Max Freq Mc | | Mu | Gm |
|---------------|-------------------|---------|--------|-----------|---------|------------------|------------------------|-------------------|-----------------------|------|-------|
| | | Volts | Amp | Max Volts | Max Amp | Max Input, Watts | Max Dissipation, Watts | @ Max Plate Input | @ 50% Max Plate Input | | |
| GL-2C39-A | 3 | 6.3 | 1.0 | 1000 | 0.125 | 100 | 100 | 2500 | | 110 | 22000 |
| GL-2C39-B | 3 | 6.3 | 1.0 | 1000 | 0.125 | | 100 | 2500 | | 100 | 24000 |
| GL-2C40 | 3 | 6.3 | 0.75 | 500 | 0.025 | | 6.5 | 3370 | | 36.0 | 4850 |
| GL-2C42* | 3 | 6.3 | 0.9 | 3000 | | | 12.0 | 1300 | | 48.0 | 8000 |
| GL-2C43 | 3 | 6.3 | 0.9 | 500 | 0.040 | | 12.0 | 3370 | | 48.0 | 8000 |
| GL-2C46* | 3 | 6.3 | 0.75 | 500 | 0.040 | | 12.0 | 1300 | | 60.0 | 3500 |
| GL-4C21 | 3 | 10.0 | 3.25 | 1250 | 0.175 | 220 | 100 | 15.0 | 80 | 12.0 | 3600 |
| GL-5C24 | 3 | 10.0 | 5.2 | 1750 | 0.107 | 250 | 160 | | | 8.0 | 5500 |
| GL-7C29 | 3 | 10.5 | 28.0 | 3000 | 0.400 | | | 110 | | 29.0 | |
| GL-7D21 | 4 | 6.3 | 30.0 | 4000 | 1.0 | 3000 | 1200 | 110 | | 8.0 | |
| GL-9C24 | 3 | 6.3 | 24.0 | 6500 | 2.0 | 12000 | 5000 | 220 | | 21.0 | 11000 |
| GL-12AY7 | 6† | 6.3 | 0.3 | 300 | | | 1.5† | | | 40.0 | 1750 |
| GL-146 | 3 | 10.0 | 3.25 | 1500 | 0.200 | 300 | 125 | 15.0 | 60 | 75.0 | |
| GL-152 | 3 | 10.0 | 3.25 | 1500 | 0.200 | 300 | 125 | 15.0 | 60 | 25.0 | |
| GL-159 | 3 | 10.0 | 9.60 | 2000 | 0.400 | 800 | 250 | 15.0 | 35 | 20.0 | |
| GL-169 | 3 | 10.0 | 9.60 | 2000 | 0.400 | 800 | 250 | 15.0 | 35 | 85.0 | |
| GL-211 | 3 | 10.0 | 3.25 | 1250 | 0.175 | 220 | 100 | 15.0 | 80 | 12.0 | |
| GL-242-C | 3 | 10.0 | 3.25 | 1250 | 0.150 | 188 | 100 | 6.0 | 30 | 12.5 | |
| FP-265 | 3 | 10.0 | 5.20 | 1500 | 0.200 | 350 | 160 | | | 75.0 | |
| FP-285 | 3 | 10.0 | 3.25 | 1350 | 0.200 | 270 | 100 | | | 12.0 | |
| GL-807 | 5 | 6.3* | 0.90 | 600 | 0.100 | 60 | 25.0 | 60.0 | 125 @ 55% | 8.0 | 6000 |
| | | | | 750 | 0.100 | 75 | 30.0 | | | | |
| GL-810 | 3 | 10.0 | 4.50 | 2000 | 0.250 | 500 | 125 | 30.0 | 100 | 36.0 | |
| | | | | 2250 | 0.275 | 620 | 150 | | | | |
| GL-813 | 5 | 10.0 | 5.00 | 2000 | 0.180 | 360 | 100 | 30.0 | 120 @ 50% | 8.5 | 3750 |
| | | | | 2250 | 0.225 | 500 | 125 | | | | |
| GL-814 | 5 | 10.0 | 3.25 | 1250 | 0.150 | 180 | 50.0 | 30.0 | 75 @ 64% | | 3300 |
| | | | | 1500 | 0.150 | 225 | 65.0 | | | | |
| GL-838 | 3 | 10.0 | 3.25 | 1250 | 0.175 | 220 | 100 | 30.0 | 120 | | |
| GL-851 | 3 | 11.0 | 15.50 | 2500 | 1.00 | 2500 | 750 | 3.0 | 15 | 20.5 | |
| GL-862-A | 3 | 33.0 | 207 | 20000 | 10.00 | 200000 | 100000 | 1.6 | | 45.0 | |
| GL-880 | 3 | 12.6 | 320 | 15000 | 4.5 | 67500 | 20000 | 25.0 | 100 | 20.0 | |
| GL-889-A | 3 | 11.0 | 120 | 8500 | 2.00 | 16000 | 5000 | 50.0 | 150 | 21.0 | |
| GL-889R-A | 3 | 11.0 | 120 | 8500 | 2.00 | 16000 | 5000 | 40.0 | 100 | 21.0 | |
| GL-891 | 3 | 11.0† | 60.0 | 12000 | 2.00 | 18000 | 6000 | 1.6 | 20 | 8.0 | |
| GL-891-R | 3 | 11.0† | 60.0 | 10000 | 2.00 | 15000 | 4000 | 1.6 | 20 | 8.0 | |
| GL-892 | 3 | 11.0† | 60.0 | 15000 | 2.00 | 30000 | 10000 | 1.6 | 20 | 50.0 | |
| GL-892-R | 3 | 11.0† | 60.0 | 12500 | 2.00 | 18000 | 4000 | 1.6 | 20 | 50.0 | |
| GL-893-A | 3 | 10.0‡ | 61.0‡ | 20000 | 4.00 | 70000 | 20000 | 5.0 | 40 | 34.5 | |
| GL-893A-R | 3 | 10.0‡ | 61.0‡ | 20000 | 4.00 | 70000 | 20000 | 5.0 | 25 | 34.5 | |
| GL-898-A | 3 | 16.5†† | 70.0†† | 20000 | 10.00 | 200000 | 100000 | 1.6 | | 45.0 | 17500 |
| GL-1603 | 5 | 6.3 | 0.3 | 250 | 0.006 | | | | | 20.0 | 1900 |
| GL-5518 | 3 | 6.3 | 2.50 | 7500 | 2.0 | 12000 | 4000 | 110 | | 22.0 | 12000 |
| GL-5549 | 3 | 12.6 | 56.0 | 8500 | 1.25 | 10000 | 4000 | 50.0 | | 23.0 | |
| GL-5556/PJ-8 | 3 | 4.5 | 1.1 | 350 | 0.040 | | | | | | |
| GL-5610 | 3 | 6.3* | 0.15 | 300 | 0.017 | 14 | 10.0 | 6.0 | 30 | 8.5 | |
| GL-5654 | 5 | 6.3* | 0.175 | 180 | 0.007 | | 3.0 | | | 14.0 | 4000 |
| GL-5670 | 6† | 6.3* | 0.350 | 300 | 0.018 | | 1.7 | | | | 5000 |
| GL-5674 | 6 | 3.8 | 0.090 | 10 | 0.0001 | | 1.5 | | | 35.0 | 5500 |
| GL-5680 | 3 | 13.0 | 36.0 | 6000 | 2.0 | | | | | | |
| GL-5686 | 5 | 6.3* | 0.35 | 250 | 0.040 | 6000 | 2500 | 5.0 | | 25.0 | |
| GL-5718 | 3 | 6.3* | 0.15 | 165 | 0.022 | 10 | 7.5 | 160 | | | 3100 |
| GL-5719 | 3 | 6.3* | 0.15 | 165 | 0.003 | | 3.3 | | | 27.0 | 6500 |
| GL-5725 | 5 | 6.3* | 0.175 | 180 | | | 0.55 | | | 70.0 | 2300 |
| GL-5739/FP-62 | 3 | 4.5 | 1.48 | 112.5 | 0.010 | | 1.7 | | | | 3200 |
| GL-5740/FP-54 | 4 | 2.5 | 0.09 | 6 | 0.006 | | | | | | |
| GL-5742/PJ-7 | 3 | 4.5 | 1.1 | 350 | 0.040 | | | | | | |
| GL-5743/PJ-21 | 3 | 4.5 | 1.1 | 350 | 0.019 | 14 | 10.0 | 6.0 | | 30.0 | |
| GL-5749 | 5 | 6.3* | 0.30 | 300 | | | 7.5 | | | 3.0 | |
| GL-5750 | 6 | 6.3* | 0.30 | 300 | | | 3.0 | | | | 4400 |
| GL-5751 | 6† | 6.3* | 0.350 | 330 | 0.001 | | 1.0 | | | | |
| | | | | | | | 1.1† | | | 70.0 | 1200 |
| GL-5797 | 5 | 26.5* | 0.045 | 50 | | | | | | | |
| GL-5798 | 6† | 26.5* | 0.090 | 50 | | | 0.8 | | | | 3450 |
| GL-5814-A | 6† | 12.6* | 0.175 | 300 | 0.011 | | 0.4† | | | | 3150 |
| | | | | | | | 2.75 | | | 19.5 | 3100 |
| GL-5824 | 5 | 25.0* | 0.3 | 200 | 0.069 | | 12.5 | | | | 5000 |
| GL-5840 | 5 | 6.3* | 0.15 | 165 | 0.007 | | 1.1 | | | | 5000 |
| GL-5844 | 6† | 6.3* | 0.30 | 175 | | | 0.5† | | | 27.0 | 3400 |
| GL-5899 | 5 | 6.3* | 0.15 | 165 | 0.007 | | 1.1 | | | | 4500 |
| GL-5902 | 5 | 6.3* | 0.45 | 165 | 0.030 | | 4.0 | | | | 4200 |
| GL-5965 | 6† | 12.6* | 0.225 | 300 | 0.010 | | 1.5 | | | 47.0 | 6500 |
| | | | | | | | | | | | |
| GL-6005 | 5 | 6.3* | 0.45 | | | | | | | | |
| GL-6017 | 3 | 10.0* | 17.0 | 3000 | 0.700 | | 12.0 | | | | 4100 |
| GL-6019 | 4 | 6.3 | 24.0 | 4000 | 0.7 | 2000 | 1000 | 400 | | 40.0 | |
| GL-6021 | 6† | 6.3 | 0.3 | 165 | 0.022 | 2800 | 2000 | 900 | | 10.0 | |
| GL-6039 | 3 | 5.0 | 78.0 | 7500 | 2.25 | 16000 | 7000 | 220 | | 35.0 | 5400 |
| GL-6046 | 5 | 25.0* | 0.30 | 200 | 0.047 | | 10.0 | | | 21.0 | |
| GL-6072 | 6† | 12.6* | 0.175 | 300 | 0.003 | | 1.5 | | | 44.0 | 8000 |
| | | | | | | | | | | | 1750 |
| GL-6111 | 6† | 6.3* | 0.3 | 165 | 0.022 | | | | | | |
| GL-6112 | 6† | 6.3* | 0.3 | 165 | 0.003 | | 1.1 | | | 20.0 | 5000 |
| GL-6134 | 5 | 6.3* | 0.45 | 300 | 0.010 | | 0.55 | | | 70.0 | 2500 |
| GL-6135 | 3 | 6.3* | 0.175 | 300 | 0.011 | | 3.0 | | | | 9000 |
| GL-6136 | 5 | 6.3* | 0.3 | 300 | 0.010 | | 3.5 | | | 19.5 | 3100 |
| GL-6137 | 5 | 6.3* | 0.3 | 300 | 0.013 | | 3.0 | | | | 5200 |
| GL-6182 | 4 | 6.3* | 15.0 | 9000 | 1.6 | 13000 | 7000 | 900 | | | 2350 |
| GL-6183 | 4 | 6.3* | 24.0 | 4000 | 0.7 | 2500 | 1500 | 900 | | 20.0 | |
| GL-6201 | 6 | 12.6* | 0.15 | 300 | 0.010 | | 2.5 | | | 10.0 | |
| | | | | | | | | | | 60.0 | 5500 |
| GL-6251 | 4 | 5.5 | 190 | 7000 | 8.0 | 50000 | 25000 | 220 | | | |
| GL-6283 | 4 | 6.3* | 3.6 | 1600 | 0.300 | 350 | 200 | 900 | | 20.0 | |
| GL-6299 | 3 | 6.3 | 0.350 | 200 | 0.011 | | 2.0 | 3000 | | 10.0 | |
| GL-8002 | 3 | 16.0 | 38.0 | 3500 | 1.00 | 3000 | 1200 | 150 | 300 | 115 | 12000 |

NOTES FOR TABLE

Figures in bold types are ICAS ratings.
 *Heater-type cathode.
 †Single- or two-phase filament. Voltage is per unit.
 ‡Single-, three-, or six-phase filament. Voltage is per strand, current is per terminal.
 ††Per section.
 †††Single- or three-phase filament. Voltage is per strand, current is per strand.
 #Voltage to neutral.
 (◊)Forced-air-cooled type. (◊)Water-cooled type.

All data subject to change without notice. The listing of any G-E tube type does not necessarily imply availability.

CATHODE-RAY TUBES—For Measurement Indicator and Monitoring Use

| Type No. | Screen Diam Min Inches | Focusing and Deflection | Screen Fluorescence | High-voltage Electrode Max Volts |
|-------------|------------------------|-------------------------|---------------------|----------------------------------|
| GL-3MP1 | 2 1/4 | Electrostatic | Green | 2500 |
| GL-3UP1 | 1 3/4 x 1 1/8 | Electrostatic | Green | 2500 |
| GL-5FP7-A | 4 1/4 | Magnetic | Blue | 7700 |
| GL-5FP14 | 4 1/4 | Magnetic | Blue† | 8000 |
| vGL-50P4 | 4 1/4 | Magnetic | White | 12000 |
| GL-7BP7-A | 6 | Magnetic | Blue* | 8000 |
| vGL-7UP7 | 6 | Magnetic | Blue | 10000 |
| GL-7VP1 | 6 | Electrostatic | Green | 4000 |
| GL-10KP7 | 9 | Magnetic | Blue | 10000 |
| GL-12DP7-A | 10 | Magnetic | Blue-White* | 10000 |
| GL-12SP7 | 11 | Magnetic | Blue | 10000 |
| vGL-12SP7-B | 11 | Magnetic | Blue | 10000 |
| vGL-17ADP7 | 14 1/2 x 11 1/8 | Magnetic | Blue | 16000 |

* Phosphorescence—greenish-yellow. † Phosphorescence—orange. v Aluminized Tube.

GASEOUS OR MERCURY-VAPOR RECTIFIER TUBES

| Type No. | No. of Electrodes | Cathode | | Anode | | | Temp Range Condensed Mercury C |
|----------------|-------------------|---------|------|------------|----------|---------|--------------------------------|
| | | Volts | Amp | Peak Volts | Peak Amp | Avg Amp | |
| GL-4B32 | 2 | 5.0 | 7.5 | 10000 | 5.0 | 1.25 | -55 to +70* |
| FG-166 | 2 | 2.5 | 100 | 1500 | 75 | 20.0 | 20-60 |
| GL-266 B | 2 | 5.0 | 30.0 | 22000 | 40 | 10.0 | 30-40 |
| FG-280 | 2 | 5.0 | 10.0 | 2000 | 40 | 6.4 | 40-80 |
| GL-575 A | 2 | 5.0 | 10.0 | 15000 | 6 | 1.5 | 20-50 |
| GL-857 B | 2 | 5.0 | 30.0 | 22000 | 40 | 10.0 | 30-40 |
| GL-869 B | 2 | 5.0 | 19.0 | 20000 | 10 | 2.5 | 30-40 |
| GL-870 A | 2 | 5.0 | 65.0 | 16000 | | 75.0 | 35-40 |
| GL-872 A | 2 | 5.0 | 7.5 | 10000 | 5 | 1.25 | 20-60 |
| GL-5558/FG 32 | 2 | 5.0 | 4.5 | 5000 | 15 | 2.5 | 30-60 |
| GL-5561/FG 104 | 2 | 5.0 | 10.0 | 3000 | 40 | 6.4 | 40-80 |
| GL-8008 | 2 | 5.0 | 7.5 | 10000 | 5 | 1.25 | 20-60 |

* Gas-filled tube. Temperature ratings expressed in terms of ambient temperature range over which tube will operate.

HIGH-VACUUM RECTIFIER TUBES

| Type No. | No. of Electrodes | Cathode | | Ratings Per Plate | | | Average Dissipation Watts |
|-----------------|-------------------|---------|-------|-------------------|---------|-------------|---------------------------|
| | | Volts | Amp | Max Inv Volts | Max Amp | Average Amp | |
| KC-1 | 2 | 9.0 | 32.0 | 100000 | 1.0 | ..... | ..... |
| GL-2B22 | 2 | 6.3* | 0.75 | 100 | 0.7 | ..... | ..... |
| GL-2B23 □ | 2 | 6.3* | 0.3 | 150 | 0.030 | 0.030 | 5.0 |
| KC-3 | 2 | 12.5 | 32.0 | 150000 | 1.0 | ..... | ..... |
| 5R4-GY† | 3 | 5.0 | 2.0 | 2800 | 0.650 | 0.125 | ..... |
| GL-218 | 2 | 11.0 | 14.75 | 50000 | 0.750 | ..... | ..... |
| FP-400 | 2 | 4.0 | 2.25 | 125 | 0.025 | ..... | ..... |
| GL-411 | 2 | 10.0 | 14.5 | 100000 | 0.300 | ..... | 500 |
| GL-5625/KC-4 | 2 | 20.0 | 24.5 | 150000 | 1.0 | ..... | 750 |
| GL-5726† | 2 | 6.3* | 0.30 | 330 | 0.054 | ..... | ..... |
| GL-5741/FP-85-A | 2 | 10.0 | 5.0 | 20000 | 0.100 | 0.020 | ..... |
| GL-5896† | 4 | 6.3* | 0.3 | 460 | 0.350 | 0.060 | ..... |
| GL-5973 | 2 | 16.0 | 19.1 | 75000 | 5.0 | ..... | 850 |
| GL-6087† | 3 | 5.0* | 2.0 | 1400 | 1.7 | 0.375 | ..... |
| GL-6202† | 3 | 6.3* | 0.6 | 1250 | 1.45 | 0.200 | ..... |
| GL-6203† | 3 | 6.3* | 0.9 | 1250 | 1.8 | 0.270 | ..... |
| GL-6215 | 2 | 1.25 | 0.2 | 18000 | 0.030 | 0.008 | ..... |
| GL-8020 | 2 | 5.0 | 6.0 | 40000 | 0.750 | 0.100 | ..... |
| | | 5.8 Δ | ..... | 12500 Δ | 2 Δ | ..... | 75 Δ |

* Heater type cathode. † Twin diodes. Δ Surge limiting diode operation.
□ Magnetically controlled diode.

G. E. Also Offers a Complete Line of:

- Glow Tubes
- TV Camera Tubes
- Ballast Tubes
- Phototubes
- Phasitrons
- Vacuum Switches,
- Gages and Capacitors
- Klystrons

MICROWAVE RADAR DEVICES—Gas Switching Tubes; Reference Cavities for Use in Microwave Circuits

| TR Type No. | Type | Frequency Range Megacycles | Maximum Peak Power Kilowatts | Min Firing Power Kilowatts | Max Spike Leakage Energy Ergs | Max Flat Leakage Power Milliwatts | Max Recovery Time—Micro seconds | Max Arc Loss Decibels |
|-------------|---------------------|----------------------------|------------------------------|----------------------------|-------------------------------|-----------------------------------|---------------------------------|-----------------------|
| GL-1B24-A | Narrow Band Tunable | 8490-9600 | 100 | 5 | ..... | 30 | 4 | ..... |
| GL-1B58 | Band pass | 2659-2969 | ..... | 10 | 0.4 | ..... | 15 | 0.5 @ 2802 MC* |
| GL-1B63-A | Broadband Fixed | 8490-9578 | 250 | 4 | 0.20 | 40 | 10 | 0.8 |
| GL-6035 | Broadband Fixed | 8490-9578 | 250 | 4 | 0.20 | 40 | 10 | 0.8 |
| GL-6117 | Band pass | 2659-2969 | ..... | 10 | 0.4 | ..... | 15 | 0.5 @ 2802 MC* |

| PRE-TR Type No. | Type | Frequency Range Megacycles | Max Peak Power Kilowatts | Min Firing Power Kilowatts | Max Leakage Energy | Min Leakage Energy | Max Recovery Time Microseconds | Max Arc Loss Decibels |
|-----------------|-----------------|----------------------------|--------------------------|----------------------------|------------------------|------------------------|--------------------------------|-----------------------|
| GL-1B38 | Broadband Fixed | 2690-2910 | 1000 | 50 | 4.8 x 10 ⁻⁴ | 0.8 x 10 ⁻⁴ | 15 | 0.3 |

| A-TR Type No. | Type | Frequency Range Megacycles | Max Peak Power Kilowatts | Min Firing Power Kilowatts | Max Equivalent Conductance | Max Loaded Q | Max Recovery Time—Microseconds | Max Arc Loss Decibels |
|---------------|-----------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------|--------------------------------|-----------------------|
| GL-1B35-A | Broadband Fixed | 9000-9600 | 250 | 5 | 0.1 | 6.5 | 8.0 | 0.8 |
| GL-1B37-A | Broadband Fixed | 8500-9000 | 250 | 5 | 0.1 | 6.5 | 8.0 | 0.8 |
| GL-1B44 | Broadband Fixed | 2680-2820 | 1000 | 20 | 0.05 | 6.5 | ..... | 0.4 |
| GL-1B56 | Broadband Fixed | 2775-2925 | 1000 | 20 | 0.05 | 5.5 | ..... | 0.4 |

| Reference Cavities Type No. | Type | Resonant Frequency Megacycles | Maximum Frequency Deviation from -40C to 100 C Megacycles | Insertion Loss Decibels | Loaded Q |
|-----------------------------|-------|-------------------------------|---|-------------------------|-----------|
| GL-1Q26-A | Fixed | 9279.7-9280.3 | ±0.3 | 5-8 | 1000-1500 |
| GL-6301 | Fixed | 9269.7-9270.3 | ±0.4 | 5-8 | 1000-1500 |
| GL-6452 | Fixed | 9349.7-9350.3 | ±0.4 | 6 Max. | 1500-2000 |

* Max. Insertion Loss Decibels.
All data subject to change without notice. The listing of any G-E tube type does not necessarily imply availability.

G-E FIVE-STAR HIGH-RELIABILITY TUBES
FOR ANY CRITICAL APPLICATION - - -

A complete line of high-reliability tubes—33 miniatures and subminiatures (listed below)—for every critical application where reliable tube operation is a "must"! Recent price reductions have cut costs in some cases by as much as 50% over original prices for many types.

Investigate your tube applications now for sockets that can be filled by a Five-Star High-Reliability type. Change to Five-Star tubes for increased equipment reliability, increased customer good will. Booklet ETD-548-C gives full facts. Write today!

G-E FIVE-STAR HIGH-RELIABILITY TUBES

| MINIATURES | | | | SUBMINIATURES | | | |
|------------|----------------|---------------------------------------|------------|------------------|--|---------|--------------------------------|
| Proto-type | Five-Star Type | Functional Description | Proto-type | Five-Star Type | Functional Description | Type | Functional Description |
| 6AK5 | GL-5654 | Sharp-cutoff R-F Pentode | 5Y3-GT | GL-6087 Glass | Full-wave Rectifier | GL-5718 | Medium-mu Triode |
| 2C51 | GL-5670 | High-frequency Medium-mu Twin-triode | 6AC7 | GL-6134 Metal | Sharp-cutoff R-F Pentode | GL-5719 | High-mu Triode |
| None | GL-5686 | Beam-power Amplifier | 6C4 | GL-6135 | Medium-mu Triode | GL-5797 | Semi-remote Cutoff R-F Pentode |
| 6AS6 | GL-5725 | Dual-control Sharp-cutoff R-F Pentode | 6AU6 | GL-6136 | Sharp-cutoff R-F Pentode | GL-5798 | Medium-mu Twin-triode |
| 6AL5 | GL-5726 | Twin-Diode | 6SK7 | GL-6137 Metal | Remote-cutoff R-F Pentode | GL-5840 | Sharp-cutoff R-F Pentode |
| 2D21 | GL-5727 | Thyratron | 12AT7 | GL-6201 | High-frequency High-mu Twin-triode | GL-5896 | Twin-diode |
| 6BA6 | GL-5749 | Remote-cutoff R-F Pentode | 6X4 | GL-6202 | Full-wave Rectifier | GL-5899 | Semi-remote Cutoff R-F Pentode |
| 6BE6 | GL-5750 | Pentagrid Converter | None | GL-6203 | Full-wave Rectifier | GL-5902 | Beam-power Amplifier |
| 12AX7 | GL-5751 | High-mu Twin-triode | 6BH6 | GL-6265 | Sharp-cutoff R-F Pentode | GL-6021 | Medium-mu Twin-triode |
| 12AU7 | GL-5814-A | Medium-mu Twin-triode | None | GL-6386 | High-frequency Medium-mu Remote-Cutoff Twin-triode | GL-6111 | Medium-mu Twin-triode |
| 6AQ5 | GL-6005 | Beam-power Amplifier | | | | GL-6112 | High-mu Twin-triode |
| 12AY7 | GL-6072 | Low-noise High-mu Twin-triode | | | | | |

G-E RECOMMENDED TYPES Receiving and Cathode-Ray Tubes for AM, FM, Television Receivers

This list of Recommended Types covers the new equipment demands of the manufacturers of AM, FM, and television receivers and provides a convenient reference to these frequently used types.

Because these types were selected to cover the needs of the commercial radio and television manufacturers, the listing excludes special-purpose receiving types as military, computer, and industrial receiving tubes. The omission of such types does not imply a lack of their suitability for their own class of service.

| Filament | Diodes | Triodes | | | Hep-todes | Gated-Beam Tubes |
|-----------------------|--|---|--------------------------------------|---------------------------------|----------------|------------------|
| | | Single | Twin | With Diodes | | |
| 0 through 2.8 volts | 1B3-GT | | | | 1R5 | |
| 5.0 through 6.3 volts | 5U4-GA 6AL5 6AX4-GT 6W4-GT 6X4 6X5-GT | 6AB4 6AP4 6AH4-GT* 6C4 6S4* | 6BK7-A 6J6 6SN7-GTA* | 6AV6 6SQ7 6T8 | 6BE6 6SA7 | 6BN6 |
| 12.6 volts and above | 25W4-GT 35W4 35Z5-GT | | 12AT7 12A U7* 12A X7 12BH7* | 12AV6 12SQ7 12SA7 12T8 | 12BE6 12SA7 | |

| Filament | Pentodes | | | | | | TV Picture Tubes |
|-----------------------|--------------------|-------------|-------------|----------------|--|-------------------------------------|------------------|
| | Voltage Amplifiers | | | Remote Cutoff | Power Amplifiers | | |
| | Sharp Cutoff | | | | Output Amplifiers | TV Horizontal Deflection Amplifiers | |
| | Single | With Diodes | With Triode | | | | |
| 0 through 2.8 volts | 1U4 | 1U5 | | 1T4 | 3S4 3V4 | | |
| 5.0 through 6.3 volts | 6AU6 6CB6 | | 6U8 | 6BA6 6SK7 | 6AQ5* 6B K5 6K6-GT* 6V6-GT* 6W6-GT* | 6AV5-GT* 6BQ6-GA* 6CD6-G* | |
| 12.6 volts and above | | | | 12BA6 12SK7 | 12BY7 12V6-GT 25L6-GT 35C5 50C5 50L6-GT | 25AV5-GT* 25BQ6-GA* | |

G-E RECEIVING TUBES
G-E CATHODE-RAY TUBES

In addition to the recommended types, G-E also produces a wide line of other high-quality, dependable receiving tubes and cathode-ray tubes for AM, FM, television and industrial and measurement applications. For further information, contact your nearest Tube Department Regional Sales office listed below.

Type numbers of metal tubes are shown in bold-face type.

Type numbers of miniature tubes are shown in italics.

* Rated for TV sweep applications.

TUBE DEPARTMENT REGIONAL SALES OFFICES

EASTERN REGION
General Electric Company
Tube Department
200 Main Avenue
Clifton, New Jersey
Telephone—Clifton, GRegory 3-6387
(N.Y.C. dial direct—
Wisconsin 7-4065-6-7-8)

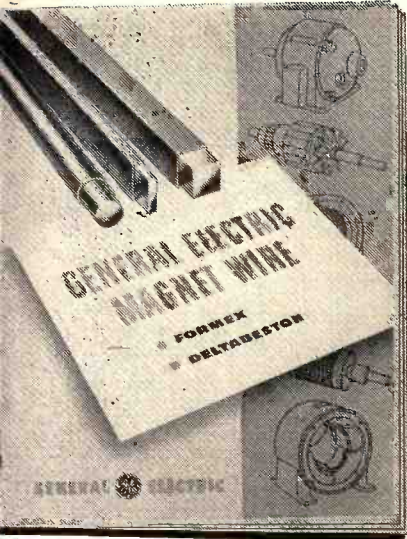
CENTRAL REGION
General Electric Company
Tube Department
3800 North Milwaukee Avenue
Chicago 41, Illinois
Telephone—SPring 7-1600

WESTERN REGION
General Electric Company
Tube Department
11840 West Olympic Boulevard
Los Angeles, California
Telephones—BRadshaw 2-8566
ARizona 9-7765

All data subject to change without notice. The listing of any G-E tube type does not necessarily imply availability.

HELPFUL INFORMATION TO MEET YOUR WIRING NEEDS

... ON MAGNET WIRE

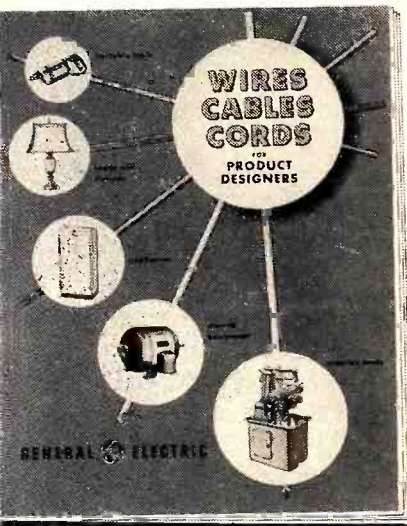


◀ This 32-page bulletin contains extensive selection and specification information and data including valuable data tables on both Formex* and Deltabeston* magnet wire.

The properties of Formex magnet wire—such as dielectric strength, toughness, heat aging, moisture resistance, solvent resistance—are discussed at length in this bulletin. A complete section of several pages is devoted to the advantages of Formex—explains why Formex takes less space, has more feet of wire per pound, demonstrates its winding-space factor, shows why Formex is easy to wind, has low first cost, and facilitates manufacturing processes. The types of Formex magnet wire are described in the detail necessary to assist you in selecting and specifying the magnet wire to meet your requirements.

This bulletin also contains a section devoted to Deltabeston magnet wire for Class Band Class H applications—asbestos-insulated, glass-insulated and film-insulated with Teflon**. You'll find complete information on the properties and advantages which make Deltabeston magnet wire unsurpassed in performance where extreme heat and other severe operating conditions exist.

... ON WIRES, CABLES, AND CORDS



◀ General Electric's line of wires, cables and cords of interest to designers and manufacturers of electronic, industrial, and electrical equipment is fully described in this 24-page publication. A special section is devoted to General Electric cords—Deltabeston, rubber, Geoprene, PreenX*, and rip cords. Product, application, and specification information is given to enable you to select the proper G-E wire, cable, or cord for your product.

* Registered Trade-Mark General Electric Company
 ** DuPont Trade-Mark for Tetrafluoroethylene Resin

SPECIAL APPLICATIONS

In cases where products may require special applications, G-E engineers, constantly engaged in the development of new or improved wires, cables, and cords, will gladly give assistance to product designers and manufacturers.

For information on special applications, please write to the nearest General Electric Construction Materials Division office or the Wire and Cable Department, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut. Just send in the coupon for your copy of these helpful, informative publications.

Section 19-314
 Construction Materials Division
 General Electric Company
 Bridgeport 2, Connecticut

Please send the publication indicated
 General Electric Magnet Wire, Pub. No. 19-273
 Wires, Cables, Cords for Product Designers, Pub. No. 19-470

Name

Title

Company

Street

City..... Zone..... State.....



G-E (KOR-LES) "COOL BLUE" POWER RESISTORS — (For Military Application)

Designed to meet Characteristic "V" of
MIL-R-26B-350°C Operating Temperatures

Standard Resistance Values

.50 through 40,000 Ohms



HIGHER POWER RATINGS—made possible by refractory base and glaze with temperature coefficients matched to eliminate crazing, checking and pin holing.

LIGHTER WEIGHTS—Core-less construction reduces weight up to 50% compared with other standard sizes.

VITREOUS ENAMEL COATING—permits high temperature operating without deterioration due to aging.

GREATER DEPENDABILITY—resistance wire is embedded in a matching refractory base for extra mechanical protection—wire bunching is virtually eliminated.

G-E DELAY LINES



Delay Lines provide a means for delaying electrical signals by desired and definite amounts of time. Limitations are allowable attenuation and waveform distortion. Practical for delay times as high as 10 microseconds. Usually employed in lengths which provide a delay ranging from 0.1 to 5.00 microseconds. Bulk lines furnished to be cut into desired lengths.

DELAY LINE APPLICATIONS: Many applications exist in laboratories engaged in research and development of special circuits for electronic devices. The original application was to radar equipment.

Rendering receivers insensitive for a definite time interval immediately following a transmitter signal. Generation of pulse signals of predetermined and definite width.

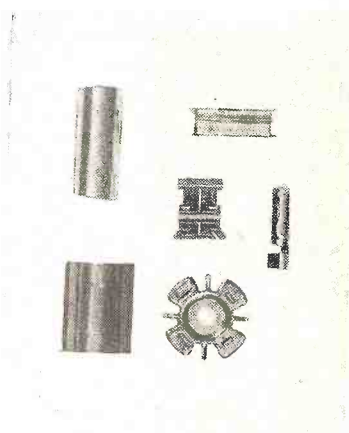
Oscilloscope applications—to delay signals with respect to the servo sweep, and for single-pulse transients.

Electronic calculators—time delay.

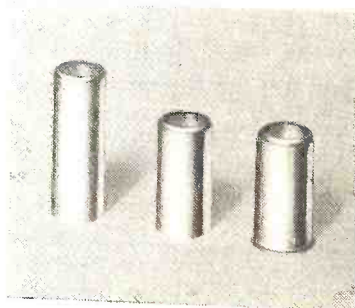
Color television—delay circuits.

ADVANTAGES: Lightweight and flexible • Low distortion • Fast rise time • Physical and electrical uniformity • Operates at ambients up to 100° C.

| | ±1/16 | ID | OD | | Mil Rated Watts | Min. Resistance Rating | Max. Resistance .0025" Wire | Max. Resistance .00175" Wire |
|-------|-------|-------|-------|-------|-----------------------|------------------------------|--------------------------------------|---------------------------------------|
| RW-29 | 1 3/4 | 5/32 | 3/8 | 19/32 | 11 | 0.5 | 2,500 | 5,600 |
| RW-30 | 1 | 9/32 | 17/32 | 3/4 | 11 | 0.5 | 900 | 2,500 |
| RW-31 | 1 1/2 | 9/32 | 17/32 | 3/4 | 14 | 0.5 | 2,000 | 6,300 |
| RW-32 | 2 | 9/32 | 17/32 | 3/4 | 17 | 1.0 | 4,000 | 10,000 |
| RW-33 | 3 | 9/32 | 17/32 | 3/4 | 26 | 1.0 | 8,000 | 18,000 |
| RW-34 | 3 | 17/32 | 23/32 | 7/8 | 43 | 3.0 | 12,000 | 28,000 |
| RW-35 | 4 | 17/32 | 23/32 | 7/8 | 55 | 3.0 | 16,000 | 40,000 |

G-E CUSTOM BUILT
PRECISION METAL PARTS

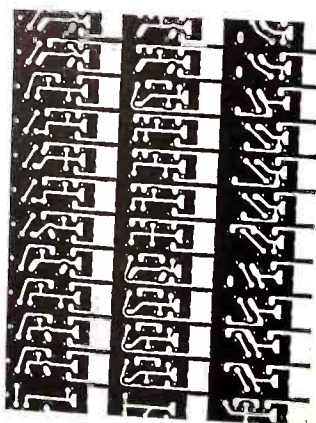
Custom production of close tolerance parts fabricated from light gauge strip and wire stock. Electronic Tube Parts — Sleeves — Spacers — Cups — Cathode Parts — Terminals — Switch Parts — for every exacting requirement in the Industrial field. Parts formed from new multislide, four slide and high speed automatic punch presses assure rapid low-cost production.



G-E TUBE SHIELDS

Miniature wrap-around types now available in 1-7/8" . . . 1-1/4" . . . and 1-1/4" flared sizes. Fabricated from pre-coated steel. Improved production techniques permit G.E. to price these shields below most others on the market today. Bulk orders promptly delivered. Tell us your specifications . . . receive an economical G-E quotation!

G-E PRINT-WIRE CIRCUIT BOARDS



A Typical G-E Electric
"Print-Wire" Circuit Board

ADVANTAGES: 1. Eliminates wiring errors.

2. Reduces assembly cost.

3. Makes possible dip solder techniques.

4. Reduces physical size and weight.

5. Eliminates variations in distributed capacity and coupling between circuits.

6. Design changes can be made easily.

CONDUCTOR FINISHES: silver flash, silver plate, gold flash, gold plate, solder plate.

OVERALL SIZE LIMITATION: Boards may be any size to customer's specifications within a maximum of 24 inches overall.

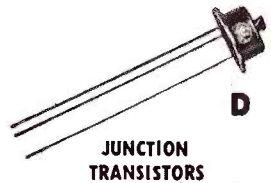


GERMANIUM PRODUCTS

The complete General Electric line for use in
electronic and electrical power circuits requiring
DETECTION . . . RECTIFICATION . . . AMPLIFICATION!

| CATEGORY | KEY | RETMA DESIGNATION | G-E TYPE | PEAK INVERSE VOLTAGE | CONTINUOUS OPER. INV. VOLTAGE | MIN. FORWARD CURRENT (MA) AT +1V | MAX. INV. CURRENT (μA) AT -50V | AVERAGE RECTIFIED CURRENT (MA) | PEAK RECTIFIED CURRENT (MA) | SURGE CURRENT (AMP) | |
|-----------------------------|-----|-------------------|--|--|--|----------------------------------|--------------------------------|--------------------------------|-----------------------------|---------------------|--|
| GENERAL PURPOSE | A | 1N48 | G5 | 85 | 70 | 4.0 | 833 | 50 | 150 | 400 | |
| | | 1N51 | G5C | 50 | 40 | 2.5 | 1667 | 25 | 100 | 300 | |
| | | 1N52 | G5D | 85 | 70 | 4.0 | 150 | 50 | 150 | 400 | |
| | | 1N63 | G5E | 125 | 100 | 4.0 | 50 | 50 | 150 | 400 | |
| | | 1N65 | G5G | 85 | 70 | 2.5 | 200 | 50 | 150 | 400 | |
| | | 1N75 | G5M | 125 | 100 | 2.5 | 50 | 50 | 150 | 400 | |
| TV | A | 1N64 | G5F | 20 | Min. dc current in 44 mc rectifier—100 μa | | | | | | |
| JAN (Ceramic case) | B | 1N69 | G5K | 75 | 60 | 5.0 | 850 | 40 | 125 | 400 | |
| | | 1N70 | G5L | 125 | 100 | 3.0 | 300 | 30 | 90 | 350 | |
| | | 1N81 | G5P | 50 | 40 | 3.0 | 10@-10v | 30 | 90 | 350 | |
| VHF | A | | G6 | 15 | Min. Rect. Eff. at 100 mc and 2 v signal—60% | | | | | | |
| UHF | A | 1N72 | G7 | +3 db max. noise factor over 1N218 in 500 mc mixer CKT | | | 25 | 75 | | | |
| | | G7A | 25 | | | | 75 | | | | |
| | | G7B | 5 | 75% min. rect. eff. at 100 mc for detector | | | 25 | 75 | | | |
| | | G7C | 5 | | | | 25 | 75 | | | |
| | | G7D | 5 | Tested for sharpness of break E-1 char. for freq. Multiplier | | | 25 | 75 | | | |
| | | G7E | 5 | | | | 25 | 75 | | | |
| | | G7F | 5 | 60% min. rect. eff. at 100 mc for detector | | | 25 | 75 | | | |
| | | G8G | 5 | | | | 25 | 75 | | | |
| MATCHED PAIRS Note (1) | A | 1N48 (2) | G8 | 85 | 70 | 4.0 | 833 | 50 | 150 | .400 | |
| | | 1N52 (2) | G8A | 85 | 70 | 4.0 | 150 | 50 | 150 | .400 | |
| | | 1N63 (2) | G8B | 125 | 100 | 4.0 | 50 | 50 | 150 | .400 | |
| | | 1N75 (2) | G8C | 125 | 100 | 2.5 | 50 | 50 | 150 | .400 | |
| QUADS | E | 1N73 | | 75 | | Note (2) | 50@-10v | 22.5 | 60 | .100 | |
| | | 1N74 | | 75 | | Note (3) | 50@-10v | 22.5 | 60 | .100 | |
| DIFFUSED JUNCTION RECTIFIER | C-1 | 1N91 | | 100 | 30 | | | 150 | 470 | 25 | |
| | | 1N92 | | 200 | 65 | | | 100 | 310 | 25 | |
| | | 1N93 | | 300 | 100 | | (ALL RATINGS AT 55° C) | 75 | 250 | 25 | |
| | | 1N151 | | 100 | 30 | | | 500 | 1570 | 25 | |
| | | 1N152 | | 200 | 65 | | | 500 | 1570 | 25 | |
| | | 1N153 | | 300 | 100 | | | 500 | 1570 | 25 | |
| 1N158 | | 380 | 185 | | | 500 | 1570 | 25 | | | |
| TRANSISTORS | D | 2N43 | PNP Junction Transistor, Current Amplification 0.98, Maximum Power Gain 40 db, Maximum Collector Dissipation 150 mw. | | | | | | | | |
| | | 2N44 | PNP Junction Transistor, Current Amplification 0.95, Maximum Power Gain 39 db, Maximum Collector Dissipation 150 mw. | | | | | | | | |
| | | 2N45 | PNP Junction Transistor, Current Amplification 0.92, Maximum Power Gain 38 db, Maximum Collector Dissipation 150 mw. | | | | | | | | |

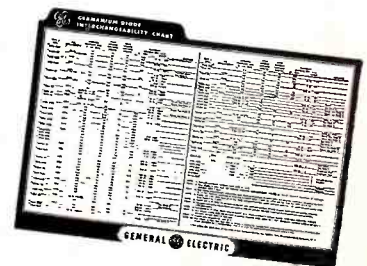
- (1) Matched at +1v so that current through higher resistance unit is within 10% of lower resistance unit.
- (2) Consists of 4 balanced diodes. With 15 ma forward current, the voltage drop of each diode is 1.3v min. and 1.7v max. All diodes are within 0.1 volt of each other, and voltage drop of a pair is 0.03 volts of each other.
- (3) Consists of 4 balanced diodes. With 15 ma forward current, the voltage drop of each diode is 1.2v min. and 1.8v max. All diodes are within 0.2v of each other and voltage drop of a pair is 0.1v of each other.



SEND FOR THIS HANDY REFERENCE MATERIAL

GERMANIUM DIODE HANDBOOK, complete specifications on G-E germanium diode products. Contains diode and rectifier characteristics and applications, curves on resistance, voltage, temperature, efficiency, circuit diagrams covering AM, FM and TV receivers, radar, carrier current. \$1.25 post-paid. Send your check or money order today to: General Electric Company, Section X764, Electronics Park, Syracuse, New York.

GERMANIUM DIODE INTERCHANGEABILITY CHART IS FREE UPON REQUEST



OSCILLOSCOPE—Type ST-2B

Better high frequency response than any other scope in its field! Permits a choice of short, medium or long persistence CR tubes. Incorporates identical direct coupled vertical and horizontal amplifiers.

SPECIFICATIONS

Freq. Response—DC to 400 kc at 2db—Identical amplifiers
Sensitivity—AC 10 mv/in. rms—DC 28mv DC/in.
Low Capacity probe—freq. resp. 2 cycles to 400 kc of 2db
Sweep—Triggered or recurrent 2 cycles to 30 kc
Built-in-Calibrator—0.1 to 300 volts peak to peak

**OSCILLOSCOPE—Type ST-2A**

Excellent for head-end position work. Unsurpassed for stability and fine trace. Delivers maximum sensitivity without sacrifice of frequency response. Use it to check hum, noise, distortion, modulation. Fits many applications where waveform study is essential.

SPECIFICATIONS

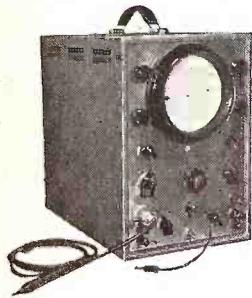
Vertical Freq. Response—20 cycles to 500 kc at 2db
Horizontal Freq. Response—10 cycles to 100 kc
Sensitivity—AC 15 mv/in. rms—DC 2 volts DC/in.
Low Capacity probe available—200mv/in. rms
Sweep—Hard tube sweep 10 cycles to 100 kc
Built-in Calibrator—0.3 to 300 volts peak to peak

**OSCILLOSCOPE—Type ST-2C**

A 5" scope for general purpose work. Particularly useful for maintenance of microwave installations and television stations. Wide frequency response without recourse to peaked amplifier coupling circuits, resulting in excellent transient response.

SPECIFICATIONS

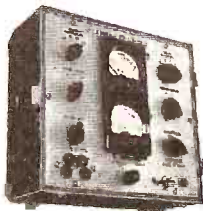
Vertical Freq. Response—20 cycles to 3 mc
Horizontal Freq. Response—10 cycles to 100 kc
Sensitivity—75 mv/in. rms
Low Capacity probe available—Sens. 1 volt/in. rms
Sweep—Recurrent hard tube sweep 10 cycles to 100 kc
Built-in Calibrator—0.3 to 300 volts peak to peak

**GERMANIUM DIODE CHECKER—ST-12A**

For use in laboratories, quality control groups, service shops. Measures the static characteristics of diodes.

SPECIFICATIONS

Forward Ranges—Current—0.3, 1.2, 6 and 12 ma full scale. Voltage—3 and 1.2 v full scale.
Inverse Ranges—Current—60, 120, 300 and 1200 ua full scale. Voltage—3, 12 and 120 v full scale.
Power requirements—105-125 v, 50/60 cycle, approx. 10 w.

**BINARY SCALER
Model 4SN1A4**

Provides scale of 2 in self-contained unit that cuts installation and maintenance to a minimum. Suitable for direct coupling—no intermediate stages necessary. Fits standard octal socket. Speeds up to 200 kc. Resolution time 4 microseconds.

**NEW COMPLETE CATALOG**

Complete specifications, descriptions, charts, and photographs of G-E electronic test equipment. Write today for your copy: General Electric Co., Section X-764-1, Electronic Park, Syracuse, New York.

**SWEEP GENERATOR—Type ST-4A**

Variable Permeability Sweep completely electronic, with no moving parts. For TV receiver maintenance, TV production and development laboratories, wide band amplifier study, transmission line impedance measurements.

SPECIFICATIONS

Freq. Range—Continuously variable, 4 to 110 mc; 170 to 220 mc
Sweep Width—Linear from 500 kc to greater than 15 mc
Output Voltage—Greater than 0.1 volts from 4 to 110 mc
Greater than 0.5 volts from 170 to 220 mc
Attenuation—Continuously variable down to 20 microvolts
Leakage—Stray field—less than 10 microvolts induced in 2 in. loop
6 in. from case in any direction
Phase Range Control—Greater than 360 degrees

**MARKER GENERATOR—ST-5A**

Functions as a crystal referenced calibrator from 10 mc. to 300 mc. When used with the General Electric sweep generator, it provides a multiple of crystal controlled markers spaced 1.5 or 4.5 mc. apart . . . and can be used to supply a marker or markers at any frequency from 10 mc. to 900 mc.

TV APPLICATION—12 crystal controlled channel frequency picture markers plus an accurate hand calibrated VFO covering the range of 20 to 50 mc. makes this unit directly applicable to TV alignment problems.

**DUAL REGULATED POWER SUPPLY**

Type ST-9A Has twin outputs and features electronic overload protection. Instruments cannot be harmed by short circuits on the regulated outputs. Built-in modulator permits observation of hum and noise tolerances by duplicating them on the equipment.

SPECIFICATIONS

#1 Regulated—Continuously variable, 0-500 v, max. current 100 ma.
#2 Regulated—Same as #1
Parallel #1 and #2—Continuously variable, 0-500 v, max. current 150 ma
Unregulated—Approx. 650 volts no load, max. current 200 ma
—75 Volts—VR tube regulation, 0-2 ma
—150 Volts—VR tube regulation, 0-4 ma
Filament Supply—6.3 volts a-c at 10 amps
Regulation—Better than 1/2% + 1/2% volt
Ripple and Noise—Less than 10 mv p to p on all regulated outputs

**POWER SUPPLY—Type YPD-2**

A high-quality, electronically regulated unit designed for use in laboratories, broadcast stations, and wherever a closely regulated variable DC voltage source at medium current consumption is required.

SPECIFICATIONS

DC Voltage Output—250-450 v, (positive or negative may be grounded to chassis)
DC current Output—0-300 milliamperes
AC Output—6.3 volts 10 amperes unregulated
Regulation—Less than 1% from minimum to maximum current
Ripple—Less than 5 mv peak to peak
Output Impedance—Approximately 2 ohms at 30 cycles, decreases with increasing frequency

**FREQUENCY AND
MODULATION METER—Type ST-13A**

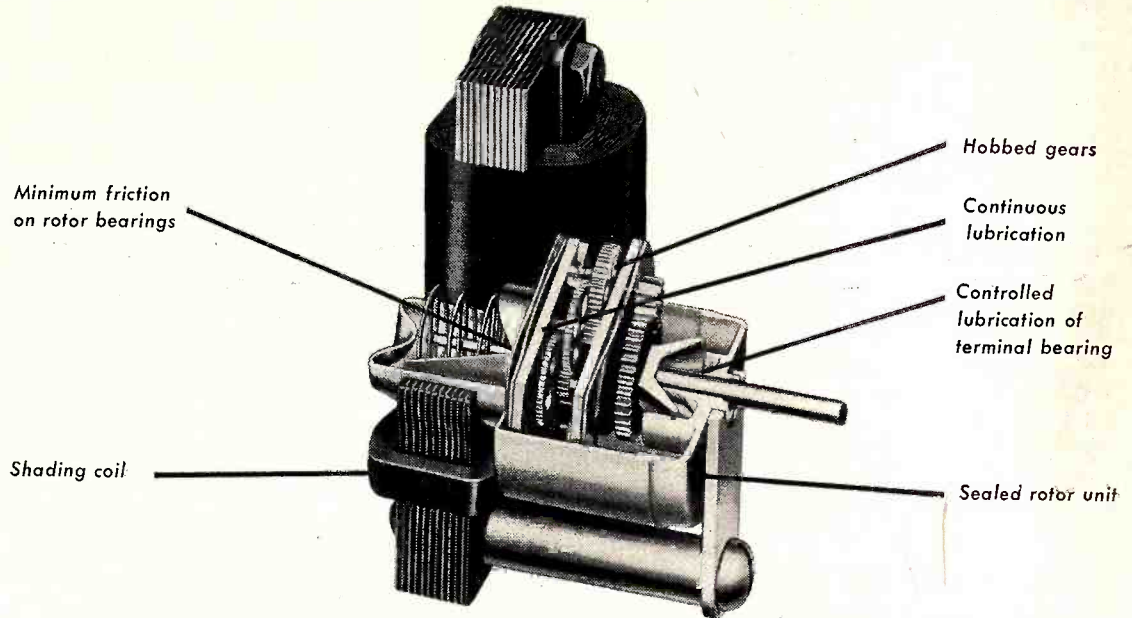
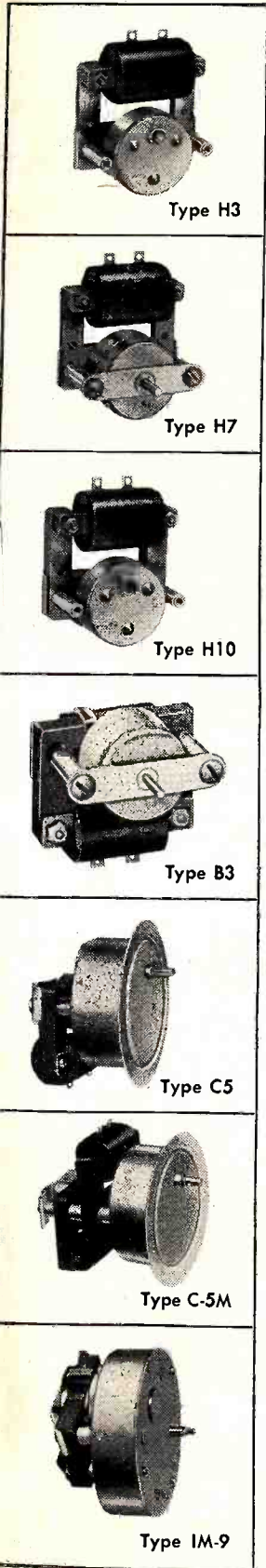
Quality FM Communications meter. Gives hairline accuracy plus provision with oven accessories for future split-channel adjustments. Measures both carrier frequency displacement and modulation. Accessories include External antenna mount and cable.

SPECIFICATIONS

Freq. Ranges—One or two specified frequencies in the following ranges: 25 mc to 50 mc, 72 mc to 76 mc, 148 mc to 174 mc
Reference Oscillator Accuracy—0.01% from 32°F to 122°F.
External connection, internal wiring and a socket provided for 6 V oven operation where wider temperature range with greater accuracy is required.
Inputs—18 in. collapsible whip antenna and fifty-ohm BNC connector.
Outputs—Low and high RF outputs for receiver alignment.
Power—Internal batteries.



Telechron Synchronous Timing Motors



For automatic devices, instruments, control equipment—wherever time is a factor in product performance—Telechron Synchronous Timing Motors are your best assurance of dependability.

Telechron motors are CONTINUOUSLY ACCURATE . . . because they're true synchronous motors with one rotation for every cycle of the alternating current source. Lightweight rotors enable virtually INSTANT SELF-STARTING . . . reach full speed in approximately 3 cycles. All gears and bearings are PERMANENTLY LUBRICATED . . . by a generous

oil reservoir sealed into the dust-free rotor unit.

With Telechron motors, you get the benefit of dependable Application Engineering Service. Engineering specialists in timing problems study your requirements . . . torque, temperature limits, running period, etc. . . . recommend the motor best suited, and at lowest cost.

Write for complete catalog and application data sheet. Telechron Department, General Electric Company, 602 Homer Ave., Ashland, Massachusetts.

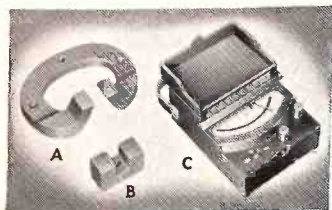
SPECIFICATIONS

| Type | Speed* of Rotation | Torque—pound-inches | | | Rated watts input | Over-all dimensions (inches) | Net Wt. (oz.) | Shipping Wt. (lbs.) |
|---------|---|------------------------------------|------------------------------------|------------------------------------|-------------------|------------------------------|---------------|---------------------|
| | | 60 cy. | 50 cy. | 25 cy. | | | | |
| H3 | 3.6 rpm. | .018 | .018 | .018 | 2 | 2-11/64 x 2-3/4 x 1-9/32 | 7 | 2 |
| H7 | 1, 2, 3, 4, 6 rpm. | .375 | .375 | .375 | 2 | 2-17/64 x 2-3/4 x 1-63/64 | 10 | 2 |
| H10 | 3.6 | .018** | .018** | .018** | 5 | 2-3/16 x 2-9/16 x 1-5/16 | 9 | 2 |
| B3 | 1/2 rpm. 1 2 4 60 | .375 .375 .19 .10 .006 | .375 .340 .17 .09 .006 | .375 .240 .12 .06 .004 | 4 | 2-5/16 x 2-1/2 x 2-3/8 | 10 | 1-1/2 |
| C5 | 1 rpm. 2 4 | 1.0 0.5 0.25 | 0.8 0.4 0.2 | 0.4 0.2 0.1 | 6 | 3-3/8 x 3-9/16 x 2-13/16 | 22 | 2 |
| C5M | 1 rpm. 2 4 | 2.00 1.00 0.50 | 1.60 0.80 0.40 | 0.80 0.40 0.20 | 12 | 3-3/8 x 3-3/4 x 3-3/4 | 32 | 2-1/2 |
| IM-9*** | 1 rev. in any of following periods: Minutes—5, 15, 30, 60 Hours—1, 2, 3, 4, 6, 8, 12, 24 Days—1, 2, 3, 7, 14, 30 | | | | | 3-1/2 x 3-1/2 x 2-11/16 | 18 | 2 |

* Standard direction of rotation facing terminal shaft end—clockwise, except for IM-9 which is counter-clockwise. Reversible rotation available in some models.

** Intermittent maximum peak torque .104 dependent on duty cycle.

*** Type IM-9 provides a totally enclosed circular gear train. Adaptable to most instrumentation and especially for chart drives. Has special backlash eliminators.

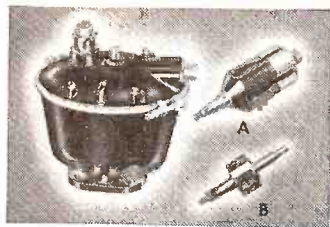


INSTRUMENTS— Fig. A is damping magnet once used in GE indicator. B is Carboloy magnet now used . . . permitting smaller design, cutting costs, improving calibrations.

CONTROLS— Fan control uses Carboloy magnet because (1)



(2) It occupies small space and gives higher energy per unit per space. (3) Offers higher stability. (4) Cost is low.



MAGNETS— To save weight, Scintilla magneto features new rotor made with Carboloy permanent magnet (B) to replace old rotor (A). Rotor weight is cut 100 percent.

MINIATURE MOTORS— One tiny Carboloy magnet replaces electromagnet and components . . .



makes possible the small design of this battery-operated motor. Magnet gives years of dependable service.

IMPROVE YOUR ELECTRICAL PRODUCTS WITH CARBOLOY PERMANENT MAGNETS

Interested in improving your product? . . . having it weigh less and cost less to build?

Then throw away that electro-magnet. *Replace it now with a high-energy Carboloy permanent magnet!*

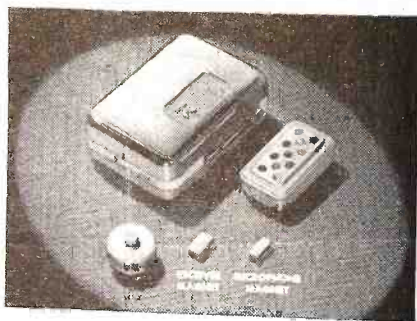
Hundreds of manufacturers in the field of electronic and electrical devices have done just this. More are doing it every day. The illustrated applications on this page show you some typical results.

For more evidence . . . and for expert engineering advice and design assistance, contact the Carboloy organization *now*. Skilled Carboloy magnet men are at your service. Carboloy production lines can supply you with high-quality magnets to meet your most exacting specifications. All sizes, all shapes available; cast or sintered.

Send today for free Carboloy Magnet Design Manual PM-101 and for Standard Stock Catalog PM-100.

OUTSTANDING ADVANTAGES OF CARBOLOY PERMANENT MAGNETS

- 1 Cool—generate no heat
- 2 Require no electrical energy
- 3 Cost nothing to operate
- 4 Eliminate coils, windings, wiring, etc.
- 5 Need no maintenance—no coils to burn out, no slip rings to clean or replace, etc.
- 6 Simplify mechanical assemblies—exert strong tractive force for holding, lifting and separating devices that eliminates component parts, makes product design and fabrication simple.
- 7 Save space—great magnetic strength in small sizes
- 8 Powerful—and power is constant
- 9 Combine electrical and mechanical features—transform electrical energy into mechanical motion; mechanical motion into electrical energy
- 10 No power failures ever
- 11 Resist moisture—no coils to collect dampness
- 12 Give uninterrupted operation
- 13 Create savings—often eliminate costly, power-supplying parts
- 14 Simple—no operating parts
- 15 Reduce weight, product size
- 16 Supply a permanent source of energy



HEARING AIDS—New all-transistor, all-magnetic "Radioear" uses Carboloy magnets in both receiver and microphone. Magnets eliminate failure once caused by high operating temperatures.

CARBOLOY

DEPARTMENT OF GENERAL ELECTRIC COMPANY
11139 E. 8 Mile Drive, Detroit 32, Michigan

"Carboloy" is the trademark for products of the Carboloy Department of General Electric Company

| PROPERTIES OF CAST ALNICO | ALNICO GRADE | | | | | | PROPERTIES OF SINTERED ALNICO | ALNICO GRADE | | |
|---|--------------|--------|--------|--------|--------|-------|---|--------------|--------|--------|
| | 2 | 3 | 4 | 5 | 6 | 7 | | 2 | 4 | 5 |
| Average Density—Lbs. per cu. in. | .256 | .249 | .253 | .264 | .268 | .259 | Average Density—Lbs. per cu. in. | .243 | .232 | .241 |
| Resistivity—Microhms per cm. per cm. ² at 25°C | 65 | 60 | 75 | 47 | 50 | 58 | Resistivity—Microhms per cm. per cm. ² at 25°C | 68 | 68 | — |
| Mean Coef. of Expansion per °C (× 10 ⁻⁶) 20°C—300°C | 12.4 | 13.0 | 13.1 | 11.3 | 11.4 | 11.4 | Tensile Strength—Lbs. per sq. in. | 65,000 | 60,000 | — |
| Tensile Strength—Lbs. per sq. in. | 3,000 | 12,000 | 9,100 | 5,450 | 23,000 | — | Transverse Modulus of Rupture—Lbs. per sq. in. | 70,000 | 85,000 | — |
| Transverse Modulus of Rupture—Lbs. per sq. in. | 7,200 | 22,500 | 24,000 | 10,500 | 45,000 | — | Hardness—Rockwell C | 43 | 42 | 44 |
| Hardness—Rockwell C | 45 | 45 | 45 | 50 | 56 | 60 | Coefficient of Thermal Expansion | 12.4 | 13.1 | 11.3 |
| Min. Residual Induction Br. | 7,200 | 6,700 | 5,200 | 12,000 | 10,000 | 7,200 | Min. Residual Br. | 6,900 | 5,200 | 10,000 |
| Min. Coercive H. | 540 | 450 | 700 | 575 | 750 | 1,050 | Min. Coercive H. | 520 | 700 | 575 |

KEPCO VOLTAGE REGULATED POWER SUPPLIES

KEPCO manufactures the most complete line of DC voltage regulated power supplies. These units are available as standard models. Workmanship is of a quality with the highest existing production standards and best instrument electronic practices consistent with the intended use of the item as a continuous duty voltage regulated power supply.

DC POWER SUPPLY SPECIFICATIONS

KEPCO Voltage Regulated Power Supplies are conservatively rated. The regulation specified for each unit is available under all line and load conditions within the range of the instrument.

REGULATION: As shown in table for both line fluctuations from 105-125 volts and load variations from minimum to maximum current.

***REGULATION FOR BIAS SUPPLIES:** 10 millivolts for line 105-125 volts. 1/2% for load at 150 volts.

†All AC Voltages are unregulated.

All units are metered except Models 131, 315 and 3100.

All units are designed for relay rack mounting or bench use.

| VOLTS | CURRENT | REGULATION | RIPPLE | 6.3 V. † | MODEL |
|------------|-------------|------------|--------|----------|-------|
| 0-1500 | 0-200 Ma. | 0.5% | | | |
| 0-1200 | 0-20 Ma. | 0.1% | 20 Mv. | | 1520 |
| 0-1000 | 0-500 Ma. | 0.5% | 10 Mv. | 10 Amp. | 1220 |
| 200-1000 | 0-500 Ma. | 0.5% | 20 Mv. | | 1350 |
| 0-1000 | 0-50 Ma. | 0.1% | 20 Mv. | | 1250 |
| 0-600 | 0-3 Amp. | 0.5% | 10 Mv. | 10 Amp. | 1020 |
| 0-600 | 0-2.25 Amp. | 0.5% | 10 Mv. | | 780 |
| 0-600 | 0-1.5 Amp. | 0.5% | 10 Mv. | | 770 |
| 0-600 | 0-750 Ma. | 0.5% | 10 Mv. | | 760 |
| 0-600 | 0-300 Ma. | 0.5% | 10 Mv. | | 750 |
| 0-150 Bias | 0-5 Ma. | 0.5% | 5 Mv. | 10 Amp. | |
| 0-600 | 0-300 Ma. | 0.5% | 5 Mv. | | 615 |
| #1 0-600 | 0-200 Ma. | 0.5% | 5 Mv. | 10 Amp. | 500R |
| #2 0-600 | 0-200 Ma. | 0.5% | 5 Mv. | 10 Amp. | 800 |
| 0-600 | 0-200 Ma. | 0.5% | 5 Mv. | 10 Amp. | |
| 0-150 Bias | 0-200 Ma. | 0.5% | 5 Mv. | 10 Amp. | |
| #1 200-500 | 0-200 Ma. | 0.5% | 5 Mv. | | 815 |
| #2 200-500 | 0-200 Ma. | 0.5% | 5 Mv. | | |
| 200-500 | 0-200 Ma. | 0.5% | 5 Mv. | 6 Amp. | 510 |
| 0-400 | 0-150 Ma. | 0.5% | 5 Mv. | 6 Amp. | |
| 0-400 | 0-150 Ma. | 0.5% | 5 Mv. | 6 Amp. | 245 |
| 0-150 Bias | 0-5 Ma. | 0.5% | 5 Mv. | 10 Amp. | |
| 0-400 | 0-5 Ma. | 0.5% | 5 Mv. | 10 Amp. | 2400 |
| 0-150 | 0-150 Ma. | 0.5% | 5 Mv. | | |
| 0-400 | 0-5 Ma. | 0.5% | 5 Mv. | 10 Amp. | 400 |
| 100-400 | 0-150 Ma. | 0.5% | 5 Mv. | 10 Amp. | |
| 0-350 | 0-150 Ma. | 0.01% | 1 Mv. | 10 Amp. | 141 |
| 0-350 | 0-3 Amp. | 0.5% | 10 Mv. | | 2000 |
| 0-350 | 0-2.25 Amp. | 0.5% | 10 Mv. | | 720 |
| 0-350 | 0-1.5 Amp. | 0.5% | 10 Mv. | | 730 |
| 0-350 | 0-750 Ma. | 0.5% | 10 Mv. | | 710 |
| 100-325 | 0-150 Ma. | 0.5% | 10 Mv. | | |
| 0-150 Bias | 0-5 Ma. | 0.5% | 5 Mv. | 10 Amp. | 700 |
| 0-300 | 0-150 Ma. | 0.5% | 5 Mv. | | |
| 0-150 Bias | 0-5 Ma. | 0.5% | 5 Mv. | 5 Amp. | 131 |
| 0-150 | 0-50 Ma. | 0.5% | 5 Mv. | | |
| 3-30 | 0-30 Amp. | 0.5% | 0.1% | | 315 |
| 1-13 | 0-10 Amp. | 0.5% | 10 Mv. | | 150 |
| | | | | | 3030 |
| | | | | | 3200 |



MODEL 131

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|------------|-----------|------------|--------|
| 1 | 100-325 | 0-150 Ma. | 0.5% | 5 Mv. |
| 2 | 0-150 Bias | 0-5 Ma. | * | 5 Mv. |
| 3 | 6.3 AC | 10 Amp. | † | |



MODEL 141

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|--------|-----------|------------|--------|
| 1 | 0-400 | 0-150 Ma. | 0.5% | 5 Mv. |
| 2 | 6.3 AC | 10 Amp. | † | |



MODEL 150

| VOLTS | CURRENT | REGULATION | RIPPLE |
|-------|----------|------------|--------|
| 0-150 | 0-50 Ma. | 0.5% | 5 Mv. |



MODEL 245

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|---------|-----------|------------|--------|
| 1 | 200-500 | 0-200 Ma. | 0.5% | 5 Mv. |
| 2 | 6.3 AC | 6 Amp. | † | |

MORE MODELS INSIDE



KEPCO LABORATORIES

131-38 SANFORD AVENUE • FLUSHING 55, N. Y. • INDEPENDENCE 1-7000



KEPCO VOLTAGE REGULATED POWER SUPPLIES



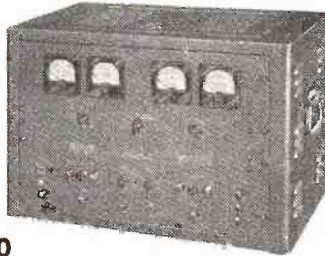
MODEL 315

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|------------|-----------|------------|--------|
| 1 | 0-300 | 0-150 Ma. | 0.5% | 5 Mv. |
| 2 | 0-150 Bias | 0-5 Ma. | * | 5 Mv. |
| 3 | 6.3 AC | 5 Amp. | † | |



MODEL 400

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|------------|-----------|------------|--------|
| 1 | 0-400 | 0-150 Ma. | 0.5% | 5 Mv. |
| 2 | 0-150 Bias | 0-5 Ma. | * | 5 Mv. |
| 3 | 6.3 AC | 10 Amp. | † | |



MODEL 510

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|----------------|----------|-----------|------------|--------|
| 1 | 200-500 | 0-200 Ma. | 0.5% | 5 Mv. |
| 2 | 200-500 | 0-200 Ma. | 0.5% | 5 Mv. |
| 1 + 2 Parallel | 200-500 | 0-400 Ma. | 0.5% | 5 Mv. |
| 1 + 2 Series | 400-1000 | 0-200 Ma. | 0.5% | 10 Mv. |
| 3 | 6.3 AC | 6 Amp. | † | |
| 4 | 6.3 AC | 6 Amp. | † | |



MODEL 500-R

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|--------|-----------|------------|--------|
| 1 | 0-600 | 0-300 Ma. | 0.5% | 5 Mv. |
| 2 | 6.3 AC | 10 Amp. | † | |

MODEL 615

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|------------|-----------|------------|--------|
| 1 | 0-600 | 0-300 Ma. | 0.5% | 5 Mv. |
| 2 | 0-150 Bias | 0-5 Ma. | * | 5 Mv. |
| 3 | 6.3 AC | 10 Amp. | † | |



MODEL 700

| MODEL | VOLTS | CURRENT | REGULATION | RIPPLE |
|-------|-------|-------------|------------|--------|
| 700 | 0-350 | 0-750 Ma. | 0.5% | 10 Mv. |
| 710 | 0-350 | 0-1.5 Amp. | 0.5% | 10 Mv. |
| 720 | 0-350 | 0-2.25 Amp. | 0.5% | 10 Mv. |
| 730 | 0-350 | 0-3 Amp. | 0.5% | 10 Mv. |



MODEL 750

| MODEL | VOLTS | CURRENT | REGULATION | RIPPLE |
|-------|-------|-------------|------------|--------|
| 750 | 0-600 | 0-750 Ma. | 0.5% | 10 Mv. |
| 760 | 0-600 | 0-1.5 Amp. | 0.5% | 10 Mv. |
| 770 | 0-600 | 0-2.25 Amp. | 0.5% | 10 Mv. |
| 780 | 0-600 | 0-3 Amp. | 0.5% | 10 Mv. |



MODEL 800

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|----------------|--------|-----------|------------|--------|
| 1 | 0-600 | 0-200 Ma. | 0.5% | 5 Mv. |
| 2 | 0-600 | 0-200 Ma. | 0.5% | 5 Mv. |
| 1 + 2 Parallel | 0-600 | 0-400 Ma. | 0.5% | 5 Mv. |
| 3 | 6.3 AC | 10 Amp. | † | |
| 4 | 6.3 AC | 10 Amp. | † | |



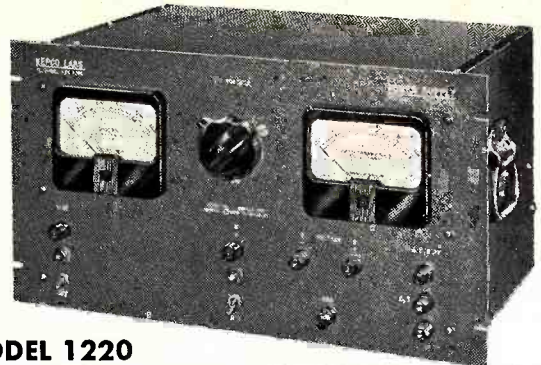
MODEL 815

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|------------|-----------|------------|--------|
| 1 | 0-600 | 0-200 Ma. | 0.5% | 5 Mv. |
| 2 | 0-150 Bias | 0-5 Ma. | * | 5 Mv. |
| 3 | 6.3 AC | 10 Amp. | † | |



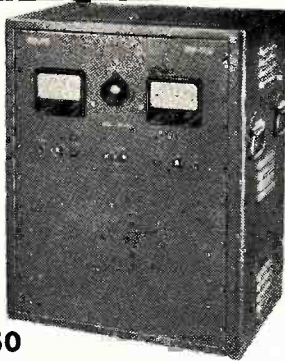
MODEL 1020

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|--------|----------|------------|--------|
| 1 | 0-1000 | 0-50 Ma. | 0.1% | 10 Mv. |
| 2 | 6.3 AC | 10 Amp. | † | |



MODEL 1220

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|--------|----------|------------|--------|
| 1 | 0-1200 | 0-20 Ma. | 0.1% | 10 Mv. |
| 2 | 6.3 AC | 10 Amp. | † | |



MODEL 1350

| MODEL | VOLTS | CURRENT | REGULATION | RIPPLE |
|-------|----------|-----------|------------|--------|
| 1250 | 200-1000 | 0-500 Ma. | 0.5% | 20 Mv. |
| 1350 | 0-1000 | 0-500 Ma. | 0.5% | 20 Mv. |



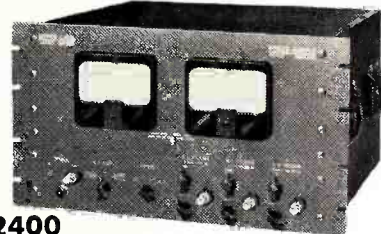
MODEL 1520

| VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|-----------|------------|--------|
| 0-1500 | 0-200 Ma. | 0.5% | 20 Mv. |



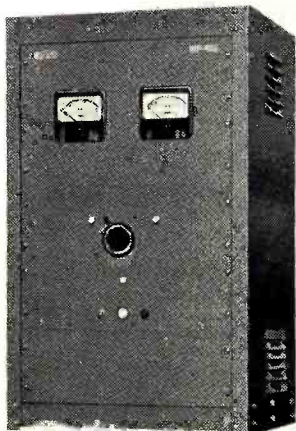
MODEL 2000

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|--------|---------|-----------|------------|--------|
| 1 | 100-400 | 0-150 Ma. | 0.01% | 1 Mv. |
| 2 | 6.3 AC | 10 Amp. | † | |



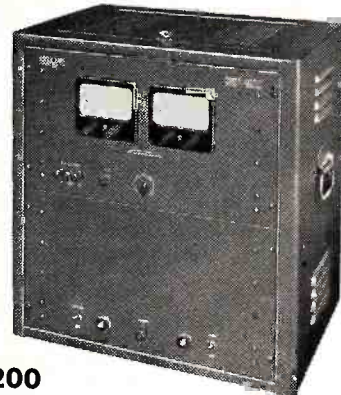
MODEL 2400

| OUTPUT | VOLTS | CURRENT | REGULATION | RIPPLE |
|----------------|------------|-----------|------------|--------|
| 1 | 0-150 Bias | 0-5 Ma. | * | 5 Mv. |
| 2 | 0-400 | 0-150 Ma. | 0.5% | 5 Mv. |
| 3 | 0-400 | 0-150 Ma. | 0.5% | 5 Mv. |
| 2 + 3 Parallel | 0-400 | 0-300 Ma. | 0.5% | 5 Mv. |
| 2 + 3 Series | 0-800 | 0-150 Ma. | 0.5% | 5 Mv. |
| 4 | 6.3 AC | 10 Amp. | † | |
| 5 | 6.3 AC | 10 Amp. | † | |



MODEL 3030

| | |
|------------|-----------|
| VOLTS | 3-30 |
| CURRENT | 0-30 Amp. |
| REGULATION | 0.5% |
| RIPPLE | 0.1% |



MODEL 3200

| VOLTS | CURRENT | REGULATION | RIPPLE |
|-------|-----------|------------|--------|
| 1-13 | 0-10 Amp. | 0.5% | 10 Mv. |

KEPCO LABORATORIES



FOR NEW POWER SUPPLY CATALOG... WRITE DEPT. BG.

131-38 SANFORD AVENUE • FLUSHING 55, N. Y. • INDEPENDENCE 1-7000

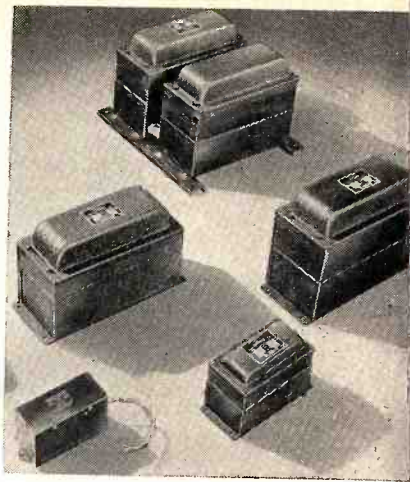


VOLTAGE STABILIZERS

TEN WAYS BETTER

1. Deliver accurate AC voltage within $\pm 1/2\%$
2. Stabilize output with more precision
3. Regulate better at full load
4. Hold up better under overload
5. Better no-load to full-load regulation
6. Accept wider input voltage range
7. Less voltage change as units heat up
8. Less change in output as frequencies fluctuate
9. Smaller, lighter, more compact; no moving parts
10. Cost less to operate

Standard catalog types rated from 15 to 2000 watts as illustrated, are available through 125 authorized distributors. All models operate on input of 95 to 130 volts, 60 cycle, single phase current; compensate within 1/20 second; maintain voltage within $\pm 1/2\%$ of rated output. Special custom-built units in ratings from 5 to 10,000 watts are also available to meet special needs. Write for complete information.



STANDARD CONTROL KNOBS



Raytheon control knobs offer CUSTOM style and quality at STANDARD cost. Made of tough, durable "Tenite II" (cellulose acetate butyrate), injection molded with anodized aluminum inserts and dual setscrews. All types and sizes to fit 1/4-inch diameter shafts. Miniature (70 series) round, dial and pointer knobs also available for 1/8-inch shafts.

MATTE OR MIRROR FINISH

Black knobs available with high gloss "mirror" finish for commercial applications or non-reflecting "matte" finish for government equipment. Manufacturers interested in colored knobs are invited to submit their requirements for quotation.

(All Knobs Shown 1/2 Size)



WELDPOWER*

STORED ENERGY WELDING UNITS

Raytheon Condenser Weldpower Control Units and Weldpower Welding Heads are designed especially for precision welding light gauge non-ferrous and ferrous metals. They are widely used in the Electronics industry for assembling tubes and other components; attaching pigtails to condensers, resistors, batteries, etc.; welding contacts involving similar or dissimilar metals and countless other small part assembly jobs.

Weldpower welding is precisely repetitive, completely dependable. It offers the important advantages over soldering, conventional AC welding or other assembly methods of time saved, fewer rejects, increased production and lower cost. Write for complete information.

*Reg. U. S. Pat. Off.

Raytheon stored energy Weldpower Control units are available in three models with appropriate Weldpower heads.



Model 60-A
Capacity:
63 watt-seconds



Model 225-A
Capacity:
225 watt-seconds



Model 1100
Capacity:
1080 watt-seconds

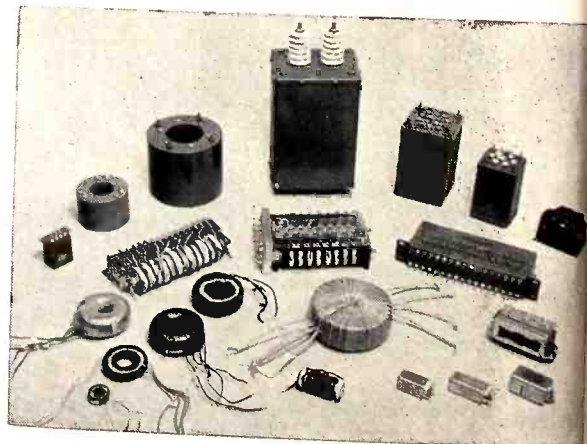


CUSTOM BUILT TRANSFORMERS

Raytheon can furnish custom engineered transformers to fit any special need. Typical units include: single or polyphase power transformers, blocking oscillators, servo transformers, chokes, audio components, filters, saturable magnetic components, etc. Cased or open types to meet the most exacting MIL specifications, as well as Underwriters' Laboratories and R.T.M.A. requirements.

TOROID-L UNITS

TOROID-L coils wound on powdered permalloy cores, high permeability solid materials or stamped "O" cores. Facilities for all types of winding including litzendraht winding, winding heavy wire on wedding ring coils and square coils wound from strip materials. Other Toroid-L Units include: transformers, filter networks for audio or ultrasonic work, lumped parameter delay lines and magnetic amplifier coils. Write for specific information.



RAYTHEON MANUFACTURING COMPANY

Excellence in Electronics

EQUIPMENT SALES DIVISION • DEPT. 6470AB • WALTHAM 54, MASS.



REFLEX KLYSTRON OSCILLATORS
Self-Contained and External Cavity

Table with columns: Tube Type, Maximum Frequency Range, Power Output, Resonator Potential, Focus or Control Grid Potential, Maximum Temperature Coef., Filament Current, and Class. Lists various tube models like RK-5777, 2K28, 6133, etc.

†1 = Mechanical Inductive, 2 = Mechanical Capacitive, 3 = Non-Contacting Plunger, 4 = Thermal Capacitive, A = Coaxial Cable, B = Waveguide

MAGNETRON OSCILLATORS for Pulse and CW Operation

Table with columns: Type No., Heater (Volts, Amps), Band or Range Mc., Maximum Ratings (Anode Kv, Anode Amps, Duty Cycle), Class*, and Typical Operation (Min Power, Pk Kw). Lists tube models like RK5J26, RK4J30, etc.

* Class 1 = Tunable-CW, 2 = Fixed Frequency-Pulsed, 3 = Tunable-Pulsed, 4 = CW Electro-mech. Freq. Mod., 5 = Fixed Frequency-CW

MAGNETRON PULSE TRANSFORMERS

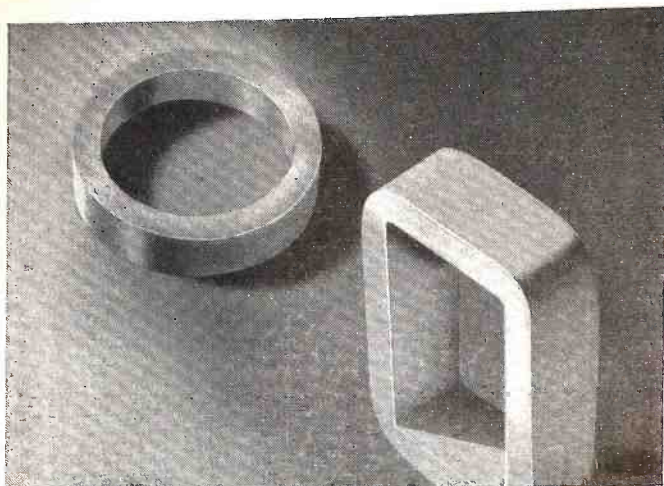
Raytheon through its Microwave and Power Tube Operations and its Transformer Division is in a unique position to serve you on your combined magnetron and pulse transformer package requirements.

In stating your requirements or on requesting data on any of our power tubes please address Raytheon Manufacturing Company, Power Tube Sales, Section PJ-01 Waltham 54, Massachusetts.



ALL *Performance - Guaranteed* PRODUCTS

MAGNETICS inc. TAPE WOUND CORES



Only Magnetics, Inc. offers Tape Wound Cores, guaranteed to meet your performance specifications. The industry's widest selection of standard cores, over 120 standard sizes gives you a size choice:

Inside Diameter . . . from 0.375-in. to 4.500-in.

Outside Diameter . . . from 0.500-in. to 6.500-in.

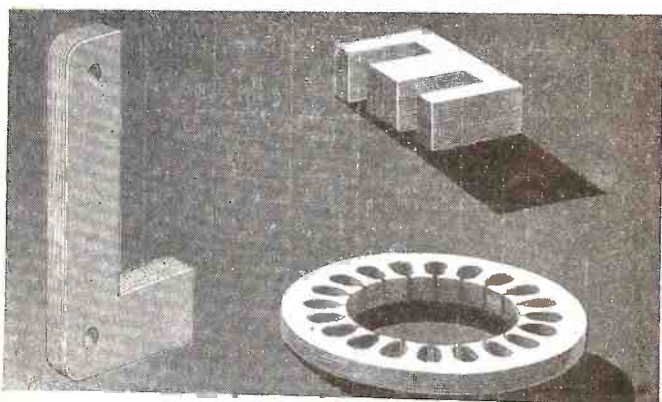
Height . . . from 0.125-in. to 4.500-in.

Gauge of Tape001, .002, .003, .004, .006-in.

Materials . . . Hy-Mu 80, 48 Alloy, Orthonol, Magnesil and all other commercially available high permeability materials.

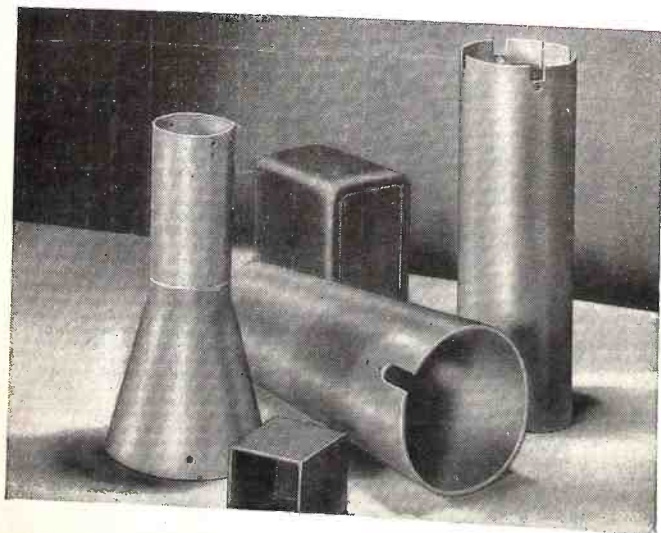
Cores are normally furnished encased in protective plastic boxes, cushioned in special wide temperature compound. Tape is hydrogen annealed to provide exact characteristics to meet your performance specifications.

MAGNETICS inc. LAMINATIONS



Magnetics Inc. Magnetic Laminations are performance guaranteed to meet all production requirements of the electrical and electronic industries. Substantially burr-free, flat laminations in both nickel-iron and all grades of silicon steels are available in standard shapes, such as Rings, EE 24-25, EE 26-27, EI 11, EI 21, EI 75 and EI 375, and in standard gauges from .025 through .006. Laminations are hydrogen annealed when necessary for guaranteed performance. Complete core assemblies can be provided and dies of both tungsten-carbide and hi-carbon, hi-chrome are provided to meet any requirement.

MAGNETICS inc. MAGNETIC SHIELDS



Performance Guaranteed Shields, usually made from Mumetal or A.E.M. 4750, can be made from any other commercially available magnetic or non-magnetic material. Shields are dry-hydrogen annealed, as necessary, and fabricated or drawn to meet production requirements. These shields can be furnished painted or lacquered in any color to your specification.

Write for literature on company letterhead

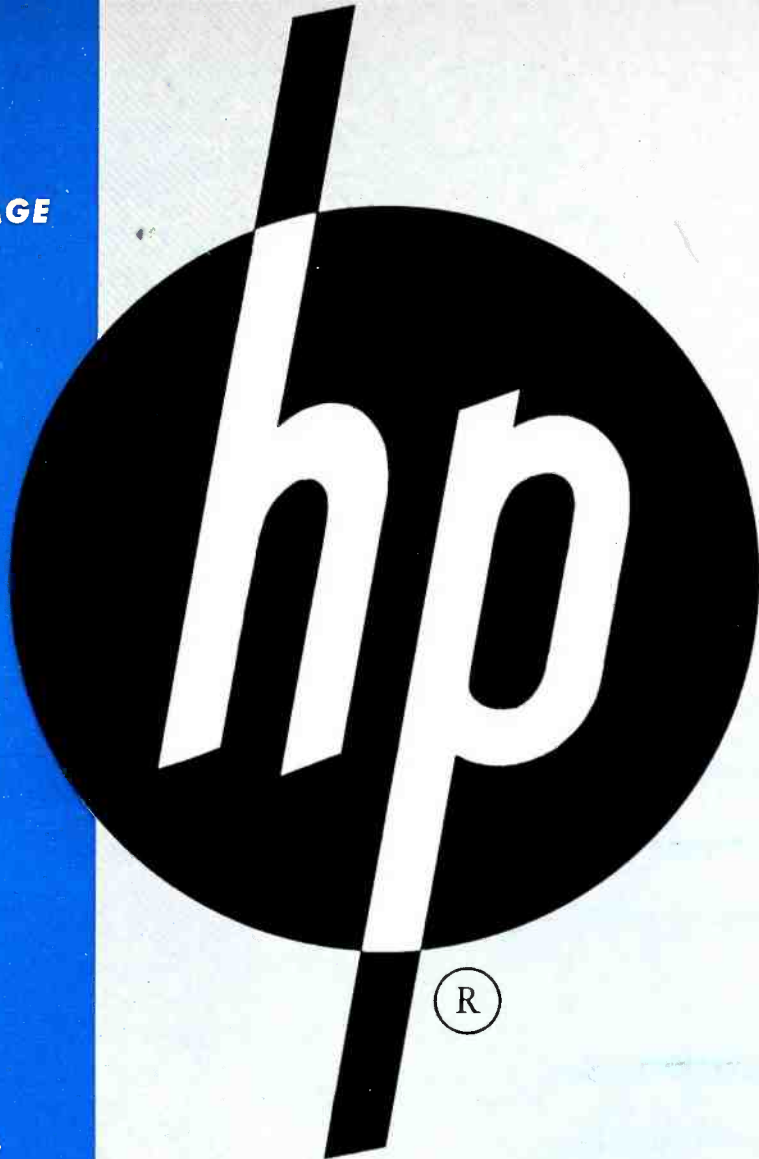
MAGNETICS inc.

DEPT. E-11, BUTLER, PENNSYLVANIA

June, 1954 — MID-MONTH — ELECTRONICS BUYERS' GUIDE

COMPLETE COVERAGE

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SHORT FORM CATALOG

Hewlett-Packard offers over 250 measuring instruments for manufacturing, industrial and scientific research, equipment maintenance, communications and military use.

Each *-hp-* instrument gives you the economies of fast, accurate performance, broad usefulness, and dependable service. Each has the familiar *-hp-* characteristics of simple operation, minimum adjustment, independence of line voltage or tube changes, generous overload protection and highest quality design and construction.

This catalog gives brief details of major *-hp-* instruments. For complete information, see your *-hp-* representative, or write direct.

-hp- Oscillators - Signal Generators .01 to 10,000,000 cps

-hp- 200 SERIES AUDIO OSCILLATORS



Four widely used *-hp-* oscillators have been redesigned into two compact, lightweight instruments offering wider frequency range, more operating simplicity, highest accuracy and stability. New Models 200AB and 200CD replace Models 200A through 200D, retain the time-tested RC circuits that insure

constant output, low distortion; require no zero set. *-hp-* also offers Model 202D for sub-audio, audio, supersonic and carrier tests; and Model 200I, a spread-scale oscillator for interpolation or where frequency must be known precisely.

-hp- 650A TEST OSCILLATOR



Highly stable, wide band (10 cps to 10 mc) multi-purpose test oscillator for audio, supersonic, video, and rf measurements. Output variable from 100 mV to 3 v. Frequency range 10 cps to 10 mc. ± 1 db. Output impedance 600 ohms with voltage divider. \$490.00

Frequency range 10 cps to 10 mc. ± 1 db. Output impedance 600 ohms with voltage divider. \$490.00

| Instrument | Primary Uses | Frequency Range | Output | Price |
|------------|--|-------------------|------------------|-----------------|
| -hp- 200AB | Audio tests | 20 cps to 40 kc | 1 watt/24.5 v | \$120.00 |
| -hp- 200CD | Audio, ultrasonic tests | 5 cps to 600 kc | 160 mw/20 v * | 150.00 |
| -hp- 200I | Interpolation and frequency measurements | 6 cps to 6 kc | 100 mw/10 v | 225.00 |
| -hp- 200T | Telemetry, carrier current tests | 250 cps to 100 kc | 160 mw/20 v * | 350.00 |
| -hp- 201B | High quality audio tests | 20 cps to 20 kc | 3 w/42.5 v | 250.00 |
| -hp- 202A | Low frequency measurements | .01 cps to 1 kc | 20 mw/10 v | 465.00 Δ |
| -hp- 202B | Low frequency measurements | 1/2 cps to 50 kc | 100 mw/10 v | 365.00 Δ |
| -hp- 202D | Low frequency measurements | 2 cps to 70 kc | 100 mw/10 v | 275.00 |
| -hp- 204A | Portable, battery operated | 2 cps to 20 kc | 2.5 mw/5 v | 175.00 |
| -hp- 205A | High power audio tests | 20 cps to 20 kc | 5 watts | 405.00 Δ |
| -hp- 205AG | High power tests, gain measurements | 20 cps to 20 kc | 5 watts | 440.00 Δ |
| -hp- 205AH | High power supersonic tests | 1 kc to 100 kc | 5 watts | 565.00 Δ |
| -hp- 206A | High quality, high accuracy audio tests | 20 cps to 20 kc | +15 dbm | 565.00 Δ |
| -hp- 230A | Carrier test oscillator | 35 cps to 35 kc | +14 dbm/600 ohms | 275.00 |
| -hp- 233A | Carrier test oscillator | 50 cps to 500 kc | 3w/600 ohms | 475.00 |
| -hp- 234A | Carrier test oscillator | 160 cps to 160 kc | +14 dbm/600 ohms | 300.00 |
| -hp- 650A | Wide range video tests | 10 cps to 10 mc | 15 mw/3 v | 490.00 Δ |

* Closed circuit. Internal impedance 600 ohms.

-hp- Distortion Wave Form Analyzers - 20 cps to 20 kc

-hp- 330B DISTORTION ANALYZER



Measures total audio distortion. Wide band 20 db gain amplifier. VTVM usable separately. \$410.00

Wide band 20 db gain amplifier. VTVM usable separately. \$410.00

FM, AM-FM MOD.

-hp- 330C, for FM broadcast measurements. Special VU meter meeting F.C.C. requirements. \$440.00
 -hp- 330D, for AM-FM broadcast measurements. AM detector and VU meter to meet F.C.C. requirements. \$455.00 Δ

| Instrument | Primary Uses | Frequency Range | Characteristics | Price |
|-----------------------|----------------------------------|-----------------|--|-----------------|
| -hp- 330A | Wave form analyzer | 30 cps to 16 kc | Variable selectivity; measuring range 1 mv to 500 v | \$625.00 |
| -hp- 330B | Measures total audio distortion | 20 cps to 20 kc | Includes input amplifier, VTVM | 410.00 Δ |
| -hp- 330C | For FM broadcast measurements | 20 cps to 20 kc | Special VU meter to meet F.C.C. requirements | 440.00 Δ |
| -hp- 330D | For AM-FM broadcast measurements | 20 cps to 20 kc | AM detector and VU meter to meet F.C.C. requirements | 455.00 Δ |
| SQUARE WAVE GENERATOR | | | | |
| -hp- 210A | Transient and frequency response | 20 cps to 10 kc | Output 50 v peak-to-peak 1,000 ohm impedance | 150.00 |

-hp- Vacuum Tube Voltmeters - 2 to 700,000,000 cps

-hp- 400D VACUUM TUBE VOLTMETER



Best *-hp-* voltmeter ever built! Covers all frequencies 10 cps to 4 mc. Extremely sensitive, wide range, accurate within 2% to 1 mc, measures 0.1 mv to 300 v. Direct reading in dbm. 10 megohm input impedance insures negligible loading on circuits

under test. New amplifier circuit with 56 db mid-range feedback assures utmost stability, freedom from change due to external conditions. \$225.00.

| Instrument | Primary Uses | Frequency Range | Voltage Range | Input Impedance | Price |
|------------|---|------------------|-----------------------------|----------------------------------|----------|
| -hp- 400A | General purpose ac measurements | 10 cps to 1 mc | .005 to 300 v 9 ranges | 1 megohm 24 μ fd shunt | \$185.00 |
| -hp- 400B | Low frequency ac measurements | 2 cps to 100 kc | .005 to 300 v 9 ranges | 10 megohms 24 μ fd shunt | 195.00 |
| -hp- 400D | Wide range ac measurements. High sensitivity | 10 cps to 4 mc | .0001 to 300 v 12 ranges | 10 megohms 14 μ fd shunt | 225.00 |
| -hp- 404A | Portable, battery operated | 2 cps to 50 kc | .0005 to 300 v 11 ranges | 10 megohms 20 μ fd shunt | 185.00 |
| -hp- 410B | Audio, rf, VHF measurements; dc voltages; resistances | 20 cps to 700 mc | .1 to 300 v 7 ranges | 10 megohms 1.5 μ fd shunt | 245.00 |

-hp- Voltmeter Accessories (not listed) include voltage dividers, connectors, shunts and multipliers to extend the useful range of your equipment.

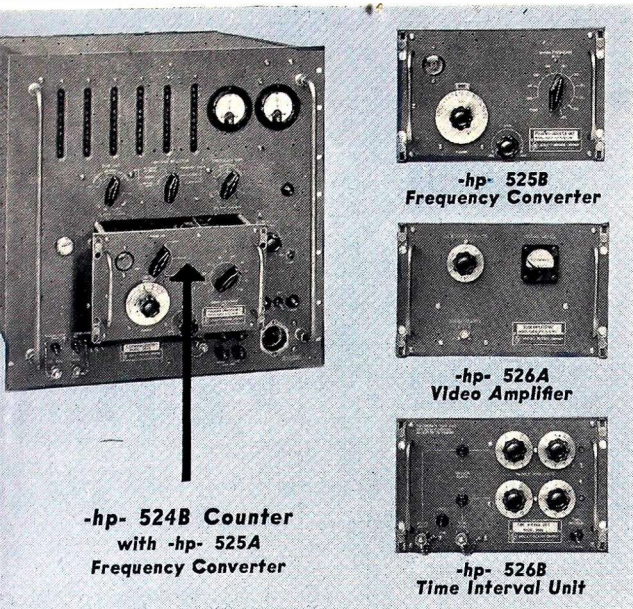
Δ Includes new lightweight all-metal cabinet with carrying handles. Also available for rack mounting at slightly lower prices.

Data subject to change without notice. Prices f.o.b. factory.

NEW!

hp 524B ELECTRONIC COUNTER

with plug-in units to fit your exact measuring need



Frequency 10 cps to 220 mc, interval 1 μ sec to 100 days and period 0 cps to 10 kc—all are measured instantly, automatically, directly by the revolutionary new *-hp-* 524B. You buy just the instrumentation you need; later add inexpensive plug-in units to double, triple versatility of this complete coverage instrument. Operation requires no calculations or technical training. Counter has high impedance, sensitivity, accuracy, quality construction. \$1,915.00 Δ .

-hp- 525A Frequency Converter extends Counter's basic 10 cps to 10 mc range to 100 mc; increases video sensitivity to 0.1 v, 10 cps to 10 mc. \$225.00.

-hp- 525B Frequency Converter gives Counter range from 100 to 220 mc at 0.25 v sensitivity. \$225.00.

-hp- 526A Video Amplifier increases Counter's sensitivity between 10 cps and 10 mc to 10 millivolts for low level work. \$125.00.

-hp- 526B Time Interval Unit measures interval 1 μ sec to 100 days with accuracy of 0.1 μ sec \pm 0.001%. Reads direct in seconds, milliseconds, microseconds. \$150.00

(Plug-in units supplied in aluminum storage cases)

Other -hp- Frequency Measuring and Monitoring Equipment

-hp- 100D SECONDARY FREQUENCY STANDARD

Swift, sure frequency comparison, new convenience in standardizing with minimum external equipment. 100 μ sec time markers, built-in oscilloscope, sine or rectangular waves. Low impedance; short-time stability 1/1,000,000. Performs most functions of primary standards in rf or supersonic ranges. \$615.00 Δ .

-hp- 335E TV MONITOR

Channels 2 through 83. Exceeds F.C.C. requirements. Compact, only 12 $\frac{1}{4}$ " high, rack mounted. Low cost, all purpose, for visual and aural frequency monitoring, aural modulation. Long-term dependability, precise accuracy, highest stability, no adjustment during operation. Forced ventilation, re-indication features. \$1,950.00.

-hp- 512A/B FREQUENCY CONVERTERS

Two new *-hp-* Frequency Converters extend range of *-hp-* 524A Electronic Counter without loss of accuracy and with increased sensitivity. *-hp-* 512A covers frequencies 10 to 100 mc, 512B covers 100 to 220 mc. Complex setups eliminated, are easily used by non-technical personnel. *-hp-* 512A, 512B, \$350.00.

-hp- 522B ELECTRONIC COUNTER

Compact, low cost, versatile instrument for frequency, period or time measurements. Range 10 cps to 100 kc. Reads direct in cps, kc, seconds or milliseconds. Count automatic, reset, action repetitive. Stability of time base 1/1,000,000. Display length variable. Easily used by untrained personnel. \$915.00 Δ .

| Instrument | Primary Uses | Frequency Range | Characteristics | Price |
|---------------------------------|--|---|--|--------------------|
| -hp- 100C Secondary Standard | Audio, supersonic calibration | 100 kc, 10 kc, 1 kc, 100 cps | Accurate within $\pm .001\%$ Sine waves only | \$ 465.00 Δ |
| -hp- 100D Secondary Standard | Frequency, time measurements | 100 kc, 10 kc, 1 kc, 100 cps, 10 cps | Stability 1/1,000,000 (short-time) Sine or rectangular output. Marker pips | 615.00 Δ |
| -hp- 335B Frequency Monitor | FM broadcast station monitor | 88 to 108 mc | Frequency deviation ± 3 kc; accuracy $\pm .001\%$; modulation 0 to 100 kc | 935.00 |
| -hp- 335E TV Monitor | TV visual, aural and % mod. monitor | Channels 2 through 83 | Indicates visual, aural carrier frequency deviation, % modulation aural carrier | 1,950.00 |
| -hp- 500A Frequency Meter | Rapid frequency measurements | 10 cps to 50 kc | 10 ranges $\pm 2\%$ accuracy. Input 0.5 to 200 volts | 210.00 |
| -hp- 505A Electronic Tachometer | Measurements of high speed machinery | 600 to 3,000,000 rpm | 10 ranges $\pm 2\%$ accuracy | 220.00 |
| -hp- 505B Electronic Tachometer | Same as 505A | 10 to 50,000 rps | Same as 505A except calibrated in rps | 220.00 |
| -hp- 510A Mixer | Measure frequency continuously with <i>-hp-</i> 500A and 100 D/C | 20 cps to 200,000 cps | Mixes two frequencies, delivers difference to <i>-hp-</i> 500A | 200.00 |
| -hp- 512A Frequency Converter | Extends <i>-hp-</i> 524A range to 100 mc | 100 kc to 100 mc | Fast, direct readings of signals to 100 mc with 524A. No charts, interpolation. Min. input 0.01 v | 350.00 |
| -hp- 512B Frequency Converter | Gives <i>-hp-</i> 524A range 100 to 220 mc | 100 mc to 220 mc | Same as 512A except for frequency coverage and input 0.14 v RMS min. | 350.00 |
| -hp- 520A Nuclear Scaler | For counting high-rate pulses | Capacity 100 counts in 2 decades. 10,000,000 pps counting rate | 100:1 divider for operation of low speed scalars | 615.00 Δ |
| -hp- 522A Electronic Counter | Wide-range frequency, period measurements | 10 cps to 100 kc | Frequency measuring gate time is 1 sec. or multiples; standard frequency counted for period measurement 100 kc | 790.00 Δ |
| -hp- 522B Electronic Counter | Wide-range frequency, period, time interval measurements | 10 cps to 100 kc | Measures rate of occurrences 0.00001 to 100,000/sec.; time interval 10 μ sec to 27.8 hrs.; periods of frequency count 1/1,000, 1/100, 1/10, 1, 10 sec. and multiples. Direct readings in cps, kc, sec. and millisec. | 915.00 Δ |

Δ Includes new lightweight all-metal cabinet with carrying handles. Also available for rack mounting at slightly lower prices.

Data subject to change without notice. Prices f.o.b. factory.

-hp- Signal Generators -10 to 11,000 mc

-hp- 612A UHF-TV SIGNAL GENERATOR



450 to 1,200 mc. Master oscillator-power amplifier generator for UHF-TV measurements including gain, selectivity, sensitivity, image rejection. Directly set and read; no charts; no interpolation. Low incidental fm. high-quality broad band pulse modulation to 5 mc. May be modulated internally or externally (CW, pulse, or pulse modulated. (Cycles per sec. 100 to 100,000; pulse width 100 nsec or longer.) \$1,200.00.

ulated internally or externally (CW, pulse, or pulse modulated. (Cycles per sec. 100 to 100,000; pulse width 100 nsec or longer.) \$1,200.00.

| Instrument | Frequency Range | Characteristics | Price |
|------------|--------------------|---|-----------|
| -hp- 608A | 10 to 500 mc | Output 0.1 μ v to 1 v into 50 ohm load. Pulse or CW modulation. Direct calibration. | \$ 850.00 |
| -hp- 612A | 450 to 1,200 mc | Output 0.1 μ v to 0.5 v into 50 ohm load. Pulse, CW or amplitude modulation to 5 mc. Direct calibration. | 1,200.00 |
| -hp- 614A | 800 to 2,100 mc | Output 0.1 μ v to 0.223 v into 50 ohm load. Pulse, CW or FM modulation. Direct calibration. | 1,950.00 |
| -hp- 616A | 1,800 to 4,000 mc | Output 0.1 μ v to 0.223 v into 50 ohm load. Pulse, CW or FM modulation. Direct calibration. | 1,950.00 |
| -hp- 618B | 3,800 to 7,600 mc | Output 0.1 μ v to 0.223 v into 50 ohm load. Pulse, CW, FM or square wave modulation. Direct calibration. | 2,250.00 |
| -hp- 620A | 7,000 to 11,000 mc | Output 0.1 μ v to 0.071 v into 50 ohm load. Pulse, CW, FM or square wave modulation. Direct calibration. | 2,250.00 |
| -hp- 622C | 5,925 to 7,725 mc | Output 70 μ v to 0.223 v into 50 ohm load. FM or square wave modulation. Separate power meter and wave meter section. | 1,750.00 |
| -hp- 624C | 8,500 to 10,000 mc | Output 3.0 μ v to 0.223 v into 50 ohm load. Pulse, FM or square wave modulation. Separate power meter and wave meter section. | 2,265.00 |

-hp- Waveguide Test Equipment - 2.6 to 18 kmc

Basic, low-cost test equipment with utmost flexibility for assembly of exact instrumentation for waveguide test. Covers entire range of its waveguide size.

Simple, rugged design; accurate, multi-purpose operation.

| Instrument | "I" 1 1/2" x 1 1/2" 2.95-5.85 kmc. | "G" 2" x 1" 3.95-5.85 kmc. | "J" 1 1/2" x 3/4" 5.85-8.2 kmc. | "H" 1 1/4" x 5/8" 7.05-10.0 kmc. | "X" 1" x 1/2" 8.2-12.4 kmc. | "P" .702" x .391" 12.4-18.0 kmc. |
|-------------------------------|------------------------------------|----------------------------|---------------------------------|----------------------------------|-----------------------------|----------------------------------|
| Adapter, Waveguide | G275 0 | G281A \$55.00 | J281A \$50.00 | H281A \$45.00 | X281A \$35.00 | |
| Cover | G295 0 | G290A \$50.00 | J290A \$35.00 | H290A \$25.00 | X290A \$15.00 | P290A \$20.00 |
| Attenuators, Fixed | G300 0 | G370 \$65.00 | J370 \$65.00 | H370 \$60.00 | X370 \$55.00 | P370 \$60.00 |
| Flap | G310 0 | G375A \$100.00 | J375A \$90.00 | H375A \$80.00 | X375A \$50.00 | P375A \$65.00 |
| Calibrator | G320 0 | | J382A \$300.00 | H382A \$300.00 | X382A \$250.00 | P382A \$250.00 |
| Detector Mounts | | | | | X421A \$75.00 | |
| Thermistor Mounts | G400 0 | G485B† \$95.00 | J485B† \$90.00 | H485B† \$85.00 | X485B† \$75.00 | P485C■ \$110.00 |
| Frequency Meters | | G487A \$95.00 | J487A \$90.00 | H487A \$80.00 | X487A \$75.00 | |
| Directional Couplers | G500 0 | | J530A \$120.00 | H530A \$120.00 | X530A \$120.00 | P530A \$150.00 |
| Directional Couplers, Matched | G510 0 | G750 \$85.00 | J750 \$70.00 | H750 \$60.00 | X750 \$50.00 | |
| Universal Waveguide | G520 0 | G752 \$170.00 | J752 \$140.00 | H752 \$120.00 | X752 \$100.00 | P752A \$135.00 |
| Slotted Sections, Waveguide | | | | | | |
| Waveguide Tees, Series | | | | | | |
| Shunt | S810A* \$450.00 | G810B§ \$90.00 | J810B§ \$90.00 | H810B§ \$90.00 | X810B§ \$90.00 | P810B§ \$90.00 |
| Hybrid | S840A \$100.00 | G840A \$85.00 | J840A \$65.00 | H840A \$50.00 | X840A \$35.00 | P840A \$40.00 |
| Transformers, Slide Screw | S841A \$100.00 | G841A \$85.00 | J841A \$65.00 | H841A \$50.00 | X841A \$35.00 | P841A \$40.00 |
| E-H | S845A \$130.00 | G845A \$115.00 | J845A \$100.00 | H845A \$75.00 | X845A \$50.00 | P845A \$55.00 |
| Waveguide Phase Shifter | S870A \$170.00 | G870A \$140.00 | J870A \$135.00 | H870A \$130.00 | X870A \$125.00 | P870A \$130.00 |
| Terminations, Low Power | S880A \$225.00 | G880A \$155.00 | J880A \$145.00 | H880A \$135.00 | X880A \$130.00 | P880A \$135.00 |
| Terminations, High Power | | | | | X885A \$250.00 | |
| Moving Load | S910A \$45.00 | G910A \$40.00 | J910A \$35.00 | H910A \$30.00 | X910A \$25.00 | P910A \$30.00 |
| Adjustable Shorts | S912A \$125.00 | | | | X912A \$75.00 | |
| Broad Band Probe | S914A \$100.00 | G914A \$75.00 | J914A \$70.00 | H914A \$60.00 | X914A \$50.00 | P914A \$55.00 |
| Broad Band Probe, Untuned | S920A \$80.00 | G920A \$70.00 | J920A \$65.00 | H920A \$60.00 | X920A \$50.00 | P920A \$55.00 |
| | 442B \$35.00 | | | | | |
| | 444A \$50.00 | | | | | |

†For use with bolometer or crystal. §For use with bolometer only. *Complete assembly including carriage. ■Mounts in 809B Carriage—See next page. ■ Includes Thermistor, installed. See page 6.

△ Includes new lightweight all-metal cabinet with carrying handles. Also available for rack mounting at slightly lower prices. Data subject to change without notice. Prices f.o.b. factory.

-hp- Regulated Power Supplies

-hp- 715A POWER SUPPLY

-hp- 715A is a versatile source of regulated beam and reflector voltage for operating most test bench klystron tubes. Beam voltage 250 to 400 v; reflector voltage 0 to 900 v; 6.3 v filament. Internal, 1,000 cps square wave modulation, also 60 cps fm modulation, both on reflector voltage. \$300.00.



-hp- 712B POWER SUPPLY

This new -hp- instrument features high regulation of 0.01%, 0.1 millisecond transient response, internal impedance 0.1 ohms in series with 25 μ H; full-load maximum voltage drop less than 500 μ v, sealed transformers, chokes and capacitors. 0 to 500 v, 200 ma supply and -300 v tap providing a 50 ma, 300 to 800 v supply for klystron operation. \$365.00 Δ .



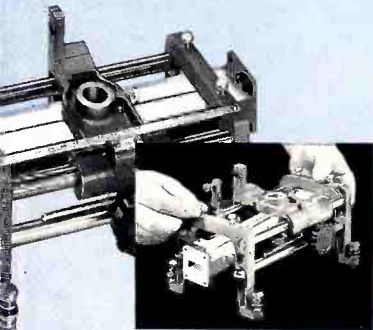
| Instrument | Primary Uses | Characteristics | Price |
|---------------------------------|---|--|-----------------|
| -hp- 710A Power Supply | General purpose regulated plate and filament supply for lab and field use | 180 to 360 volts at 75 milliamperes | \$ 85.00 |
| -hp- 710B Power Supply | Same as 710A | 100 to 360 volts at 75 milliamperes | 100.00 |
| -hp- 712B Power Supply | Similar to 710A/B. Meets requirements for heavy duty field and lab work | 0 to 500 volts at 200 milliamperes 0.01% regulation | 365.00 Δ |
| -hp- 715A Klystron Power Supply | Regulated beam, reflector source for low power klystrons | 250 to 400 volts at 50 milliamperes | 300.00 |
| -hp- 717A Klystron Power Supply | Regulated beam, reflector source for Type 5721 klystrons | 800 to 1,000 volts at 25 milliamperes | 375.00 |

Equipment below available for most waveguide frequencies

See table at left for data, prices.

-hp- 809B UNIVERSAL PROBE CARRIAGE

-hp- 810 WAVEGUIDE SLOTTED SECTIONS



Convenient, all-purpose -hp- 809B carriage comes with six different -hp- slotted section waveguide and coaxial. Mounts section covering frequencies 3,000 to 18,000 sections interchange in 30 seconds! Non-built carriage calibrated in mm to mm; dial gauge may be mounted. Operates with -hp- 442B Broad Band Probe or -hp- 440A Coaxial Detector in combination, or with -hp- 444A Untuned Probe.

-hp- 810A/B Slotted Sections. -hp- 810B, mounting in 809B carriage, is a flanged waveguide section with accurately machined tapered at ends to minimize reflection. Available in 5 waveguide bands, 3.95 thru 12.5 kmc. -hp- S810A, complete slotted section assembly including probe carriage. Available for 2.6 to 3.95 kmc band only.

-hp- 420A CRYSTAL DETECTOR

Employs a silicon crystal to detect rf signals in Type N coaxial line. Covers frequencies 10 mc to 12.5 kmc. Flat frequency response, excellent conversion efficiency. Modified 1N21 crystal.

-hp- X382A PRECISION ATTENUATOR



Precision broad band attenuation to 50 db. Completely independent of frequency; phase shift constant at all attenuations.

Calibrated range 0 to 50 db, maximum error $\pm 2\%$ of db reading. 8,200 to 12,400 mc. VSWR less than 1.15 full range. Radical new design with rotating attenuator films.

-hp- 281A WAVEGUIDE-COAX ADAPTERS



For convenient transition between waveguide and coax systems. Each unit covers a full waveguide range with VSWR less than 1.25. Equipped with Type N connectors.

-hp- 444A UNTUNED PROBE



A 1N26 crystal plus small antenna in a convenient, easy-to-use housing. Variable penetration depth, no tuning required. Sensitivity equal to single- or double-tuned probes. Frequency range: 2.6 to 18.0 kmc. Mounts in 809B Carriage.

-hp- 487A THERMISTOR MOUNT



For fast, accurate waveguide power measurements. Each mount covers full range of its waveguide frequency. No tuning required, VSWR less than 1.5. Rugged construction, high temperature coefficient permanent thermistors virtually eliminate delays due to detector element burn-out.

-hp- X885A PHASE SHIFTER



For accurate, precisely controlled phase variation throughout X-Band frequencies. Ideal for microwave impedance, transmission measurements, antenna and system design. Direct reading, low power absorption, 360° (electrical) range.

-hp- 752 MULTI-HOLE COUPLER



Directional couplers available in 2 models with coupling factors of 10 and 20 db ± 0.7 db over full range of a waveguide. VSWR better than 1.05. Directivity 40 db or better over entire range. Available as a 3-terminal network.

-hp- 485B DETECTOR MOUNTS



To measure power over complete waveguide range in conjunction with -hp- 430B Power Meter and barretter. Also measures relative level, or detects rf energy using 1N21 or 1N23 crystal. Semi-tuned by movable short to VSWR 1.25.

-hp- 870A SLIDE SCREW TUNERS



For flattening waveguide systems. The position and penetration of a probe is adjusted to set up a VSWR which is used to cancel existing VSWR in system. VSWR values up to 20 can be corrected with accuracy of 1.02 VSWR.

Δ Includes new lightweight all-metal cabinet with carrying handles. Also available for rack mounting at slightly lower prices.

Data subject to change without notice. Prices f.o.b. factory.

-hp- Oscillators — Signal Generators .01 to 10,000,000 cps

-hp- 200 SERIES AUDIO OSCILLATORS



Four widely used -hp- oscillators have been redesigned into two compact, lightweight instruments offering wider frequency range, more operating simplicity, highest accuracy and stability. New Models 200AB and 200CD replace Models 200A through 200D, retain the time-tested RC circuits that insure constant output, low distortion; require no zero set. -hp- also offers Model 202D for sub-audio, audio, supersonic and carrier tests; and Model 200I, a spread-scale oscillator for interpolation or where frequency must be known precisely.

-hp- 650A TEST OSCILLATOR



Highly stable, wide band (10 cps to 10 mc) multi-purpose test oscillator for audio, supersonic, carrier and intermediate frequency tests. Frequency range 10 cps to 10 mc. Output 15 mw/3 v. ± 1 db. Output impedance 600 ohms with voltage divider. \$490.00.

| Instrument | Primary Uses | Frequency Range | Output | Price |
|------------|--|-------------------|------------------|-----------------|
| -hp- 200AB | Audio tests | 20 cps to 40 kc | 1 watt/24.5 v | \$120.00 |
| -hp- 200CD | Audio, ultrasonic tests | 5 cps to 600 kc | 160 mw/20 v * | 150.00 |
| -hp- 200I | Interpolation and frequency measurements | 6 cps to 6 kc | 100 mw/10 v | 225.00 |
| -hp- 200T | Telemetry, carrier current tests | 250 cps to 100 kc | 160 mw/20 v * | 350.00 |
| -hp- 201B | High quality audio tests | 20 cps to 20 kc | 3 w/42.5 v | 250.00 |
| -hp- 202A | Low frequency measurements | .01 cps to 1 kc | 20 mw/10 v | 465.00 Δ |
| -hp- 202B | Low frequency measurements | 1/2 cps to 50 kc | 100 mw/10 v | 365.00 Δ |
| -hp- 202D | Low frequency measurements | 2 cps to 70 kc | 100 mw/10 v | 275.00 |
| -hp- 204A | Portable, battery operated | 2 cps to 20 kc | 2.5 mw/5 v | 175.00 |
| -hp- 205A | High power audio tests | 20 cps to 20 kc | 5 watts | 405.00 Δ |
| -hp- 205AG | High power tests, gain measurements | 20 cps to 20 kc | 5 watts | 440.00 Δ |
| -hp- 205AH | High power supersonic tests | 1 kc to 100 kc | 5 watts | 565.00 Δ |
| -hp- 206A | High quality, high accuracy audio tests | 20 cps to 20 kc | +15 dbm | 565.00 Δ |
| -hp- 230A | Carrier test oscillator | 35 cps to 35 kc | +14 dbm/600 ohms | 275.00 |
| -hp- 235A | Carrier test oscillator | 50 cps to 500 kc | 3w/600 ohms | 475.00 |
| -hp- 236A | Carrier test oscillator | 160 cps to 160 kc | +14 dbm/600 ohms | 300.00 |
| -hp- 650A | Wide range video tests | 10 cps to 10 mc | 15 mw/3 v | 490.00 Δ |

* Output 100 ohms. Internal impedance 600 ohms.

-hp- Distortion and Form Analyzers — 20 cps to 20 kc

-hp- 330B DISTORTION ANALYZER



Measures distortion as low as .01% (100 db). Measures total audio distortion. Includes input amplifier, VTVM usable separately. Wide band 20 db gain amplifier. VTVM usable separately. \$410.00.

FM, AM-FM MOD

-hp- 330C, for FM broadcast meter meeting F.C.C. requirements for AM-FM broadcasters. Will rectify AM carrier, plus AM model 330C. Model 330C. \$455.00 Δ .

| Instrument | Primary Uses | Frequency Range | Characteristics | Price |
|------------------------------|----------------------------------|-----------------|--|-----------------|
| -hp- 330B | Wave form analyzer | 30 cps to 16 kc | Variable selectivity; measuring range 1 mv to 500 v | \$625.00 |
| -hp- 330C | Measures total audio distortion | 20 cps to 20 kc | Includes input amplifier, VTVM | 410.00 Δ |
| -hp- 330D | For FM broadcast measurements | 20 cps to 20 kc | Special VU meter to meet F.C.C. requirements | 440.00 Δ |
| -hp- 330E | For AM-FM broadcast measurements | 20 cps to 20 kc | AM detector and VU meter to meet F.C.C. requirements | 455.00 Δ |
| SQUARE WAVE GENERATOR | | | | |
| -hp- 215A | Transient and frequency response | 20 cps to 10 kc | Output 50 v peak-to-peak 1,000 ohm impedance | 150.00 |

-hp- Vacuum Tube Voltmeters — 2 to 700,000,000 cps

-hp- 400D VACUUM TUBE VOLTMETER



Best -hp- voltmeter ever built! Covers all frequencies 10 cps to 4 mc. Extremely sensitive, wide range, accurate within 2% to 1 mc, measures 0.1 mv to 300 v. Direct reading in dbm. 10 megohm input impedance insures negligible loading on circuits under test. New amplifier circuit with 56 db mid-range feedback assures utmost stability, freedom from change due to external conditions. \$225.00.

| Instrument | Primary Uses | Frequency Range | Voltage Range | Input Impedance | Price |
|------------|---|------------------|--------------------------|-------------------------------|----------|
| -hp- 400A | General purpose ac measurements | 10 cps to 1 mc | .005 to 300 v 9 ranges | 1 megohm 24 μ fd shunt | \$185.00 |
| -hp- 400B | Low frequency ac measurements | 2 cps to 100 kc | .005 to 300 v 9 ranges | 10 megohms 24 μ fd shunt | 195.00 |
| -hp- 400D | Wide range ac measurements. High sensitivity | 10 cps to 4 mc | .0001 to 300 v 12 ranges | 10 megohms 24 μ fd shunt | 225.00 |
| -hp- 404A | Portable, battery operated | 2 cps to 50 kc | .0005 to 300 v 11 ranges | 10 megohms 20 μ fd shunt | 185.00 |
| -hp- 410B | Audio, rf, VHF measurements; dc voltages; resistances | 20 cps to 700 mc | .1 to 300 v 7 ranges | 10 megohms 1.5 μ fd shunt | 245.00 |

-hp- Voltmeter Accessories (not listed) include voltage dividers, connectors, shunts and multipliers to extend the useful range of your equipment.

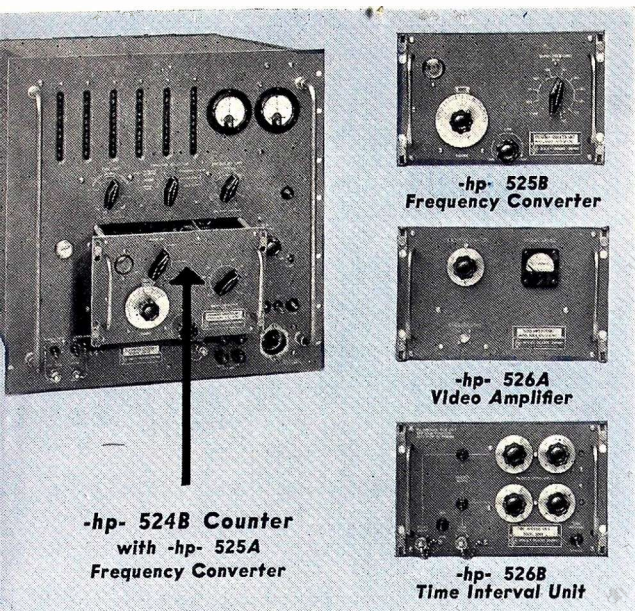
Δ Includes new lightweight all-metal cabinet with carrying handles. Also available for rack mounting at slightly lower prices.

Data subject to change without notice. Prices f.o.b. factory.

NEW!

hp 524B ELECTRONIC COUNTER

with plug-in units to fit your exact measuring need



Frequency 10 cps to 220 mc, interval 1 μ sec to 100 days and period 0 cps to 10 kc—all are measured instantly, automatically, directly by the revolutionary new *-hp-* 524B. You buy just the instrumentation you need; later add inexpensive plug-in units to double, triple versatility of this complete coverage instrument. Operation requires no calculations or technical training. Counter has high impedance, sensitivity, accuracy, quality construction. \$1,915.00 Δ .

-hp- 525A Frequency Converter extends Counter's basic 10 cps to 10 mc range to 100 mc; increases video sensitivity to 0.1 v, 10 cps to 10 mc. \$225.00.

-hp- 525B Frequency Converter gives Counter range from 100 to 220 mc at 0.25 v sensitivity. \$225.00.

-hp- 526A Video Amplifier increases Counter's sensitivity between 10 cps and 10 mc to 10 millivolts for low level work. \$125.00.

-hp- 526B Time Interval Unit measures interval 1 μ sec to 100 days with accuracy of 0.1 μ sec \pm 0.001%. Reads direct in seconds, milliseconds, microseconds. \$150.00

(Plug-in units supplied in aluminum storage cases)

Other -hp- Frequency Measuring and Monitoring Equipment

-hp- 100D SECONDARY FREQUENCY STANDARD

Swift, sure frequency comparison, new convenience in standardizing with minimum external equipment. 100 μ sec time markers, built-in oscilloscope, sine or rectangular waves. Low impedance; short-time stability 1/1,000,000. Performs most functions of primary standards in rf or supersonic ranges. \$615.00 Δ .

-hp- 335E TV MONITOR

Channels 2 through 83. Exceeds F.C.C. requirements. Compact, only 12 $\frac{1}{4}$ " high, rack mounted. Low cost, all purpose, for visual and aural frequency monitoring, percentage aural modulation. Long-term dependability, precise accuracy, highest stability, no adjustment during operation. Forced ventilation, re-indication features. \$1,950.00.

-hp- 512A/B FREQUENCY CONVERTERS

Two new *-hp-* Frequency Converters extend range of *-hp-* 524A Electronic Counter without loss of accuracy and with increased sensitivity. *-hp-* 512A covers frequencies 10 to 100 mc, 512B covers 100 to 220 mc. Complex setups eliminated, are easily used by non-technical personnel. *-hp-* 512A, 512B, \$350.00.

-hp- 522B ELECTRONIC COUNTER

Compact, low cost, versatile instrument for frequency, period or time measurements. Range 10 cps to 100 kc. Reads direct in cps, kc, seconds or milliseconds. Count automatic-reset, action repetitive. Stability of time base 0.000001. Display length variable. Easily used by untrained personnel. \$915.00 Δ .

| Instrument | Primary Uses | Frequency Range | Characteristics | Price |
|---------------------------------|---|---|---|--------------------|
| -hp- 100C Secondary Standard | Audio, supersonic calibration | 100 kc, 10 kc, 1 kc, 100 cps | Accurate within \pm .001% Sine waves only | \$ 465.00 Δ |
| -hp- 100D Secondary Standard | Frequency, time measurements | 100 kc, 10 kc, 1 kc, 100 cps, 10 cps | Stability 1/1,000,000 (short-time) Sine or rectangular output. Marker pips | 615.00 Δ |
| -hp- 335B Frequency Monitor | FM broadcast station monitor | 88 to 108 mc | Frequency deviation \pm 3 kc; accuracy \pm .001%; modulation 0 to 100 kc | 935.00 |
| -hp- 335E TV Monitor | TV visual, aural and % mod. monitor | Channels 2 through 83 | Indicates visual, aural carrier frequency deviation, % modulation aural carrier | 1,950.00 |
| -hp- 500A Frequency Meter | Rapid frequency measurements | 10 cps to 50 kc | 10 ranges \pm 2% accuracy. Input 0.5 to 200 volts | 210.00 |
| -hp- 505A Electronic Tachometer | Measurements of high speed machinery | 600 to 3,000,000 rpm | 10 ranges \pm 2% accuracy | 220.00 |
| -hp- 505B Electronic Tachometer | Same as 505A | 10 to 50,000 rps | Same as 505A except calibrated in rps | 220.00 |
| -hp- 510A Mixer | Measure frequency continuously with -hp- 500A and 100 D/C | 20 cps to 200,000 cps | Mixes two frequencies, delivers difference to -hp- 500A | 200.00 |
| -hp- 512A Frequency Converter | Extends -hp- 524A range to 100 mc | 100 kc to 100 mc | Fast, direct readings of signals to 100 mc with 524A. No charts, interpolation. Min. input 0.01 v | 350.00 |
| -hp- 512B Frequency Converter | Gives -hp- 524A range 100 to 220 mc | 100 mc to 220 mc | Same as 512A except for frequency coverage and input 0.14 v RMS min. | 350.00 |
| -hp- 520A Nuclear Scaler | For counting high-rate pulses | Capacity 100 counts in 2 decades. 10,000,000 pps counting rate | 100:1 divider for operation of low speed scalars | 615.00 Δ |
| -hp- 522A Electronic Counter | Wide-range frequency, period measurements | 10 cps to 100 kc | Frequency measuring gate time is 1 sec. or multiples; standard frequency counted for period measurement 100 kc | 790.00 Δ |
| -hp- 522B Electronic Counter | Wide-range frequency, period, time interval measurements | 10 cps to 100 kc | Measures rate of occurrences 0.00001 to 100,000/sec.; time interval 10 μ sec to 27.8 hrs.; periods of frequency count 1/1,000, 1/100, 1/10, 1, 10 sec. and multiples. Direct readings in cps, kc, sec. and millisecc. | 915.00 Δ |

Δ Includes new lightweight all-metal cabinet with carrying handles. Also available for rack mounting at slightly lower prices.

Data subject to change without notice. Prices f.o.b. factory.

-hp- Signal Generators - 10 to 11,000 mc

-hp- 612A UHF-TV SIGNAL GENERATOR



450 to 1,200 mc. Master oscillator-power amplifier generator for UHF-TV measurements including gain, selectivity, sensitivity, image rejection. Directly set and read; no charts, no interpolation. Low incidental fm, high-quality broad band video modulation to 5 mc. May be modulated internally or externally, amplitude modulated or pulse modulated. (Good if pulses $> 7 \mu\text{sec}$ or longer.) \$1,200.00.

450 to 1,200 mc. Master oscillator-power amplifier generator for UHF-TV measurements including gain, selectivity, sensitivity, image rejection. Directly set and read; no charts, no interpolation. Low incidental fm, high-quality broad band video modulation to 5 mc. May be modulated internally or externally, amplitude modulated or pulse modulated. (Good if pulses $> 7 \mu\text{sec}$ or longer.) \$1,200.00.

| Instrument | Frequency Range | Characteristics | Price |
|------------|--------------------|---|-------------------|
| -hp- 608A | 10 to 500 mc | Output 0.1 μv to 1 v into 50 ohm load. Pulse or CW modulation. Direct calibration. | \$ 850.00 |
| -hp- 612A | 450 to 1,200 mc | Output 0.1 μv to 0.5 v into 50 ohm load. Pulse, CW or amplitude modulation to 5 mc. Direct calibration. | 1,200.00 |
| -hp- 614A | 800 to 2,100 mc | Output 0.1 μv to 0.223 v into 50 ohm load. Pulse, CW or FM modulation. Direct calibration. | 1,950.00 |
| -hp- 616A | 1,800 to 4,000 mc | Output 0.1 μv to 0.223 v into 50 ohm load. Pulse, CW or FM modulation. Direct calibration. | 1,950.00 |
| -hp- 618B | 3,800 to 7,600 mc | Output 0.1 μv to 0.223 v into 50 ohm load. Pulse, CW, FM or square wave modulation. Direct calibration. | 2,250.00 |
| -hp- 620A | 7,000 to 11,000 mc | Output 0.1 μv to 0.071 v into 50 ohm load. Pulse, CW, FM or square wave modulation. Direct calibration. | 2,250.00 |
| -hp- 623B | 5,925 to 7,725 mc | Output 70 μv to 0.223 v into 50 ohm load. FM or square wave modulation. Separate power meter and wave meter section. | 1,750.00 |
| -hp- 624B | 8,500 to 10,000 mc | Output 3.0 μv to 0.223 v into 50 ohm load. Pulse, FM or square wave modulation. Separate power meter and wave meter section. | 2,265.00 Δ |

-hp- Waveguide Test Equipment - 2.6 to 18 kmc

Basic, low-loss components offer utmost flexibility for assembly of exact instrumentation required. Each unit covers entire range of its waveguide size.

Simple, rugged, standard design; accurate, multi-purpose operation.

| Instrument | "B" 1 1/2" x 1 1/2" 3.95-5.85 kmc. | "G" 2" x 1" 3.95-5.85 kmc. | "J" 1 1/2" x 3/4" 5.85-8.2 kmc. | "H" 1 1/4" x 5/8" 7.05-10.0 kmc. | "X" 1" x 1/2" 8.2-12.4 kmc. | "P" .702" x .391" 12.4-18.0 kmc. |
|---------------------------------|--|-------------------------------------|--|---|--------------------------------------|---|
| Adapter, Waveguide to Coaxial | G281A \$75.00 | G281A \$55.00 | J281A \$50.00 | H281A \$45.00 | X281A \$35.00 | |
| Cover to chassis | G290A \$65.00 | G290A \$50.00 | J290A \$35.00 | H290A \$25.00 | X290A \$15.00 | P290A \$20.00 |
| Attenuators, Fixed 6, 10, 20 dB | G370 \$75.00 | G370 \$65.00 | J370 \$65.00 | H370 \$60.00 | X370 \$55.00 | P370 \$60.00 |
| Flap, 25 db | G375A \$110.00 | G375A \$100.00 | J375A \$90.00 | H375A \$80.00 | X375A \$50.00 | P375A \$65.00 |
| Calibrated, 10 dB | G380A \$260.00 | | J382A \$300.00 | H382A \$300.00 | X382A \$250.00 | P382A \$250.00 |
| Detector Mounts | | | | | X421A \$75.00 | |
| Thermistor Mounts (Fixed) | G485A† \$125.00 | G485B† \$95.00 | J485B† \$90.00 | H485B† \$85.00 | X485B† \$75.00 | P485C■ \$110.00 |
| Frequency Meters, Reactive | | G487A \$95.00 | J487A \$90.00 | H487A \$80.00 | X487A \$75.00 | |
| Directional Couplers, Crossed | | | J530A \$120.00 | H530A \$120.00 | X530A \$120.00 | P530A \$150.00 |
| Directional Couplers, Multi | G750 \$100.00 | G750 \$85.00 | J750 \$70.00 | H750 \$60.00 | X750 \$50.00 | |
| Universal Waveguide Carriage | G752 \$260.00 | G752 \$170.00 | J752 \$140.00 | H752 \$120.00 | X752 \$100.00 | P752A \$135.00 |
| Slotted Sections, Waveguide | 809B for frequencies 3,000 to 18,000 mc \$160.00 | | | | | |
| Waveguide Tees, Series | S810A* \$450.00 | G810B§ \$90.00 | J810B§ \$90.00 | H810B§ \$90.00 | X810B§ \$90.00 | P810B§ \$90.00 |
| Shunt | S840A \$100.00 | G840A \$85.00 | J840A \$65.00 | H840A \$50.00 | X840A \$35.00 | P840A \$40.00 |
| Hybrid | S841A \$100.00 | G841A \$85.00 | J841A \$65.00 | H841A \$50.00 | X841A \$35.00 | P841A \$40.00 |
| Transformers, Slide Screw | S845A \$130.00 | G845A \$115.00 | J845A \$100.00 | H845A \$75.00 | X845A \$50.00 | P845A \$55.00 |
| E-H | S870A \$170.00 | G870A \$140.00 | J870A \$135.00 | H870A \$130.00 | X870A \$125.00 | P870A \$130.00 |
| Waveguide Phase Shifter | S880A \$225.00 | G880A \$155.00 | J880A \$145.00 | H880A \$135.00 | X880A \$130.00 | P880A \$135.00 |
| Terminations, Low Power | S910A \$45.00 | G910A \$40.00 | J910A \$35.00 | H910A \$30.00 | X885A \$250.00 | |
| Terminations, High Power | S912A \$125.00 | | | H910A \$30.00 | X910A \$25.00 | P910A \$30.00 |
| Moving Load | | | | | X912A \$75.00 | |
| Adjustable Shorts | S914A \$100.00 | G914A \$75.00 | J914A \$70.00 | H914A \$60.00 | X914A \$50.00 | P914A \$55.00 |
| Broad Band Probe | S920A \$80.00 | G920A \$70.00 | J920A \$65.00 | H920A \$60.00 | X920A \$50.00 | P920A \$55.00 |
| Broad Band Probe, Untuned | 442B \$35.00 | | | | | |
| | 444A \$50.00 | | | | | |

†For use with bolometer or crystal.

‡For use with bolometer only.

*Complete assembly including carriage.

§Mounts in 809B Carriage—See next page.

Δ Includes new lightweight all-metal cabinet with carrying handles. Also available for rack mounting at slightly lower prices.

Data subject to change without notice. Prices f.o.b. factory.

-hp- Regulated Power Supplies

-hp- 715A POWER SUPPLY

-hp- 715A is a versatile source of regulated beam and reflector voltage for operating most test bench klystron tubes. Beam voltage 250 to 400 v; reflector voltage 0 to 900 v; 6.3 v filament. Internal, 1,000 cps square wave modulation, also 60 cps fm modulation, both on reflector voltage. \$300.00.



-hp- 712B POWER SUPPLY

This new **-hp-** instrument features high regulation of 0.01%, 0.1 millisecond transient response, internal impedance 0.1 ohms in series with 25 μ H; full-load maximum voltage 500 v, sealed transformers, chokes and condensers. 0 to 500 v, 200 ma supply and —300 v tap providing a 50 ma, 300 to 800 v supply for klystron operation. \$365.00 Δ .



less than 500 μ v, sealed transformers, chokes and condensers. 0 to 500 v, 200 ma supply and —300 v tap providing a 50 ma, 300 to 800 v supply for klystron operation. \$365.00 Δ .

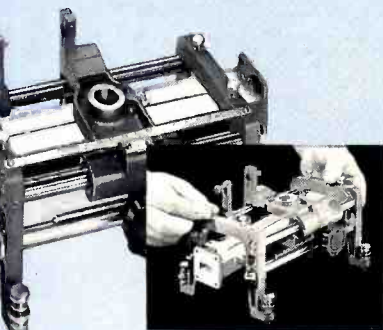
| Instrument | Primary Uses | Characteristics | Price |
|---|---|--|-----------------|
| -hp- 710A Power Supply | General purpose regulated plate and filament supply for lab and field use | 180 to 360 volts at 75 milliamperes | \$ 85.00 |
| -hp- 710B Power Supply | Same as 710A | 100 to 360 volts at 75 milliamperes | 100.00 |
| -hp- 712B Power Supply | Similar to 710A/B. Meets requirements for heavy duty field and lab work | 0 to 500 volts at 200 milliamperes 0.01% regulation | 365.00 Δ |
| -hp- 715A Klystron Power Supply | Regulated beam, reflector source for low power klystrons | 250 to 400 volts at 50 milliamperes | 300.00 |
| -hp- 717A Klystron Power Supply | Regulated beam, reflector source for Type 5721 klystrons | 800 to 1,000 volts at 25 milliamperes | 375.00 |

Equipment below available for most waveguide frequencies

See table at left for data, prices.

-hp- 809B UNIVERSAL PROBE CARRIAGE

-hp- 810 WAVEGUIDE SLOTTED SECTIONS



Convenient, all-purpose **-hp-** 809B carriage mates with six different **-hp-** slotted section waveguide and coaxial. Mounts sections *interchange in 30 seconds!* Precision-built carriage calibrated in mm to mm; dial gauge may be mounted. Operates with **-hp-** 442B Broad Band Probe or **-hp-** 440A Coaxial Detector in combination; or with **-hp-** 444A Untuned Probe.

-hp- 810A/B Slotted Sections. **-hp-** 810B, mounting in 809B carriage, is a flanged waveguide section with accurately machined tapered ends to minimize reflection. Available in 5 waveguide bands, 3.95 thru 18.0 kmc. **-hp-** S810A, complete slotted section assembly including probe carriage. Available for 2.6 to 3.95 kmc band only.

-hp- 420A CRYSTAL DETECTOR

Employs a silicon crystal to detect rf signals in Type N coaxial line. Covers frequencies 10 mc to 12.5 kmc. Flat frequency response, excellent conversion efficiency. Modified 1N21 crystal.

-hp- X382A PRECISION ATTENUATOR



Precision broad band attenuation to 50 db. Completely independent of frequency; phase shift constant all attenuations.

Calibrated range 0 to 50 db, maximum error $\pm 2\%$ of db reading. 8,200 to 12,400 mc. VSWR less than 1.15 full range. Radical new design with rotating attenuator films.

-hp- 281A WAVEGUIDE-COAX ADAPTERS



For convenient transition between waveguide and coax systems. Each unit covers a full waveguide range with VSWR less than 1.25. Equipped with Type N connectors.

-hp- 444A UNTUNED PROBE



A 1N26 crystal plus small antenna in a convenient, easy-to-use housing. Variable penetration depth, no tuning required. Sensitivity equal to single- or double-tuned probes. Frequency range: 2.6 to 18.0 kmc. Mounts in 809B Carriage.

-hp- 487A THERMISTOR MOUNT



For fast, accurate waveguide power measurements. Each mount covers full range of its waveguide frequency. No tuning required, VSWR less than 1.5. Rugged construction, high temperature coefficient permanent thermistors virtually eliminate delays due to detector element burn-out.

-hp- X885A PHASE SHIFTER



For accurate, precisely controlled phase variation throughout X-Band frequencies. Ideal for microwave impedance, transmission measurements, antenna and system design. Direct reading, low power absorption, 360° (electrical) range.

Directional couplers available in 2 models with coupling factors of 10 and 20 db ± 0.7 db over full range of a waveguide. VSWR better than 1.05. Directivity 40 db or better over entire range. Available as a 3-terminal network.

-hp- 752 MULTI-HOLE COUPLER



Directional couplers available in 2 models with coupling factors of 10 and 20 db ± 0.7 db over full range of a waveguide. VSWR better than 1.05. Directivity 40 db or better over entire range. Available as a 3-terminal network.

-hp- 485B DETECTOR MOUNTS



To measure power over complete waveguide range in conjunction with **-hp-** 430B Power Meter and barretter. Also measures relative level, or detects rf energy using 1N21 or 1N23 crystal. Semi-tuned by movable short to VSWR 1.25.

-hp- 870A SLIDE SCREW TUNERS



For flattening waveguide systems. The position and penetration of a probe is adjusted to set up a VSWR which is used to cancel existing VSWR in system. VSWR values up to 20 can be corrected with accuracy of 1.02 VSWR.

Δ Includes new lightweight all-metal cabinet with carrying handles. Also available for rack mounting at slightly lower prices.

Data subject to change without notice. Prices f.o.b. factory.

Microwave Power Measuring Equipment

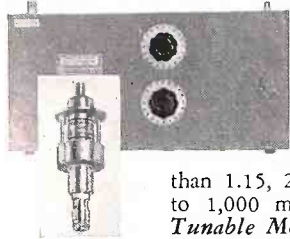
-hp- 430B MICROWAVE POWER METER



No computations! Provides instantaneous, automatic power readings direct in db or mw at all frequencies for which there are suitable bolometer mounts. For CW measurements, uses either

1/100 amp. fuse or Sperry 821 barretter. Also measures CW or pulsed power with negative coefficient thermistor. Operates with all mounts in adjacent table. \$250.00.

-hp- 475B/476A BOLOMETER MOUNTS



-hp- 476A Universal Bolometer Mount measures rf power 10 to 1,000 mc. No tuning or adjustment. VSWR less

than 1.15, 20 to 500 ohms. \$85.00. **-hp- 475B Tunable Mount** (upper), continuous 1,000 to 4,000 mc. \$200.00.

| Instrument | Primary Uses | Frequency Range | Characteristics | Price |
|--------------------------------------|-------------------------|----------------------------|--|------------------|
| -hp- 430B Microwave Power Meter | Measurement of rf power | Depends on Bolometer mount | .01 to 10 mw \pm 5% accuracy | \$250.00 |
| -hp- 475B Tunable Bolometer Mount | Measurement of rf power | 1,000 to 4,000 mc | Matches 50-ohm line to 100 or 200 ohms | 200.00 |
| -hp- 476A Universal Bolometer Mount | Measurement of rf power | 10 to 1,000 mc | No tuning required VSWR less than 1.25 | 85.00 |
| -hp- 477A Coaxial Thermistor Mount | Measurement of rf power | 10 to 10,000 mc | Broad band, low VSWR, no tuning | 75.00 |
| -hp- 485 Waveguide Detector Mount | Measurement of rf power | 2,600 to 18,000 mc | Full coverage of waveguide band | See Table page 4 |
| -hp- 487A Waveguide Thermistor Mount | Measurement of rf power | 4,000 to 12,000 mc | Full coverage, no tuning, 1.5 VSWR | See Table page 4 |

-hp- 477A COAXIAL THERMISTOR MOUNT

For frequency range 10 mc to 10 kmc. VSWR less than 1.5. Thermistor element is 200 ohm negative. Input connector type N, output Type BNC. \$75.00.

Microwave Impedance Measuring Equipment

-hp- 805A/B COAXIAL SLOTTED SECTION



Range 500 to 4,000 mc. High accuracy, negligible slope, minimum loss. Parallel plane design, VSWR of section and connectors, 1.04. **-hp- 805A**, 50 ohm N coaxial connector. **-hp- 805B**, 45 ohm $\frac{7}{8}$ " rigid transmission lines. \$475.00.

-hp- 806B COAXIAL SLOTTED SECTION

For continuous coverage at all frequencies from 3,000 to 12,000 mc. For use with **-hp- 806B** carriage. Section and connector VSWR 1.04 to 1.05. 50 ohm impedance, negligible slope. Type N connectors, \$200.00.

| Instrument | Primary Uses | Frequency Range | Characteristics | Price |
|------------------------------------|---|--|--|-----------------|
| -hp- 440A Band Pass Filters | Eliminates harmonic voltages from UHF systems | Cutoff frequencies A-700 mc B-1,200 mc C-2,200 mc D-4,100 mc | 50 db rejection at 1.2 cutoff freq. | \$ 40.00 |
| -hp- 415A Standing Wave Indicator | VSWR indicator or null indicator | 300 to 2,000 cps Normal freq. 1,000 cps | 0 to 60 db. attn. Max. sensitivity 0.3 μ v | 200.00 |
| -hp- 417A VHF Detector | Measure reflection coefficient, VSWR | 1,000 cps \pm 40 cps | Min. 3 millivolts or 0.3 μ v; accuracy \pm 2% | 365.00 Δ |
| -hp- 803A VHF Bridge | VHF bridge detector (for -hp- 803A) | 10 to 500 mc | Approx. 5 μ v sensitivity | 250.00 |
| -hp- 803A VHF Bridge | Measurement of VHF impedance, VSWR | 50 to 500 mc | 2 to 2,000 ohms impedance -90° to $+90^\circ$ phase angle | 495.00 |
| -hp- 805A Coaxial Slotted Section | Measurement of VSWR | 500 to 4,000 mc | For Type N Connectors, flexible cables | 475.00 |
| -hp- 805B Coaxial Slotted Section | Same as above | Same as above | For rigid $\frac{7}{8}$ " RG44/U line | 475.00 |
| -hp- 806B Coaxial Slotted Section | Same as above (Mounts in 809B) | 3,000 to 12,000 mc | For Type N Connectors, flexible cables | 200.00 |
| -hp- 809B Universal Probe Carriage | Supports 806B section, also G, J, H, X and P 810 Waveguide sections | | Accepts 442B and 444A probes | 160.00 |



-hp- 803A VHF BRIDGE

Gives fast, direct readings of any impedance between 50 and 500 mc. Measures by sampling electric and magnetic fields in transmission line. Usable for comparative measurements 5 to 700 mc. Impedance range 2 to 2,000 ohms. Phase angle -90° to $+90^\circ$, at 52 mc and above. Also measures SWR, % reflected power, VHF system flatness. \$495.00.



-hp- 417A VHF DETECTOR

For use with 803A Bridge; or general laboratory use. Super-regenerative receiver, 10 to 500 mc. 5 bands. Approx. 5 μ v sensitivity over entire band. Direct reading frequency control, thoroughly shielded. \$250.00.



-hp- 415A STANDING WAVE INDICATOR

For all waveguide or coaxial slotted sections. Gives readings in VSWR or db. Single frequency operation; 300 to 2,000 cps. Low noise level, 0.3 μ v sensitivity, 60 db. calib. attenuator. \$200.00.

Δ Includes new lightweight all-metal cabinet with carrying handles. Also available for rack mounting at slightly lower prices.

Data subject to change without notice. Prices f.o.b. factory.

Amplifiers for General Use and Fast-Circuit Work

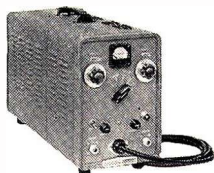
-hp- 460A/B AMPLIFIERS

Complete instrumentation for distortion-free fast pulse measurement. *-hp- 460A Wide Band Amplifiers*, in cascade with *-hp- 460B Fast-Pulse Amplifiers* offer up to 90 db gain, 125 open circuit output. This permits full deflection of 5XP CRT, or 2-inch deflection of 5CP tubes. Rise time 0.0026 μ sec; can amplify milli-microsecond pulses; gives over 100 mc bandwidth to your standard oscilloscope. 460A, \$185.00; 460B, \$225.00. Connecting cables, plugs, accessories—prices on request.



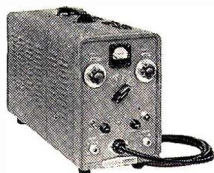
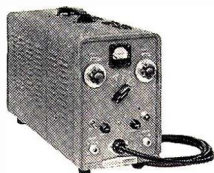
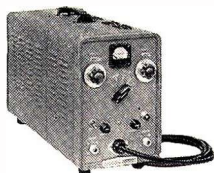
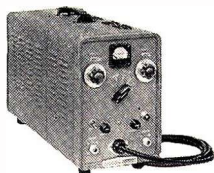
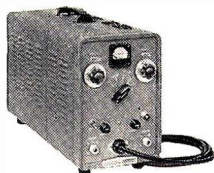
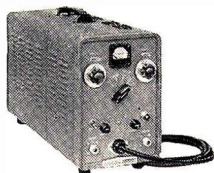
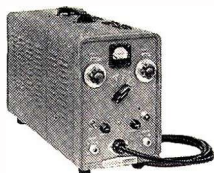
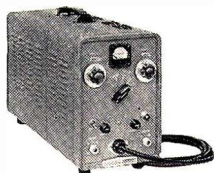
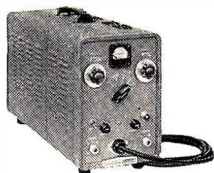
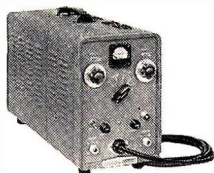
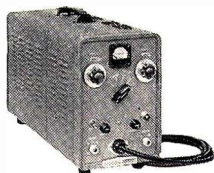
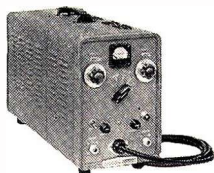
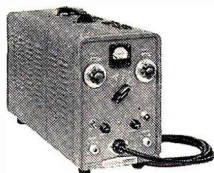
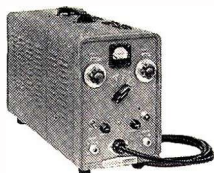
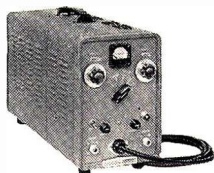
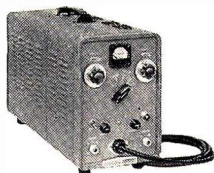
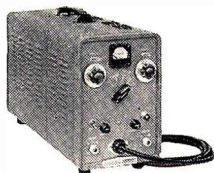
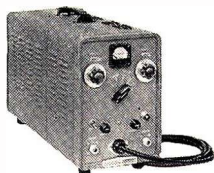
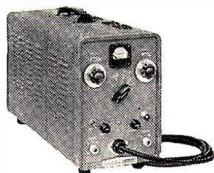
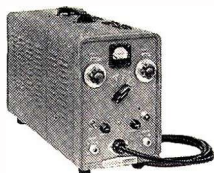
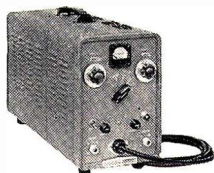
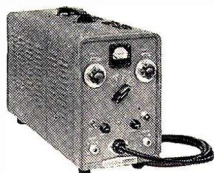
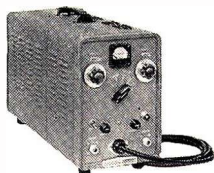
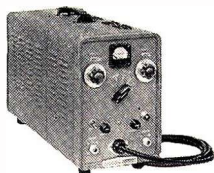
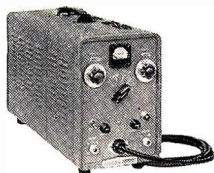
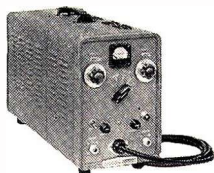
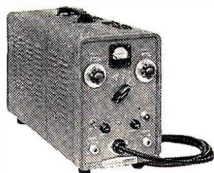
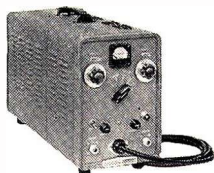
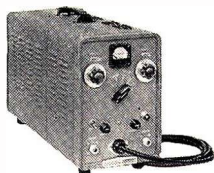
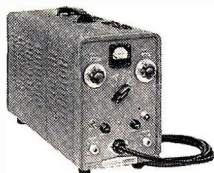
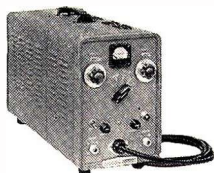
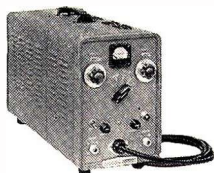
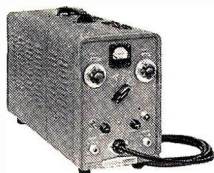
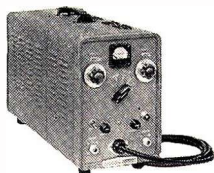
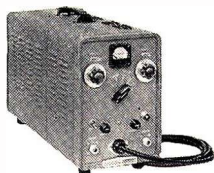
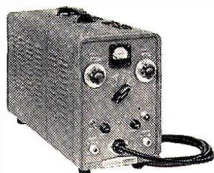
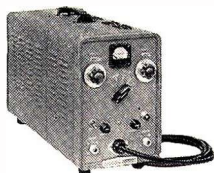
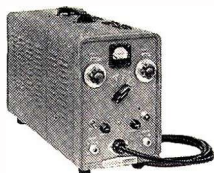
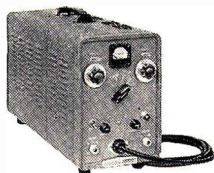
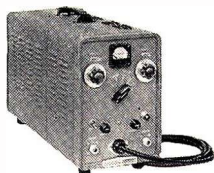
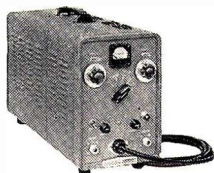
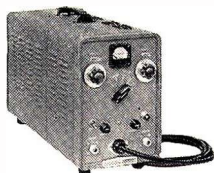
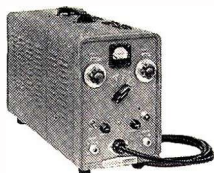
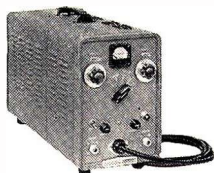
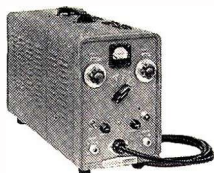
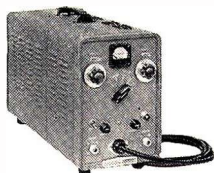
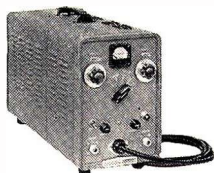
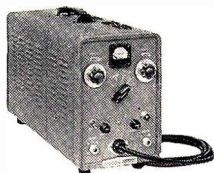
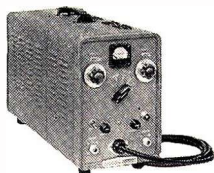
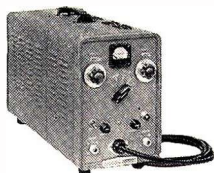
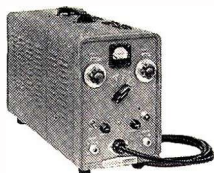
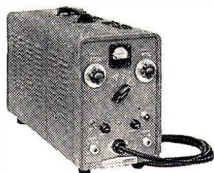
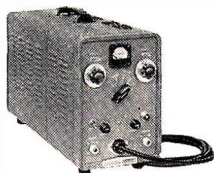
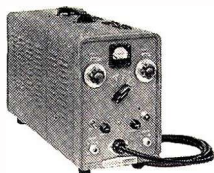
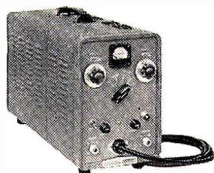
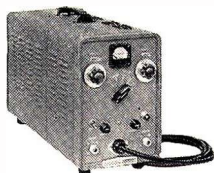
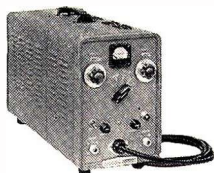
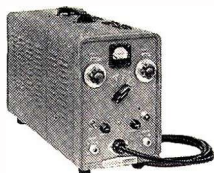
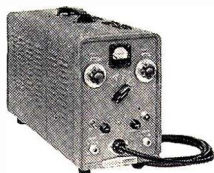
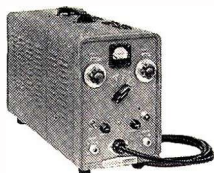
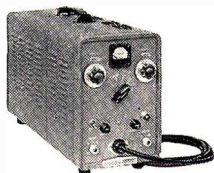
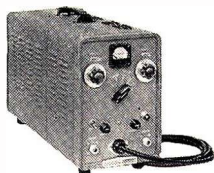
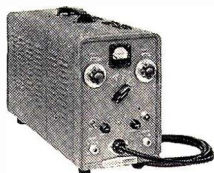
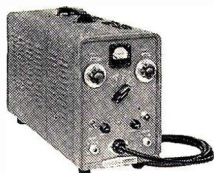
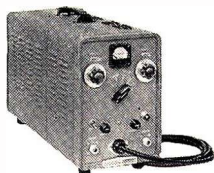
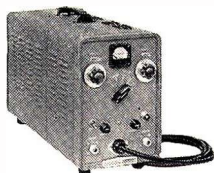
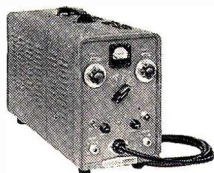
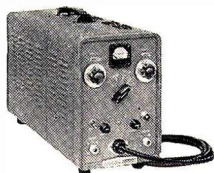
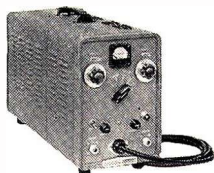
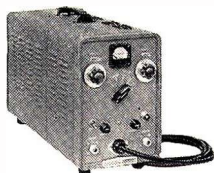
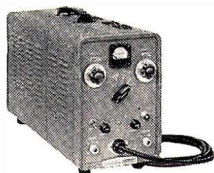
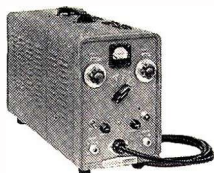
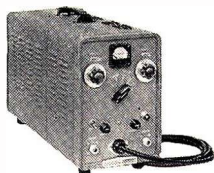
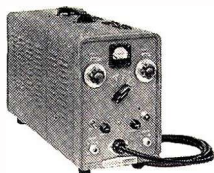
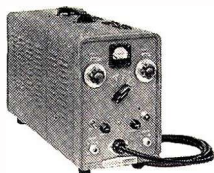
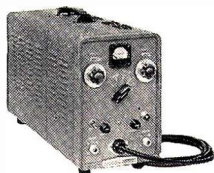
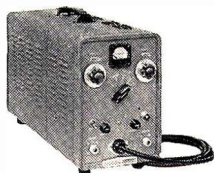
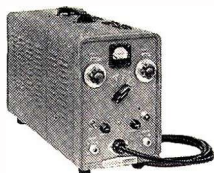
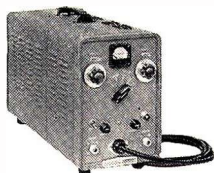
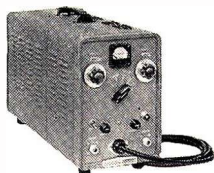
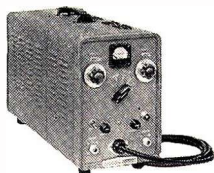
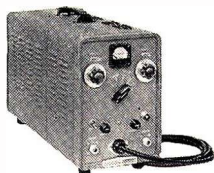
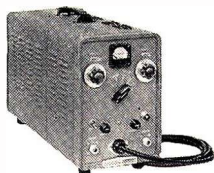
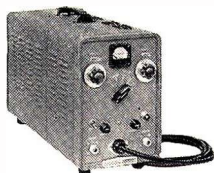
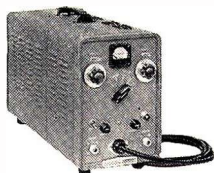
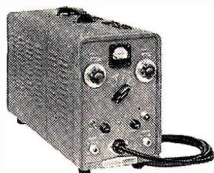
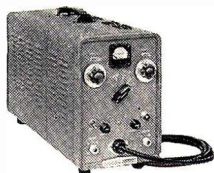
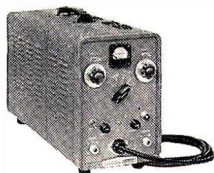
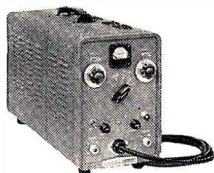
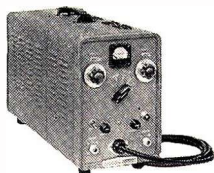
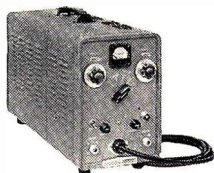
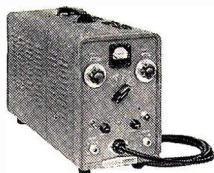
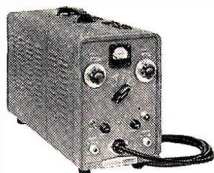
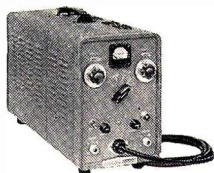
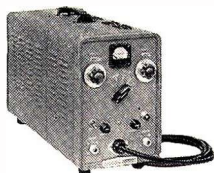
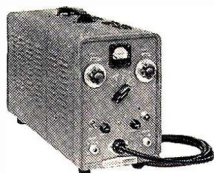
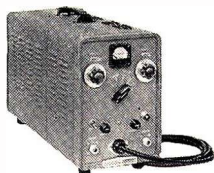
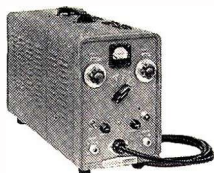
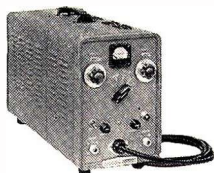
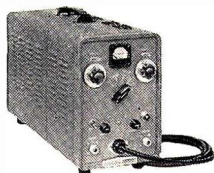
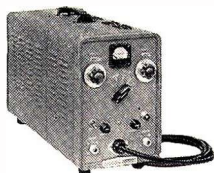
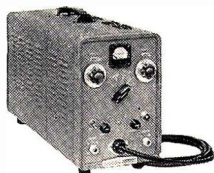
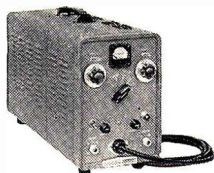
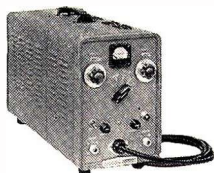
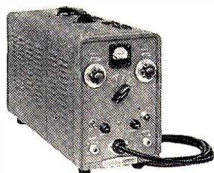
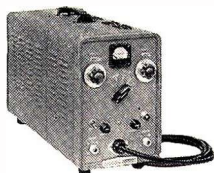
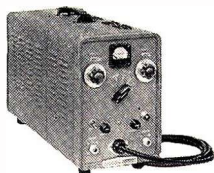
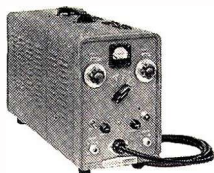
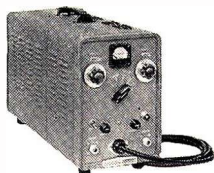
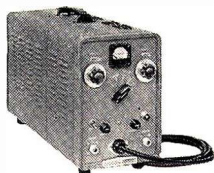
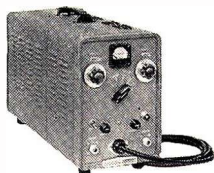
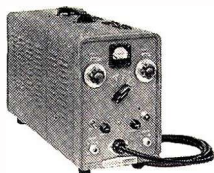
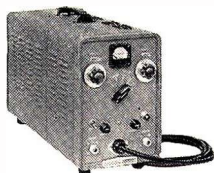
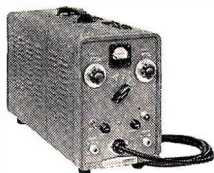
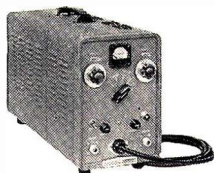
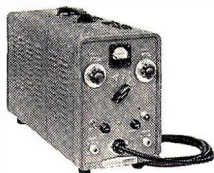
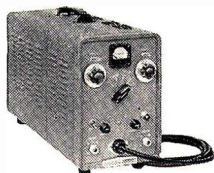
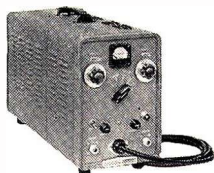
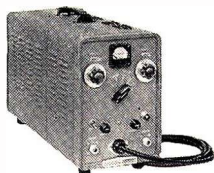
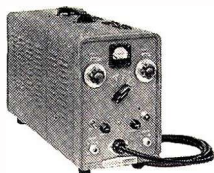
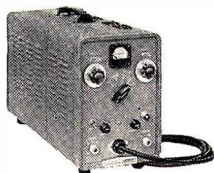
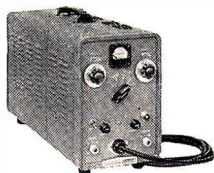
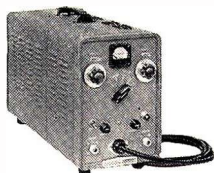
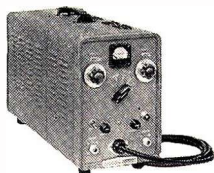
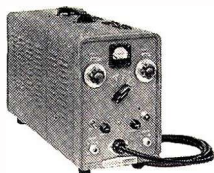
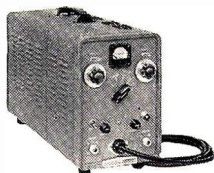
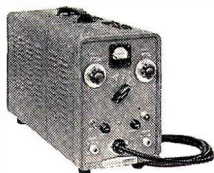
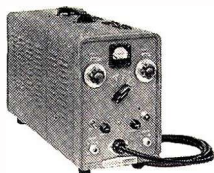
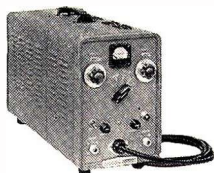
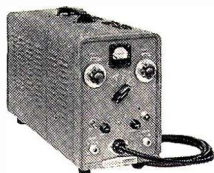
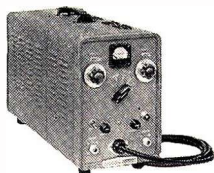
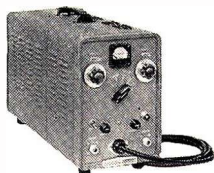
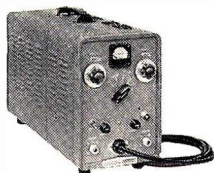
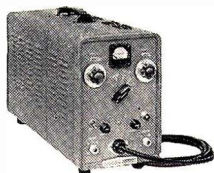
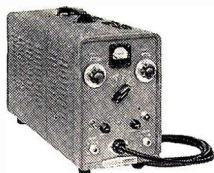
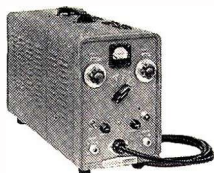
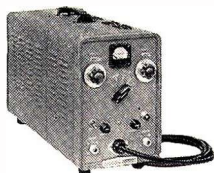
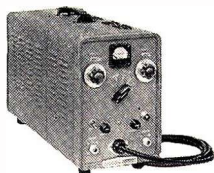
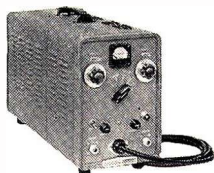
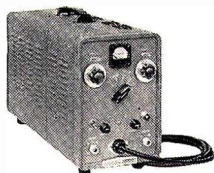
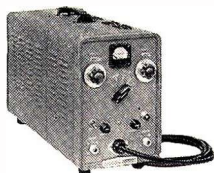
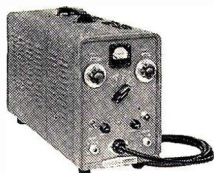
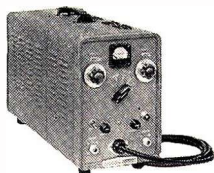
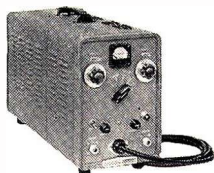
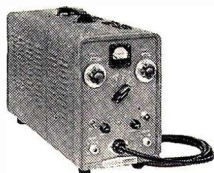
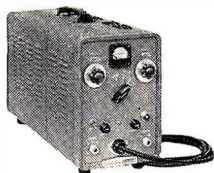
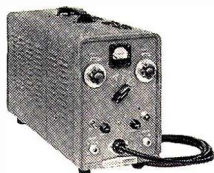
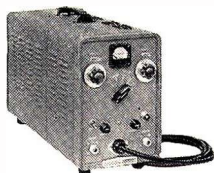
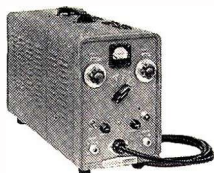
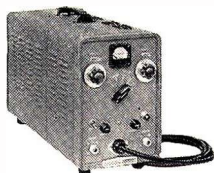
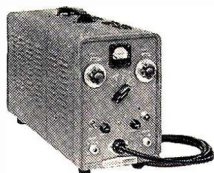
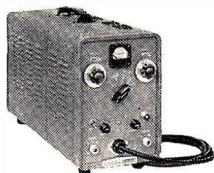
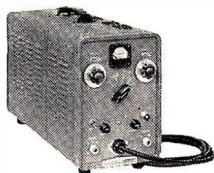
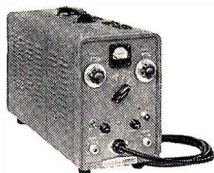
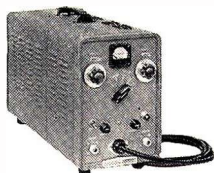
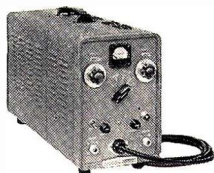
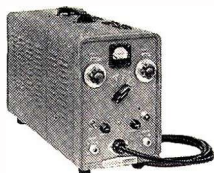
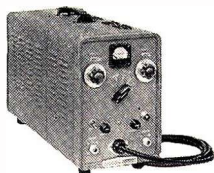
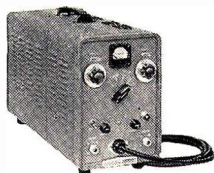
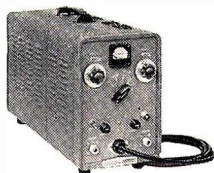
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Time-tested, general purpose instrument, 20 db or 40 db gain, for use wherever wide frequency range and high stability are needed. 10 cps to 1 mc. Negligible phase shift, no spurious responses. \$140.00.



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Two new broad band linear instruments providing a new, simple way to amplify, modulate, or increase power to 1 watt. Full S-Band coverage—2 to 4 kmc; 30 and 35 db gain, millimicrosecond pulse modulation, radical new coupled-helix design. High gain, low noise. *-hp- 490A*, \$1,100.00. *-hp- 491A*, \$1,100.00 (Includes capsulated tube).





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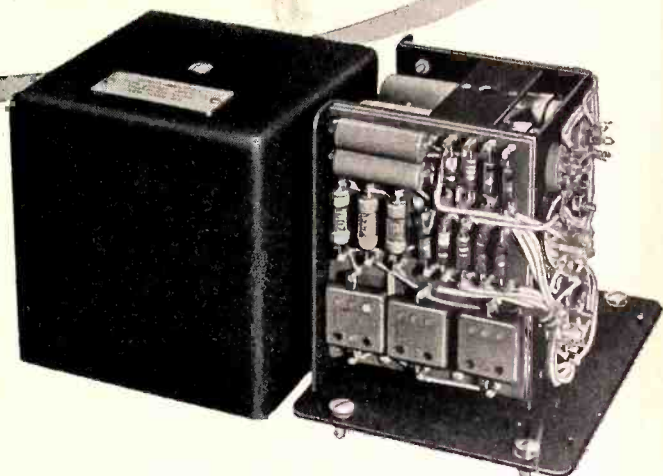
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SERVO AMPLIFIERS



MOTOR-DRIVEN
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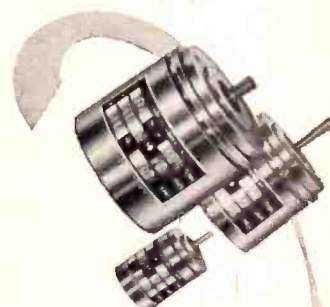
PLUG-IN ASSEMBLIES OF
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Transicoil servo systems feature integrated design—every component is made to match all the others . . . coordinated to insure maximum efficiency and top performance.

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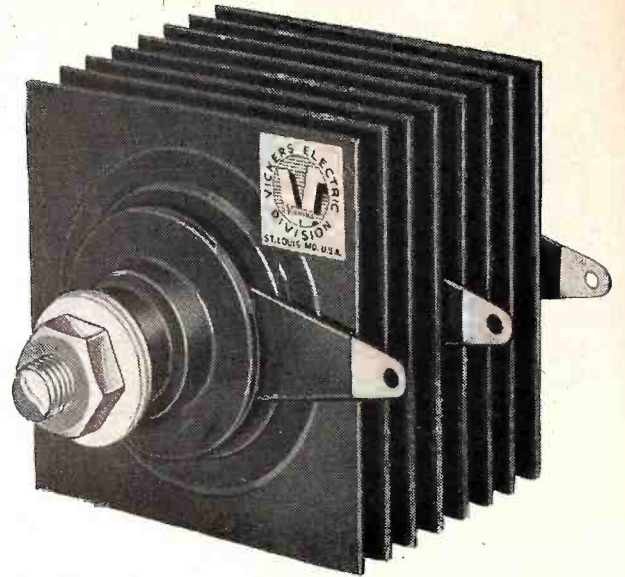
combines

HIGH VOLTAGE

HIGH AMBIENT

LONG LIFE

**Gives you more watts per dollar
initial cost... lower annual cost**



*Vickers offers
a selenium rectifier
which combines
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features
sought by
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HIGH VOLTAGE

40-volt rating with:

- **Low leakage:** leakage of new Vickers rectifier averages 2 milliamperes per square inch — one-half that of conventional rectifiers.
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- **High dielectric quality:** new Vickers rectifiers withstand surges up to twice rated voltage.

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- Operate in ambient temperatures up to 125°C.
- No derating for 50°C.
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LONG LIFE

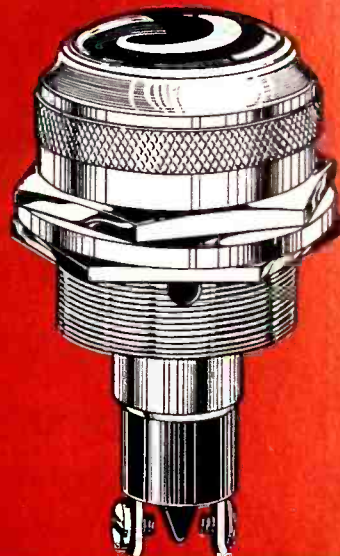
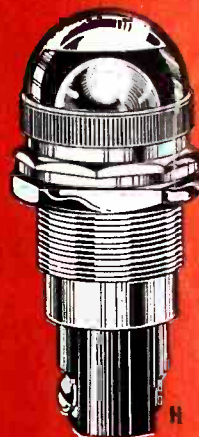
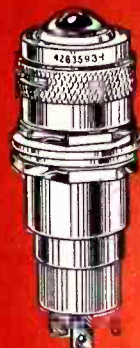
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- Life test now past 25,000-hour mark.

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designed to meet every requirement for indication . . . automation . . . miniaturization

DIALCO

WHILE designing a new product (or improving an old one), you will profit substantially by including a *Dialco* Pilot Light. *Low in cost, compact, and dependable* under severest conditions, *Dialco* Pilot Lights render a vital three-fold service:

Enhanced appearance: The glow of light and sparkle of a lens add colorful visual attraction.

Greater safety: A timely warning flashed by a pilot light can prevent damage to equipment.

Added service: Discs inserted behind lenses can be used to deliver specific messages, such as "FUEL LOW", "EMPTY", "GYRO", "ON", "OFF", etc.

THE COMPLETE LINE: At *Dialco* you have a virtually unlimited selection of Pilot Lights—from *sub-miniature types* to *giant units* with 1½" lenses. Such special features as MIL spec insulation, water-tightness, dull-black finish, and others may be specified. For NEON lamps, *Dialco* provides Pilot Lights with **built-in resistors** (patent #2,421,321) for 115 or 230 volts; also simple external resistors for all higher voltages.

EVERY ASSEMBLY IS AVAILABLE COMPLETE WITH LAMP: Assure complete satisfaction—let the *Dialco* Engineering Dept. assist you in selecting the *right* lamp and the *most suitable* pilot light for your needs.

SAMPLES ON REQUEST — at once — no charge

Sub-Miniature Units Shown approx. 70% actual size:

(A) No. *TT-51*; No. *TT-51A* with No. 327 lamp. For edge lighting. Red or other color filters, black top . . . (B) No. *8-3730-111*, for MIL-P-7788 panel . . . (C) No. *4-1930*, light shield . . . (D) No. *8-1930-111*, non-dimming . . . (E) No. *11-1930-111*, mechanical dimmer; No. *3-1930-111*, polaroid dimmer.

Units requiring ⅛" to 1" mounting clearance holes: 70% actual size:

(F) No. *521308-991*, for neon lamps, with multi-vue cap . . . (G) No. *922210-111*, for T3¼ lamps, dimmer type for aircraft . . . (H) No. *47901*, for S-6 lamp, with light shield cap . . . (I) No. *303529-211*, for S-11 lamp; for heavy duty industrial equipment.

FREE Brochure on "Selection and Application of Pilot Lights"

Contains consolidated information on pilot light assemblies and small lamps. Originally published by "Machine Design" magazine; based on data supplied by the Dialight Corp. Included are practical working tables, data, photographs, and product information.



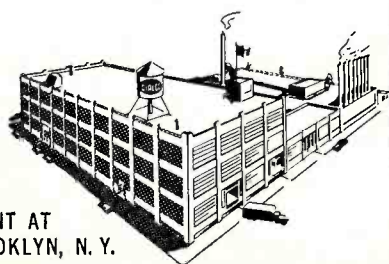
Also write for Catalogues L-151, L-153, and L-154

Foremost Manufacturer of Pilot Lights

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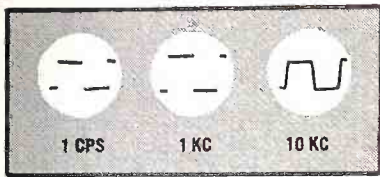


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INTRODUCES **5** NEW INSTRUMENTS



SQUARE WAVE RESPONSE

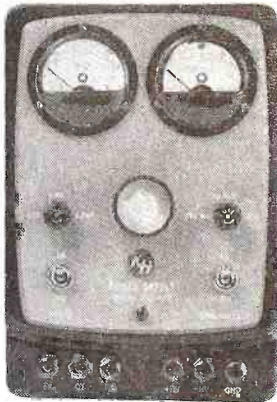
*Typical harmonic distortion at 1,000 cps is 0.002% in voltage or 0.00000004% in power at 30 watts.

1 ULTRA-LOW DISTORTION power amplifier

DELIVERING **99.99999996%***
DISTORTION-FREE POWER

MODEL UF-101 SPECIFICATIONS

POWER OUTPUT... 50 watts from 15 cps to 20 kc ± 1 db
 FEEDBACK... 80 db
 FREQUENCY RESPONSE ± 0.5 db from 0.5 cps to 30 kc
 ± 3 db from 0.03 cps to 70 kc
 DYNAMIC RANGE... 110 db
 OUTPUT IMPEDANCE... 2, 4, 8, 16 and 450 ohms
 VOLTAGE GAIN... 14 db or 30 db to 16 ohm output
 PRICE... \$350.00



| | Model | Voltage | Current | Impedance | | Output | | Price |
|----------|---------|----------|---------|-----------|------|---------------|-----------------|----------|
| | | | | D.C. | A.C. | Bias | Heater | |
| 2 | UHR-220 | 0-500v | 0-200ma | 0.01 | 0.1 | 0-150v, 0-5ma | 12.6v ac, 4a CT | \$350.00 |
| 3 | UHR-225 | 150-500v | 0-200ma | 0.01 | 0.1 | — | 12.6v ac, 4a CT | \$300.00 |

NEW UHR SERIES power supplies

FEATURING **ultra-high regulation**

OVER THE **entire OPERATING RANGE**

- Regulation 0.001%
- Extremely low dc and ac impedance
- Ripple less than 100 microvolts
- Transient response 0.001 milliseconds



| | Model | Voltage | Current | Impedance | | Output | | Price |
|----------|---------|----------|---------|-----------|------|---------------|------------------|----------|
| | | | | D.C. | A.C. | Bias | Heater | |
| 4 | UHR-240 | 0-500v | 0-500ma | 0.005 | 0.05 | 0-150v, 0-5ma | 5-13v dc, 5a CT | \$550.00 |
| 5 | UHR-245 | 150-500v | 0-500ma | 0.005 | 0.05 | — | 12.6v ac, 10a CT | \$450.00 |

PRESENTS THIS PROVEN GROUP OF electronic instruments

8 WIDE-RANGE AUDIO **oscillators** 0.001 cps to 520 kc



MODEL 440-A

Features

Frequency range, continuous from 0.001 cps. to 100 kc
Distortion less than 0.1% at any output level
Excellent frequency stability and resetability
Amplitude variation less than ± 0.25 db
Frequency calibration $\pm 1\%$
Both Sine and Square Waves simultaneously
Hum less than 0.1% at any output level

| Model | Frequency Range | Frequency* Accuracy | Output | Dis-tortion | Power Consumption | Price |
|----------|--------------------|---------------------|------------|-------------|-------------------|----------|
| 400-A | .009 cps to 1.1 kc | 2% | 25 mw/10v | 1% | 45 watts | \$350.00 |
| 410-A** | .02 cps to 20 kc | 2% | 10 mw/5v | 1/10% | 150 watts | \$950.00 |
| 420-A | .35 cps to 52 kc | 2% | 25 mw/10v | 1% | 45 watts | \$290.00 |
| 430-B** | 4.5 cps to 520 kc | 2% | 50 mw/10v | 1% | 45 watts | \$120.00 |
| 400-C*** | .009 cps to 1.1 kc | 2% | 100 mw/10v | 1% | 65 watts | \$375.00 |
| 420-C*** | .35 cps to 52 kc | 2% | 100 mw/10v | 1% | 65 watts | \$325.00 |
| 440-A** | .001 cps to 100 kc | 1% | 100 mw/10v | 1/10% | 120 watts | \$495.00 |
| 440-B** | 1 cps to 100 cps | 1/20% | 100 mw/10v | 1/10% | 110 watts | \$950.00 |

All oscillators except 430-B and 440-B have both sine wave and square wave.

6 VARIABLE ELECTRONIC **filters** 0.01 cps to 200 kc



MODEL 330

Features

Unity Pass band gain with 24 db/octave attenuation rates and reduced corner frequency attenuation
Ultra-low frequency coverage with adjustable center frequency and band width
Low internally generated noise
Input and output buffer stages
Electronic regulated supplies
Five decade bands

| Model | Type | Frequency Range | Frequency* Accuracy | Noise & Hum | Power Consumption | Price |
|---------|-----------|--------------------|---------------------|-------------|-------------------|----------|
| 310-A** | Band Pass | 20 cps to 200 kc | 10% | 3 mv | 40 watts | \$275.00 |
| 330-A** | Band Pass | .02 cps to 2 kc | 5% | 0.1 mv | 50 watts | \$450.00 |
| 330-M** | Band Pass | 0.2 cps to 20 kc | 5% | 0.1 mv | 50 watts | \$450.00 |
| 340-A | Servo | 0.1 cps to 100 cps | 5% | 10 mv | 40 watts | \$350.00 |
| 350-A** | Rejection | .02 cps to 2 kc | 5% | 0.1 mv | 50 watts | \$450.00 |
| 360-A** | Rejection | 20 cps to 200 kc | 10% | 5 mv | 40 watts | \$275.00 |

*Slightly higher at ends of dial.
***Rack panel construction.

**Available for rack mounting at \$5.00 additional.

A NEW **CATALOG** GIVING COMPLETE DESCRIPTIONS OF THE ENTIRE LINE IS AVAILABLE UPON REQUEST. PLEASE WRITE



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for control of SHOCK and VIBRATION



ALL-METL VIBRATION ISOLATORS

Types M44 and M64 . . . have non-packing, wire-mesh damper; meet latest Government specifications for airborne electronic equipment; ruggedized; light weight, operate over wide temperature range. **ASK FOR BULLETINS 534, 536**



UNIT VIBRATION ISOLATOR

Type 915 . . . to isolate vibration and noise caused by high-speed motors, motor-generator sets, and rotating machinery; load ratings to 200 pounds. **ASK FOR BULLETIN 532**



AIR-DAMPED VIBRATION ISOLATORS

Types 780 (JAN#2), 770 (JAN#1), and 6475 (Miniaturized) . . . to protect airborne equipment; meet latest Gov't specifications; give maximum protection under normal service conditions. **ASK FOR CATALOG 523-A**



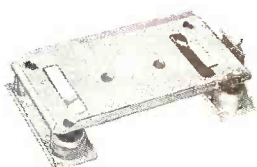
ISOLATORS for VERY LIGHT LOADS

Small, rubber, vibration isolators for light-duty, low-cost service; load ratings from 2 ounces to 9 pounds. **ASK FOR CATALOG 504-B**



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To meet dimensional and material requirements of JAN-C-172; also special sizes to fit customer's needs; built with ALL-METL or AIR-DAMPED unit Barrymounts. **ASK FOR CATALOG 523-A**



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To absorb high-impact shocks; equal stiffness in all directions; self-captivating metal parts; steel or aluminum shells; load ratings to 1800 pounds. **ASK FOR CATALOG 504-B**



SHOCK MOUNTINGS — PLATE TYPE

Particularly suited to mount mobile communications equipment, shipboard equipment, and in vehicular use where shock protection and high stability of mounted equipment are required. **ASK FOR BULLETIN 541**



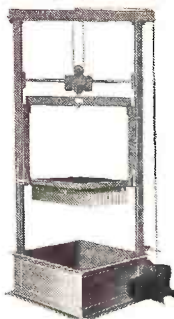
ENGINEERING DATA FILE

Lists all Barry bulletins, technical articles, reprints. Files your own copies for ready reference. Gives the names, addresses, and telephone numbers of all Barry sales representatives.



SHOCK-TESTING MACHINES

Types 150-400 VD and 20 VI . . . produce the types of shock required for Government acceptance testing of airborne equipment; specifically designed for uniformly reproducible shock testing in development engineering and quality control work. **ASK FOR BULLETINS 533 and 535.**



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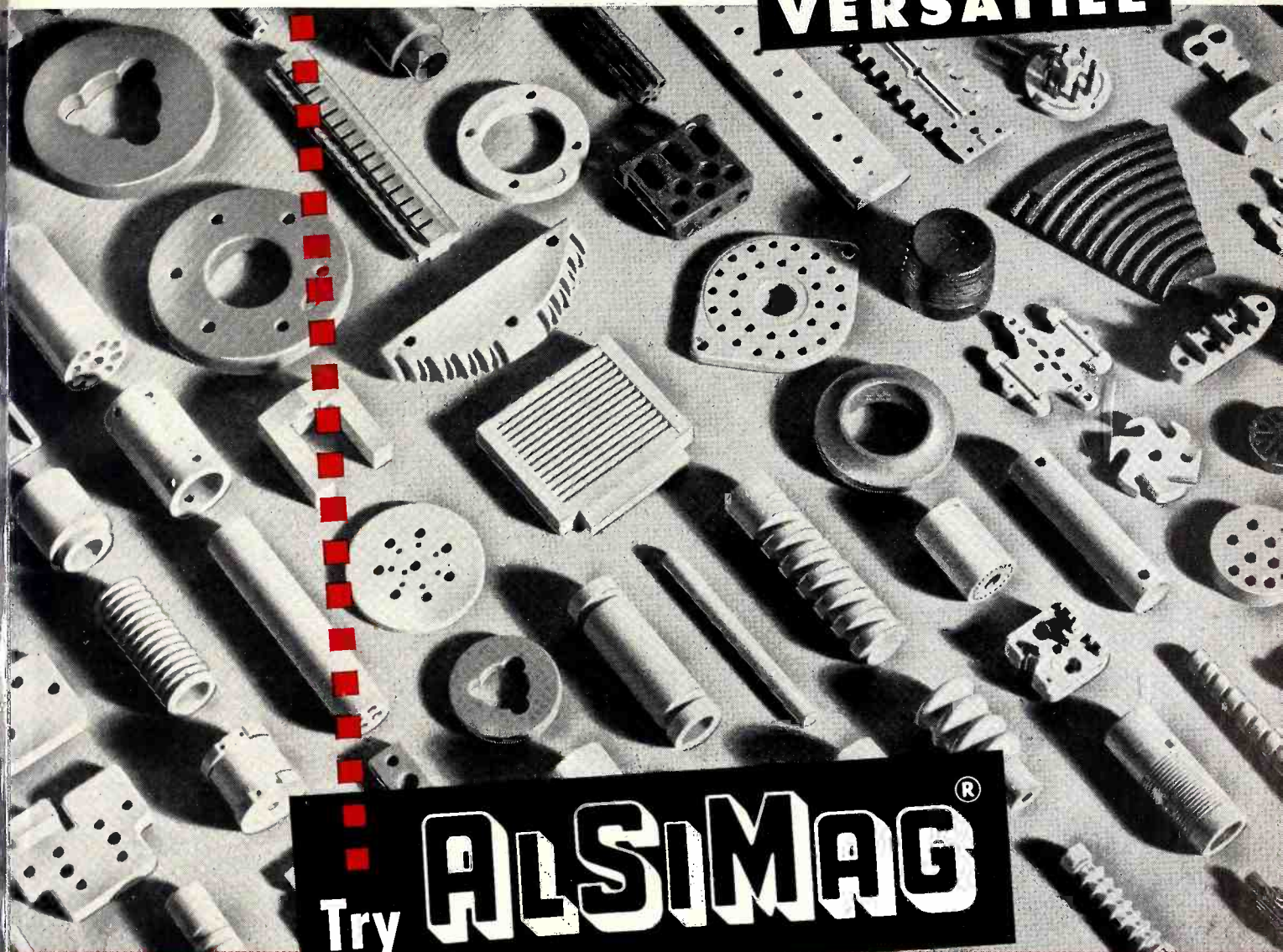
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giving mechanical
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Development of new, special purpose ceramic compositions is a regular part of our work. No matter what your requirements are, the chances are good that we have an ALSiMag composition that will do the job.

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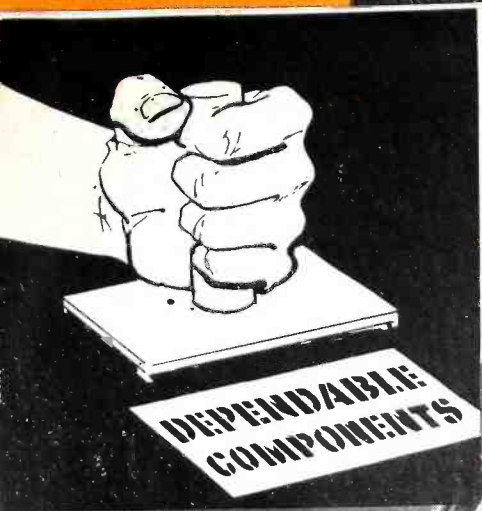
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AMERICAN LAVA CORPORATION

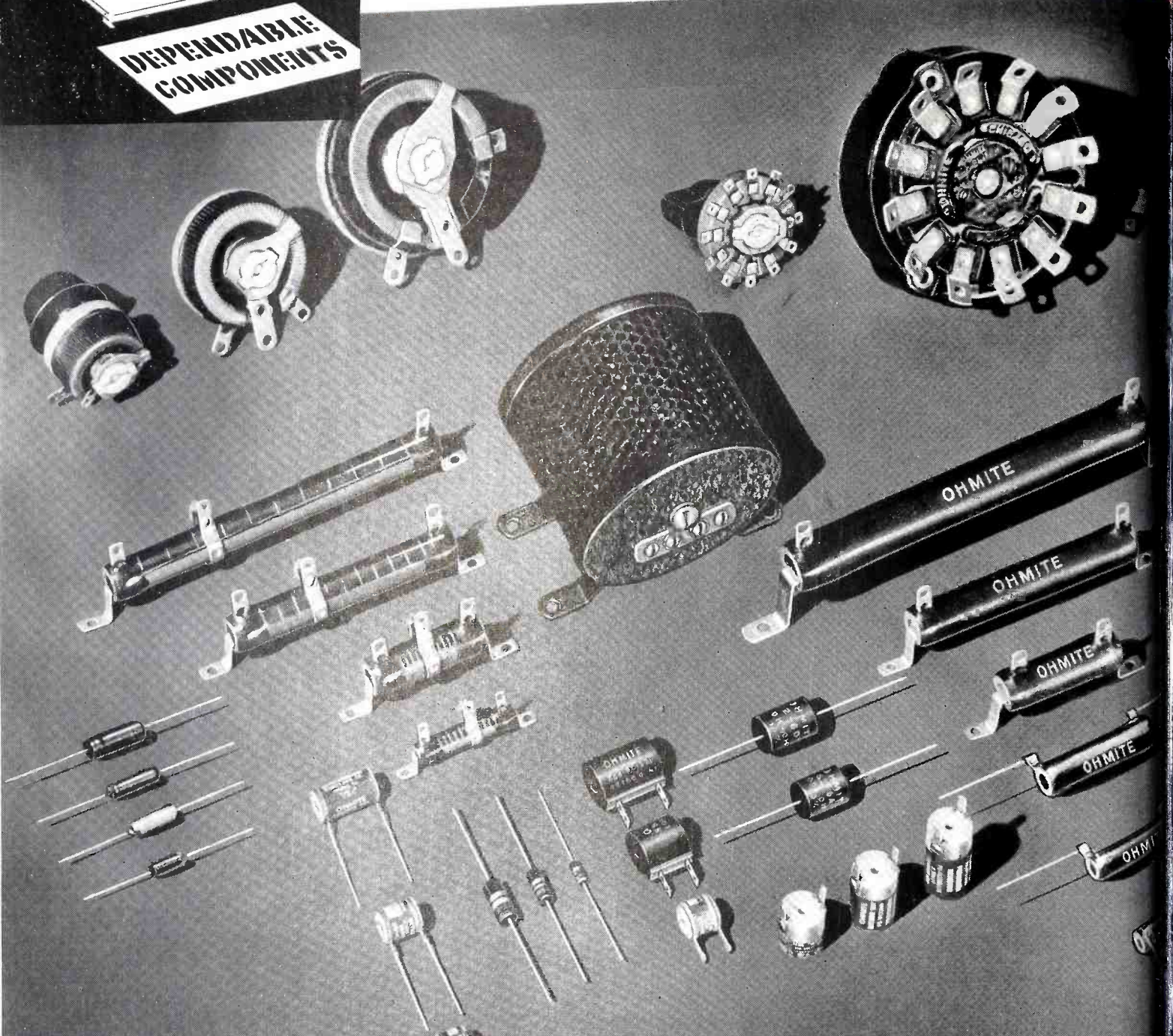
A Subsidiary of Minnesota Mining and Manufacturing Company

CHATTANOOGA 5, TENNESSEE

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RHEOSTATS

All-ceramic and metal, close control rheostats for unsurpassed dependability and smoothness of operation. Ten stock sizes, 25 to 1,000 watts.

RESISTORS

A wide range of dependable, fixed, adjustable, tapped, and non-inductive, power wire-wound resistors. Also a wide range of precision resistors.

TAP SWITCHES

Five compact models, 10 to 100 amperes, AC, up to 12 taps. All-ceramic and metal construction. Silver-to-silver contacts, with self-cleaning rotor contact.

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Single layer R. F. plate chokes and power line chokes, on steatite or plastic cores. Protected by a special moisture resistant coating.

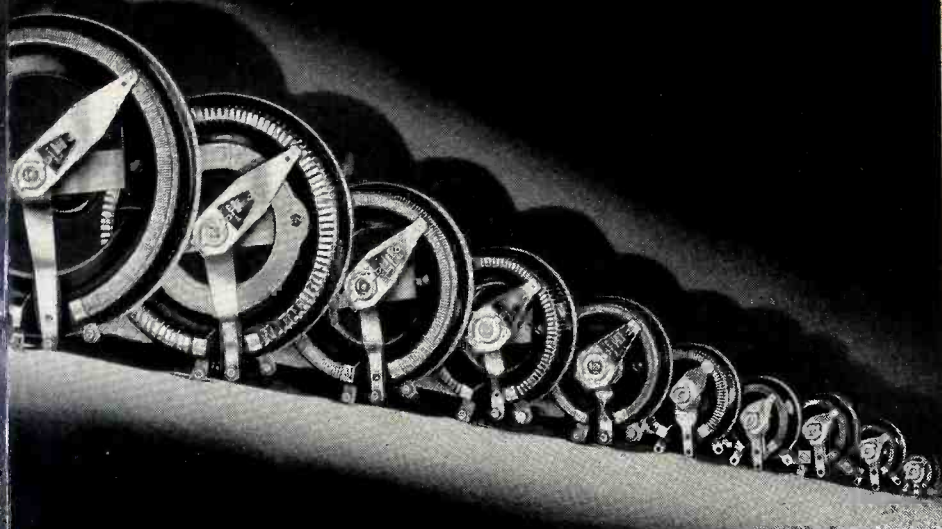
Be Right with **OHMITE[®]**



WRITE on Company Letterhead for Catalog and Engineering Manual No. 40

OHMITE[®] offers an unusually complete line of MIL TYPE RHEOSTATS AND RESISTORS

The ONLY COMPLETE LINE



MIL-R-22A RHEOSTATS

Ohmite can furnish rheostats to meet MIL-R-22A requirements in each of the 26 type designations. These severe requirements again prove the dependability of Ohmite rheostats. All-ceramic construction, close control, and smooth operation insure years of trouble-free service. It will pay you to standardize on Ohmite rheostats.



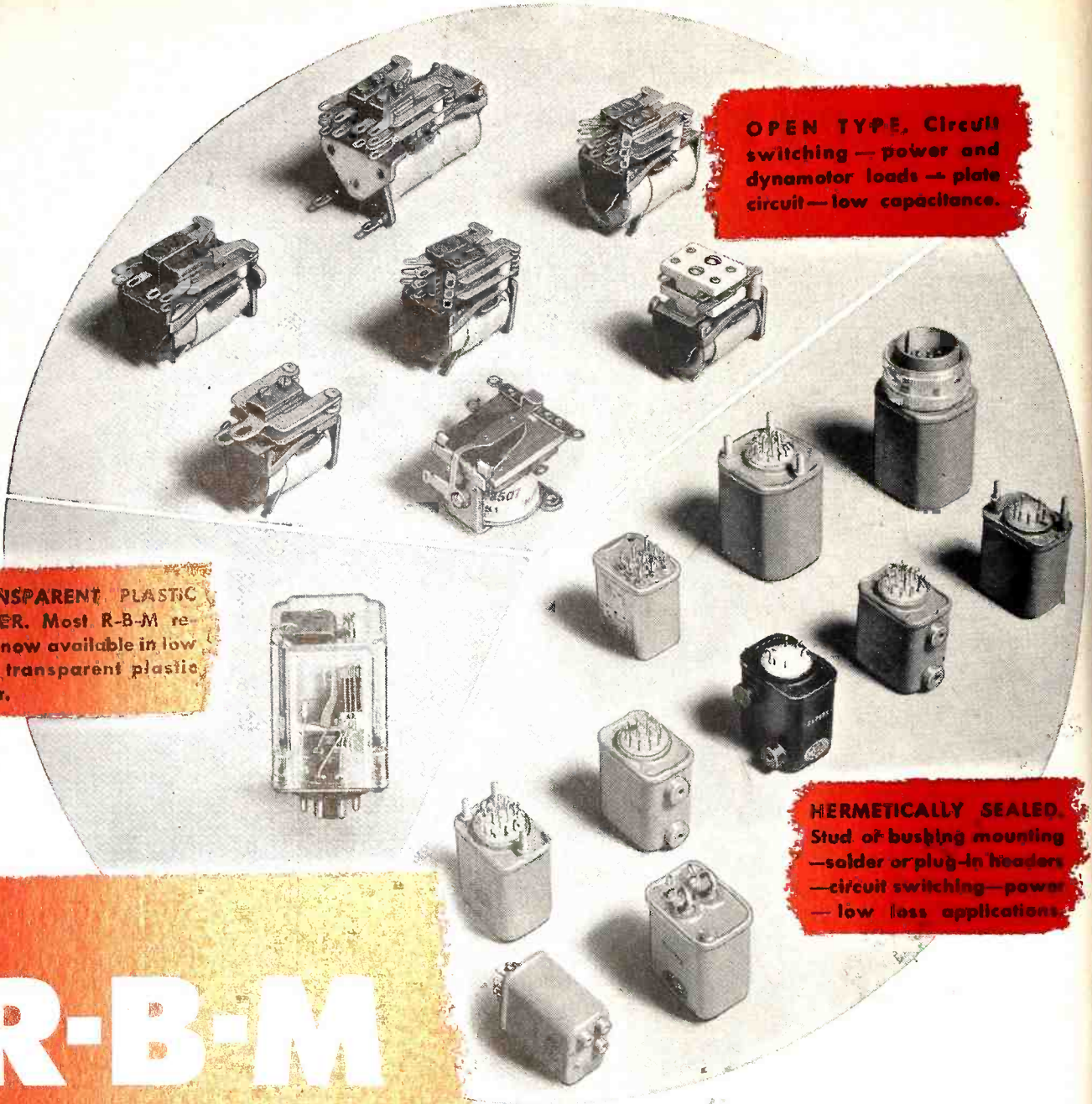
MIL-R-26B wire-wound RESISTORS

Ohmite offers an unusually complete line of tab-terminal, ferrule-terminal, axial-terminal tubular resistors, and tab-terminal, flat type resistors that meet the most rigid requirements (char. "G," "J," and "F") of MIL-R-26B. Ohmite offers 33 of the 38 resistor styles listed in MIL-R-26B, in a complete range of resistance values.

OHMITE[®]

FIRST IN RESISTANCE PRODUCTS

OHMITE MANUFACTURING COMPANY, 3607 Howard Street, Skokie, Illinois (Suburb of Chicago)



OPEN TYPE. Circuit switching — power and dynamotor loads — plate circuit — low capacitance.

TRANSPARENT PLASTIC COVER. Most R-B-M relays now available in low cost transparent plastic cover.

HERMETICALLY SEALED. Stud or bushing mounting — solder or plug-in headers — circuit switching — power — low loss applications.

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Relays

FOR EVERY ELECTRONIC APPLICATION
Meeting Commercial and Government Requirements

OTHER PRODUCTS: Motor starting relays and overload protectors for refrigeration, appliance and general purpose motors. Industrial contactors and across-the-line

starters. NEMA size 1 and smaller. Low cost general purpose relays. Low voltage D.C. manual and magnetic devices.

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Controls for Electronic, Refrigeration, Industrial, Appliance, Communication and Automotive Industries

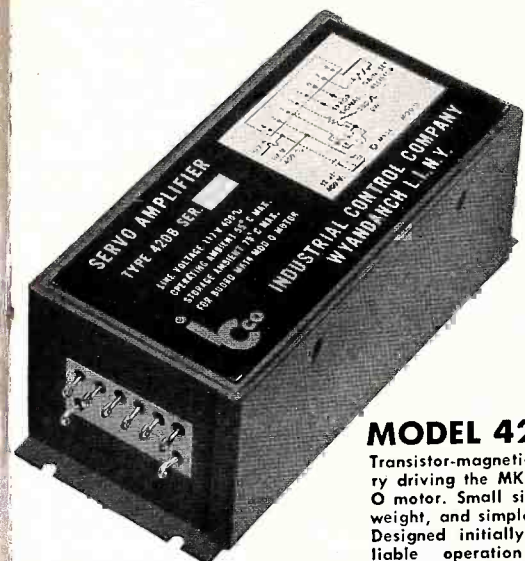


PROGRESS REPORT...

SINCE OUR ANNOUNCEMENT IN FEBRUARY 1953 OF THE FIRST SUCCESSFUL TRANSISTOR-MAGNETIC SERVO AMPLIFIER, WE HAVE DEVELOPED A LINE OF STANDARD, AND MINIATURIZED CONTROLLERS. These . . .

Servo Magnetics

are ready now as standard components for your servo loops.

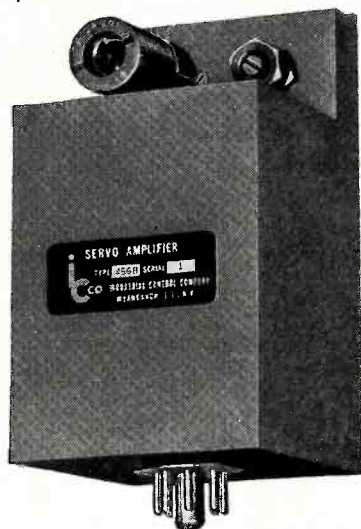


MODEL 420-B

Transistor-magnetic circuitry driving the MK 14 Mod O motor. Small size, light weight, and simple to use. Designed initially for reliable operation in a miniaturized airborne computing loop.

MODEL 456-B

One premium tube, conservatively used, approaches in reliability the mag output stage. Power gain, 6X10⁶; Zero stable to 71° C! Developed for potentiometer follow-up, but works equally well with synchro data. For MK7 Mod O motor.



MODEL 465-B

All mag circuit for MK7 Mod O motor. Full output with 1 ampere turn of control. Supplied with control windings for any current sensitivity. Quick disconnect fasteners and sealed octal header.



Their versatility and reliability is such that they can be used as standard components, like a servo motor or autosyn. No damping tachometers or power supplies are required. There are only six connections: 2 for input, two for output, 2 for 117 V. 400 cps. Precise regulation of line voltage and frequency is not necessary. Often the nameplate carries full applications data, and system connections.

THESE AMPLIFIERS HAVE RADICALLY NEW CHARACTERISTICS . . .

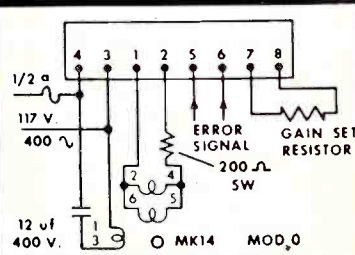
- ZERO STABLE WITH LINE VOLTAGE, TEMPERATURE AND FREQUENCY.
- POWER SUPPLY—400 CPS LINE ONLY.
- BUILT IN SERVO LOOP STABILIZATION.
- HERMETICALLY SEALED AND POTTED.
- MINIATURIZED AND LIGHT WEIGHT.

Bypass costly development time and delivery delay in your systems work with these time-tested amplifiers. Whether standard or special, meticulous production techniques insure complete reliability. Delivery on special prototypes is prompt, because of our backlog of engineering designs. These amplifiers are backed by a continuing research and development program.

SERVO AMPLIFIER

TYPE 420B SER.

LINE VOLTAGE 117 V. 400 \sim
 OPERATING AMBIENT 55° C MAX.
 STORAGE AMBIENT 75° C MAX.
 FOR BUORO MK14 MOD O MOTOR



INDUSTRIAL CONTROL COMPANY
 WYANDANCH L.I.N.Y.

May we put our engineering staff and production group to work with you on your automatic control problems?

MILLIONS

COMPLETE MILITARY LINE AVAILABLE.

POPULAR MILITARY TYPES ILLUSTRATED.

CORRESPONDING COMPLETE LINE FOR COMMERCIAL APPLICATIONS ALSO AVAILABLE.

5 acres of plant area . . . over 1000 employees . . . making ALL TYPES of variable resistors by the million. . . for ALL your requirements. CTS SPECIALIZES in precision mass production of variable resistors and associated switches . . . makes nothing else.

Most controls available with switches and in concentric shaft tandems or with two controls operating on one shaft. Also available with locking bushing, water sealed bearing and many other special features not illustrated.

Immediate delivery from stock on many JAN-R-94, JAN-R-19 and other types.



WRITE FOR ILLUSTRATED CATALOG

Describes Electrical and Mechanical characteristics, Special Features and Constructions of a complete line of variable resistors for military and civilian use. Includes dimensional drawings of each resistor

REPRESENTATIVES

Henry E. Sanders
McClatchy Bldg.
69th & Market St.
Upper Darby, Penna.
Phone: Flanders 2-4420

W. S. Harmon Company
121 No. Robertson Blvd.
Beverly Hills, California
Phone: Bradshaw 2-3321

John A. Green Company
6815 Oriole Drive
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ELKHART • INDIANA

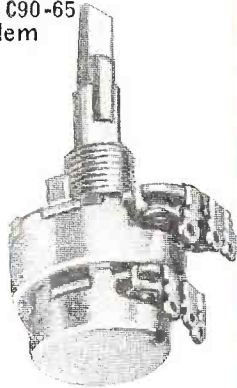
OF VARIABLE

1/2 watt 70°C, 3/4" diameter miniaturized variable composition resistor.

TYPE 65
(Miniaturized)



TYPE C90-65
Tandem



UNPRECEDENTED PERFORMANCE CHARACTERISTICS

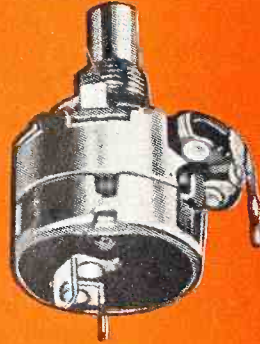
Types 65, 90 and 95 are specially designed for military communication equipments subject to extreme temperature and humidity ranges: -55°C to +150°C . . . aridity to saturation.

1 watt 70°C, 15/16" diameter variable composition resistor.

TYPE 90



TYPE GC-90
With Switch



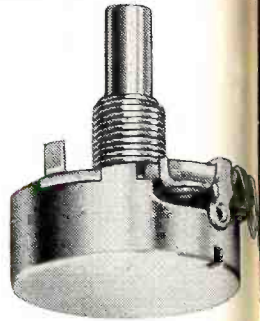
TYPE C2-90
Tandem



Meets JAN-R-94 type RV4

2 watt 70°C, 1-1/8" diameter variable composition resistor. Also available with other special military features not covered by JAN-R-94.

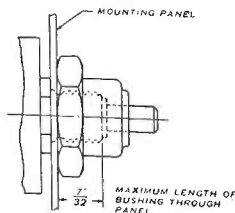
TYPE 95



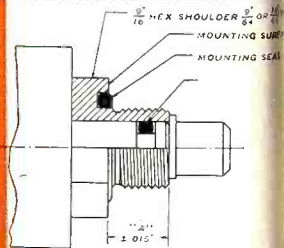
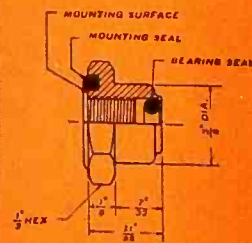
TYPE GC-95
With Switch



TYPE C2-95
Tandem



WATER SEALED MOUNTING AND BEARING FOR TYPE 65



(CAN BE SUPPLIED WITHOUT THE WATER SEALED MOUNTING SHOULDER)
WATER SEALED MOUNTING AND BEARING FOR TYPE 45, 35, 90, 95, 25, 252.

RESISTORS... FOR EVERY NEED

Meets JAN-R-94
type RV3

2 watt 1-1/8" diameter
variable composition
resistor. Also available
with other special mili-
tary features not covered
by JAN-R-94.

Meets JAN-R-94
type RV2

1/4 watt 15/16" diameter
variable composition
resistor. Also available
with other special
military features not
covered by JAN-R-94.

Meets JAN-R-19
types RA25 and RA30

4 watt 1-17/32" diameter
variable wirewound resis-
tor. Also available with
other special military
features not covered by
JAN-R-19.

Meets JAN-R-19
type RA20

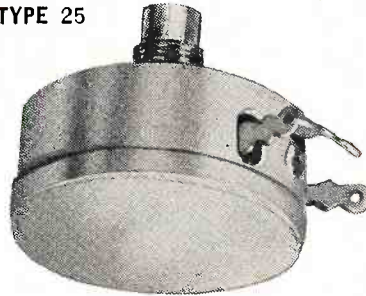
2 watt 1-17/64" diameter
variable wirewound resis-
tor. Also available with
other special military
features not covered by
JAN-R-19.



TYPE 45



TYPE 25



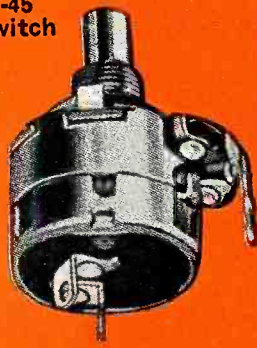
TYPE 252



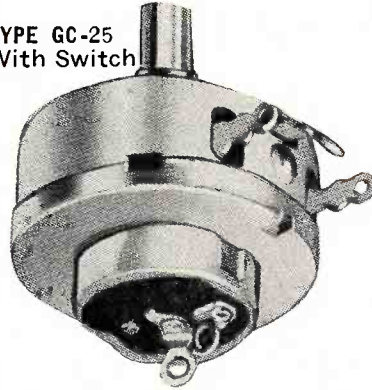
TYPE GC-35
With Switch



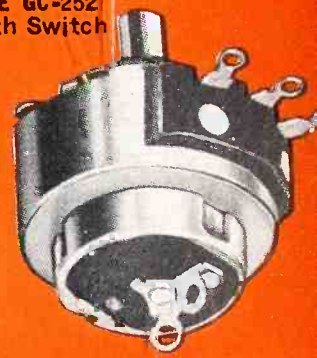
TYPE GC-45
With Switch



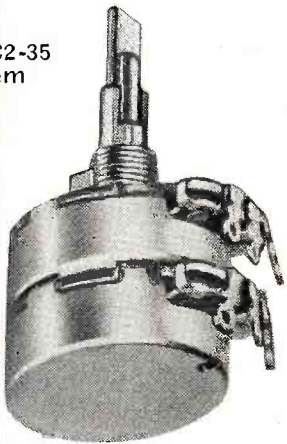
TYPE GC-25
With Switch



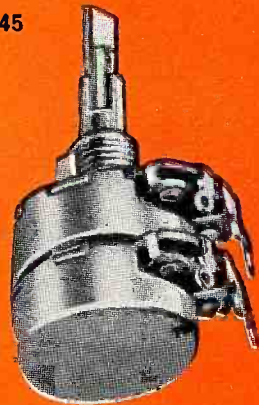
TYPE GC-252
With Switch



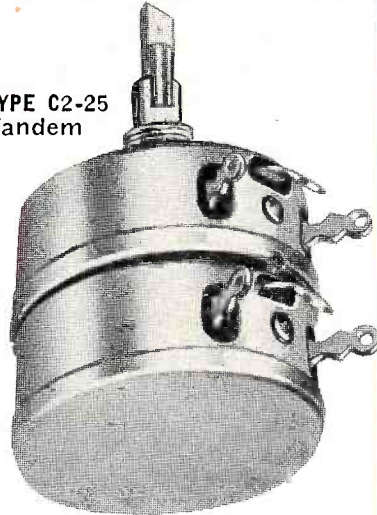
TYPE C2-35
Tandem



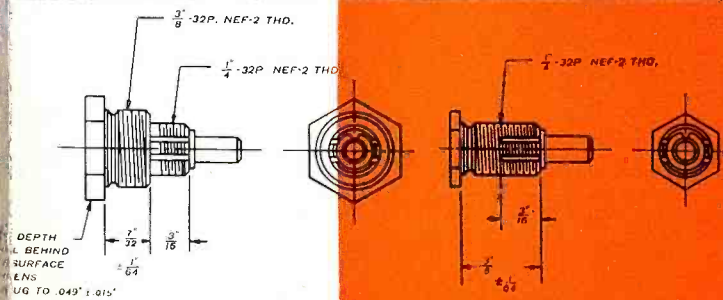
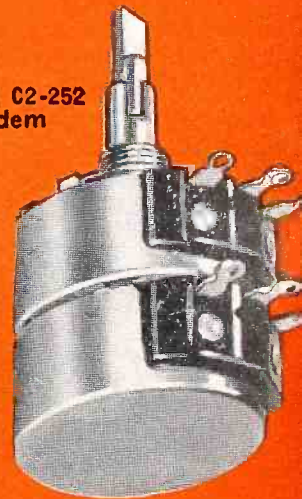
TYPE C2-45
Tandem



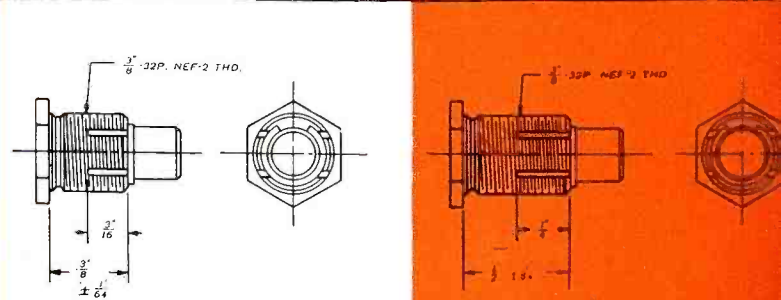
TYPE C2-25
Tandem



TYPE C2-252
Tandem



LOCKING BUSHINGS FOR TYPE 65 CONTROL.



LOCKING BUSHINGS FOR CONTROL TYPES 25, 252, 95, 35, 90, 45.

Since it pioneered the field years ago, Sorensen has been the acknowledged leader in electronic power control. Its standard line includes a wide variety of instruments in a broad range of capacities to meet practically any needs; all are notable for sound design, conservative rating, and fine workmanship. Most items can be delivered quickly in reasonable quantities. Sorensen invites your inquiries concerning special instruments to meet unusual requirements.

AC REGULATORS

Utilizing the original Sorensen circuit and incorporating the SAFETY DIODE, these regulators are noted for economical operation, accuracy, and easy maintenance.

ELECTRICAL CHARACTERISTICS

| | | |
|---|---------------|--|
| Models available (Numbers denote VA capacities) 150S 250S 500S 1000S (-2S also) 2000S 3000S (-2S also) 5000S (-2S also) 10000S (-2S also) 15000S (-2S also) | Input | 95-130 VAC, 1 ϕ 50-60; 190-260 VAC in "-2S" models |
| | Output | 115 VAC ADJ. 110-120; 230 VAC with "-2S" models |
| | Reg. accuracy | $\pm 0.1\%$ against line or load |
| | Distortion | 3% max. |
| | P.F. range | Down to 0.7 |
| | Load range | 0 to full load |
| | Miscellaneous | Models 150S, 250S, 500S, 1000S, 5000S, 10000S, and 15000-2S are self-contained. Cabinets available for others. |

NOBATRONS* (low-voltage, high current, regulated DC sources)

Provide stability comparable to batteries and eliminate recharging interruptions, fume and acid hazards, installation difficulties. *Reg. U.S. Pat. Off.

ELECTRICAL CHARACTERISTICS

| | | |
|---|---------------|--|
| Models available (numbers indicate voltage & current) E-6-5A E-6-15A E-6-40A E-6-100A E-12-5 E-12-15 E-12-50 E-28-5 E-28-10 E-28-30 E-28-70 E-28-150 E-48-15 E-125-10 E-200-5 (Also Model SWR-5 with output either 6VDC @ 10 amp or 12VDC @ 5 amp) | Input | 95-130 VAC, 1 ϕ , 50-60 cycles. 120/208 3 ϕ , 4-wire wye for the E-28-150. The E-28-70 requires 190-260, 1 ϕ power. |
| | Reg. accuracy | $\pm 0.2\%$ against line or load at 105-125 v. input |
| | Ripple | 1% RMS max. |
| | Load range | 1/10 to full load |
| | Output range | Adjustable $\pm 10\%$; down to 20% at lesser accuracy |
| | Recovery time | 0.2 seconds on all models up to 1 KW rating, increasing to 0.5 seconds at 10KW |
| | Miscellaneous | Normally for rack mounting - cabinets available. Normal finish - gray wrinkle. Meters standard in some models; available in all. |
| | Note | "A" model output either 6 or 7 volts |

B-NOBATRONS (high-voltage, low current, regulated DC supplies)

These B-Supplies have been designed to meet the broadest technical and economical requirements. The internal impedance figures given are from measurements in accordance with IRE specifications for measurement of power supply internal impedance.

ELECTRICAL CHARACTERISTICS

| UNIT | 325BB | 350B (dual supply) | 560BB | 500BB | 600BB | 1000BB |
|--|---------------|-----------------------|---------------|---------------|--|-------------|
| Output voltage (VDC) | 0-325 | * | 0-500 | 0-500 | 0-600 | 200-1000 |
| Output current (Ma) | 0-125 | * | 0-200 | 0-300 | 0-500 | 0-500 |
| Regulation accuracy | $\pm 0.5\%$ | $\pm 0.5\%$ | $\pm 0.5\%$ | $\pm 0.5\%$ | $\pm 0.25\%$ 0.5% at 0-100VDC | $\pm 0.5\%$ |
| Ripple (MV-RMS) | 5 max. | 10 max. | 5 max. | 5 max. | 3 max. | 20 max. |
| Bias supply (VDC at 0-5 Ma) | 0-150 | none | 0-150 | 0-150 | 0-150 | none |
| Max. bias circuit impedance | 25000 ohms | - - - | 25000 ohms | 25000 ohms | 50000 ohms | - - - |
| Internal impedance (max.) | 2.0 ohms | 2.0 ohms | 2.0 ohms | 2.0 ohms | 2.0 ohms | 2.0 ohms |
| AC input range is 105-125 volts, single phase, 50-60 cycles. | | | | | | |
| AC voltage (C.T., unregulated) | 6.3 @ 10 amp. | - - - | 6.3 @ 10 amp. | 6.3 @ 10 amp. | 6.3 @ 15 amp. | - - - |

* (1). 175-350 VDC at 0-60 Ma in each of two supplies simultaneously. Each adjusted independently, but with a common negative. (2). 175-350 VDC at 120 Ma in a single supply. (3) 0-175 VDC at 0-60 Ma in a single supply. For condition (3) maximum regulation is 1.5 volt.

NOBATRON-RANGERS (Wide-range variable regulated DC sources)

ELECTRICAL CHARACTERISTICS

| | | | |
|---------------|--|--------|---------|
| Input range | 95-130 VAC, 1 ϕ , 50-60 cycles for SR30 and SR100. 190-260 VAC, 1 ϕ , 50-60 cycles for the SR2. | | |
| Reg. accuracy | $\pm 0.25\%$ at any voltage setting. | | |
| Ripple | 1% RMS max. | | |
| Output | Model | SR-100 | SR-30 |
| | VDC | 5-135 | 5-30 |
| | Amps | 1-10 | 3-30 |
| | | | SR-2 |
| | | | 100-300 |
| | | | 1-10 |

These versatile and popular instruments have electrical characteristics similar to the standard Nobatrons, except that output voltage is continuously adjustable. Circuitwise, they incorporate adaptations of the Nobatron circuit.



Model 1000S AC Regulator



Nobatron Model E-6-15



B-Nobatron Model 600

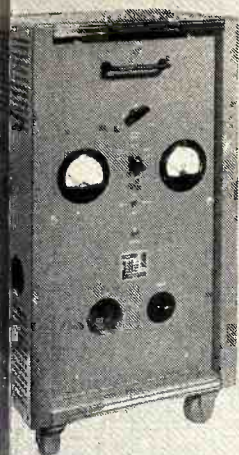


Nobatron-Ranger Model

regulated
FREQUENCY
CHANGERS

regulated
wide-range-variable
DC SOURCES

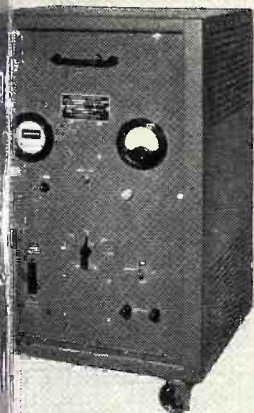
regulated
TUBELESS
DC SOURCES



DC Source Model MA6/15



Accuracy AC Regulator Model 1001



Changer Model FCD1000

FREQUENCY CHANGERS

Electronically controlled, these instruments give accurate control of voltage and frequency, with good wave shape. They may be placed next to the load, eliminating the need for costly installation.

ELECTRICAL CHARACTERISTICS

| | |
|-----------------------|---|
| Input voltage range | 95-130 VAC, 1 ϕ , 50-60 cycles for the FCD250. 208 or 230 VAC \pm 10%, 1 ϕ , 50-60 cycles for the FCD1000 and FC1000. |
| Output voltage | 115 VAC, 1 ϕ , adjustable between 110-120 volts |
| Output frequency | FCD250 & FCD1000 — 400 cycles, adjustable \pm 10%. FC1000 — 60 cycles, adjustable between 45-65 cycles. |
| Output voltage reg. | \pm 1% |
| Output frequency reg. | \pm 1% in standard model \pm 0.01% with auxiliary frequency standard (fixed output) |
| Load range | 0-250 VA in the FCD250 0-1000VA in the FCD1000 and FC1000 |
| Distortion | 5% maximum |

\pm 0.01% REGULATION MODELS

Extremely precise, these are nonetheless rugged, serviceable instruments. The AC regulator is used primarily in calibration applications; the DC source is designed to power the Beckman Model DU Spectrophotometer.

ELECTRICAL CHARACTERISTICS

| | | |
|---|--------------------|---|
| Super-accurate AC Line Regulator Model 1001 | Load range | 0-1000 VA |
| | Input volt. range | 95-130 VAC, 1 ϕ , 55-65~ |
| | Load P.F. range | 0.7 lagging to 0.95 leading |
| | Output voltage | 115 VAC 1 ϕ (adjustable from 110-120 volts) |
| | Distortion | 3% max. |
| | Time constant | 0.1 seconds |
| | Reg. accuracy | \pm 0.01% |
| DC Power Source for Spectrophotometers Model E-6/2-5 Nobatron | Input volt. range | 95-130 VAC 1 ϕ , 50-60 cycles |
| | Output #1 for lamp | 6VDC adjustable \pm 5% at 5 amperes |
| | #2 for filament | 6VDC at 100 Ma. |
| | #3 for bias | 2VDC adjustable \pm 10% at 100 Ma. |
| | Filtering #1 | 1% max. |
| | #2 & 3 | 0.05% max. |
| | Reg. accuracy | \pm 0.01% against line changes |
| | Time constant | Output voltage is insensitive to fluctuations in input line |

TUBELESS REGULATED DC SOURCES

These units have been designed for heavy-duty industrial applications. Tubeless, and utilizing magnetic amplifier principles, they offer the utmost in reliability.

ELECTRICAL CHARACTERISTICS

| MODEL | MA6/15 | MA2850 |
|---------------|--|---|
| Input | 190-230 on 208 line, 1 ϕ , 60~ | 190-230, 3 ϕ , 4-wire, wye, 60~ |
| | 210-250 on 230 line, 1 ϕ , 60~ | |
| Output | 4.5-7.7 VDC at 0-100 amperes 8.5-15.4 VDC at 0-75 amperes | 23-32 VDC at 0-50 amperes |
| Ripple | 1% max. RMS | 3% max. RMS |
| Reg. Accuracy | \pm 1% against line and load combined | \pm 1% against line and load combined |
| Time constant | 0.2 seconds | 0.5 seconds |

LE EQUIPMENT

ORS — The characteristics are similar to 60-cycle equipment, except that regulation accuracy is \pm 0.5%, distortion and capacities are 250, 500, 1200, and 2500 VA. NOBATRONS — With the same general specifications as 60-cycle instruments are available with outputs of 6 VDC at 40 amperes, 12 VDC at 10 amperes, and 28 VDC at 10 amperes.

CALLY SEALED & MILITARIZED REGULATORS

ments of many Sorensen instruments can be hermetically sealed by the Fosterite process (Sorensen does this under West) or by standard potting. Sorensen also builds equipment to meet MIL-T-27 and JAN specifications on resistance to humidity, etc.

L CATALOG

ation on all the instruments in the Sorensen line will be found in the new general catalog. For your free copy, write ad to Sorensen & Co., Inc., 375 Fairfield Ave., Stamford, Conn. In Europe, correspond directly with Sorensen A. G., Zurich 2, Switzerland.

NATION-WIDE SERVICE

Authorized Sorensen representatives are listed below. Look up the one located nearest you — don't hesitate to call on him for consultation and advice.

CALIFORNIA — LOS ANGELES
Gerald B. Miller Co., 1550 No. Highland Ave., Hollywood 28. Phone Hollywood 9-6305

CALIFORNIA — SAN FRANCISCO
Gerald B. Miller Co., 1334 Old County Road, Belmont. Phone: Lytell 3-3438

COLORADO — DENVER
Ronald G. Bowen Co., 446 Broadway. Phone: Sherman 2501

CONNECTICUT — BRIDGEPORT
Yewell Associates, 1101 E. Main St. Phone: 66-0000

DC — WASHINGTON
Hormann Associates, 2017 S. St., N.W. Phone: Decatur 2-8000

FLORIDA — FORT MYERS
Arthur H. Lynch & Associates, P.O. Box 466. Phone 5-6762

GEORGIA — ATLANTA
Floyd Fausett & Son, 777 Pinehurst Terr., S.W. Phone: Raymond 3104

ILLINOIS — CHICAGO
Loren F. Green & Associates, 4949 W. Diversey Ave. Phone: Nctional 2-2370

KENTUCKY
H. A. Watson, Jr., 817 Citizens Bldg., Cleveland, Ohio. Phone: Tower 1-1947

MASSACHUSETTS — BOSTON
Yewell Associates, 751 Main St., Waltham, Mass. Phone: 5-7420

MICHIGAN — DETROIT
S. Sterling Company, 15310 W. McNichols Rd. Phone: B'way 3-2900

MISSOURI — KANSAS CITY
Harris-Hanson Company, 7916 Pasea Ave. Phone: Hiland 6744

MISSOURI — ST. LOUIS
Harris-Hanson Company, 5506 S. Kings- hghway. Phone: Flanders 1-5584

NEW JERSEY — NORTHERN
RMC Associates, 114 E. Main St., Bogota, N.J. Phone: Diamond 2-5343

NEW JERSEY — SOUTHERN
I. E. Robinson Co., 702 Maltison Ave., Asbury Park, N.J. Phone: Allenhurst 3-2402

NEW MEXICO — ALBUQUERQUE
Gerald B. Miller Co., 327 Wyoming, S.E. Phone: 5-6466

NEW YORK — NEW YORK
RMC Associates, 170 E. 80th St. Phone: TR. 9-2023

NEW YORK — SYRACUSE
J. D. Ryerson Co., 412 E. Genesee St. Phone: 76-8344

NORTH CAROLINA — CHARLOTTE
James L. Highsmith, P.O. Box 1011. Phone: 5-6436

OREGON — PORTLAND
James L. Kearns Co., P.O. Box 5108. Phone: Lincoln 4747

PENNSYLVANIA — EASTERN
I. E. Robinson Co., 7217 Marshall Rd., Upper Darby, Pa. Phone: Flanders 2-5911

PENNSYLVANIA — WESTERN
H. E. Ransford Co., Grant Bldg., Pitts- burgh, Pa. Phone: Grant 1-1880

TENNESSEE — KNOXVILLE
A. R. Hough, P.O. Box 1452. Phone: 7-6660

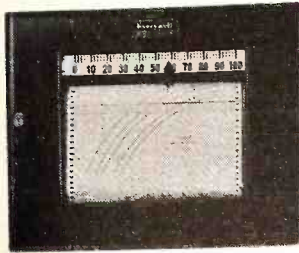
TEXAS — DALLAS
Earl W. Lipscomb & Associates, P.O. Box 8042. Phone: Elmhurst 5345

CANADA — VANCOUVER, B.C.
Frederick Goertz, Ltd., 1170 Robson St. Phone: Tatlow 5377

CANADA — TORONTO, ONT.
Charles W. Pointon, 6 Alcina Ave. Phone: Oliver 7984

SORENSEN 375 FAIRFIELD AVENUE STAMFORD, CONNECTICUT

special *ElectroniK* recorders



function plotter

Automatically plots one variable directly as a function of another. One variable actuates the pen; the other, the chart drive. 11 inches full travel of both X and Y axis. See Data Sheet No. 10.0-5a.

duplex two-pen recorder

Simultaneously measures any two independent variables. Two separate measuring systems, each driving a pen which can traverse the full 11-inch chart. Any desired combination of ranges. See Data Sheet No. 10.0-6.

duplex function plotter

Two-pen version of the Function Plotter. Plots two different "X" variables as a function of a common "Y" variable. Wide selection of ranges for pens and chart measuring systems. See Data Sheet No. 10.0-17.

narrow span potentiometer

Measures spans as narrow as 100 microvolts, readable to 0.1 microvolt . . . needs no pre-amplifier. Available as a precision indicator, strip chart recorder, or circular chart pneumatic controller. See Data Sheet No. 10.0-8.

1/2-second recorder

Pen speed is only 1/2 second for full 11-inch chart travel. Improved velocity damping prevents overshoot. Chart speeds as fast as 4" per second are available. See Data Sheet No. 10.0-13.

components



amplifiers

For use with converter and balancing motor, for null detection and error signal correction. See Data Sheets 10.20-3a and 10.20-4.

| Amplifier No. | Input Impedance (ohms) | Sensitivity* (volts) | Overall Voltage Gain |
|---------------|------------------------|----------------------|----------------------|
| 357504-20 | 80,000 | 3×10^{-6} | 1×10^6 |
| 357504-21 | 80,000 | 1×10^{-6} | 3×10^6 |
| 357504-5 | 400 | 4×10^{-6} | 1×10^6 |
| 356899 | 2,200 | $.05 \times 10^{-6}$ | 40×10^6 |

*Approximate sensitivity, when used with motors listed below.



balancing motors

2-phase induction, reversing

Totally enclosed, self lubricated. High torque at low speeds. See Data Sheet No. 10.20-2b.

| Ratings for 115 volt, 60 cycle operation† | | | | |
|---|---|----------------|-----------------|-----------------|
| Shaft Speed, rpm | 27 | 54 | 162 | 333 |
| Maximum Torque, inch-ounces | 85 | 43 | 19 | 11 |
| Intermittent Rated Torque, inch-ounces | 30 | 15 | 5 | 4 |
| Maximum Power, inch-ounces per minute | 6300 at 17-18 rpm | 6700 at 35 rpm | 8150 at 100 rpm | 8750 at 190 rpm |
| Power Required, all speeds | Line Field, 9.5 watts Amplifier Field, 4 watts | | | |

†Motors for 25 and 40 cycle service are also available. Above motors may be used on 50 cycles.



converters

Proved by years of service in *ElectroniK* recorders. Convert low power d-c signals to alternating voltages at nominal frequencies of 25, 40, 60 or 400 cycles. For null detection or error voltage measurement. Extremely low thermal emf; thorough shielding against pickup. See Data Sheet 10.20-1.

Electrical Characteristics of 400 cycle Converters (60 cycle converters similar except as noted)

Driving Coil Input: 18 volts, 94 milliamperes, 400 cycles (within 10%). (60-cycle model: 6.3 volts, 60 ma.)

Contact Rating: SPDT switching. Nominal rating 6 volts to 1 microvolt. 1.0 milliamperes, maximum power, 100 micro-watts.

Symmetry: Within 5%.

Vibration Resistance: Output voltage varies less than 2% under accelerations up to 10 g.

Stray Pick-up: Electrostatic: 2×10^{-10} volts per ohm of input circuit impedance. Electromagnetic: 2×10^{-5} volts, constant to 2×10^{-6} volts.

adjustable span recorder

The instrument of a hundred ranges. Calibrated dials on front of the case permit adjustment of span from 1 to 50 millivolts . . . shift of zero by plus or minus 100% of maximum span. See Data Sheet No. 10.0-10.

high impedance recorder

Records data from sources having impedance ranging from 0 to 50,000 ohms, with negligible loading effect on source. Spans down to 2 mv. Excellent stray rejection. See Data Sheet No. 10.0-14.

ElectroniK null indicator



The modern successor to the galvanometer is this electronic d-c null balance detector. Needs no special mounting. Vibration-resistant, stable and fast. Takes heavy overloads; no "loss of spot." Sensitivity 0.6×10^{-9} amp/millimeter. See Data Sheet 10.0-12.

YOUR own research program can be accelerated through the use of these and many other *ElectroniK* instruments, Brown Electronic Components and special primary elements. Your nearby Honeywell field engineer will be glad to consult on your specific requirements. He's as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR Co.,
Industrial Division, Wayne and Windrim
Avenues, Philadelphia 44, Pa.



MINNEAPOLIS
Honeywell

BROWN INSTRUMENTS

First in Controls

Instruments

and

Servo

Components

*for
research
work*

POLARAD MICROWAVE EQUIPMENT

MICROWAVE SIGNAL GENERATING EQUIPMENT

950 - 11,500 MC

| Model No. | Frequency Range MCS/sec. |
|-----------|--------------------------|
| MSG-1 | 950-2400 |
| MSG-2 | 2150-4600 |
| MSG-3 | 4450-8000 |
| MSG-4 | 6950-10,800 |
| MSG-4A | 6950-11,500 |



MSG 1-2



MSG 3-4

Signal Generators
Direct reading, single dial frequency control, with internal FM and pulse modulation circuits, as well as provisions for external synchronization. Delayed and undelayed sync output. Frequency accuracy $\pm 1\%$. Attenuator accuracy ± 2 db. Extremely stable. Rugged construction.

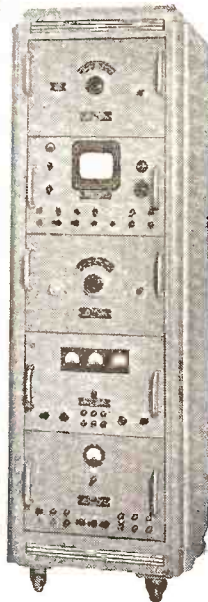
MICROWAVE SIGNAL ANALYZING EQUIPMENT

10 - 35,000 MC

LSA Laboratory Spectrum Analyzer
with 5 interchangeable R.F. heads

| R.F. Head | Frequency Range in MC |
|-----------|-----------------------|
| LTU-1 | 10-1000 |
| LTU-2 | 940-4500 |
| LTU-3 | 4460-16,520 |
| LTU-4 | 15,000-21,000 |
| LTU-5 | 20,850-35,000 |

5 interchangeable R.F. heads provide continuous coverage from 10 MC to 35,000 MC. Single dial tuning allows for quick and simple display of any frequency spectrum. Frequency dispersion from 250 KC to 25 MC with an internal marker measuring frequency differences up to ± 12.5 MC on a 5 in. CRT display.

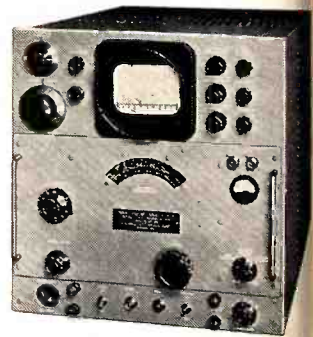


10 - 21,980 MC

TSA Bench Model Spectrum Analyzer
with 3 interchangeable R.F. heads

| R.F. Head | Frequency Range in MC |
|-----------|-----------------------|
| STU-1 | 10-1000 |
| STU-2 | 915-4560 |
| STU-3 | 4370-21,980 |

3 interchangeable R.F. heads provide continuous coverage from 10 MC to 21,980 MC in a portable, table-top spectrum analyzer. Single dial tuning allows for quick and simple display of any frequency spectrum. Frequency dispersion from 250 KC to 25 MC with an internal marker measuring frequency differences up to ± 12.5 MC on a 5 in. CRT display.



MICROWAVE GENERAL LABORATORY EQUIPMENT

DC - 11,000 MC

**Micro Power Meter—
Model P-1**

Measures RMS power from DC to 11,000 MC, utilizing a single power sensitive probe. The elimination of hot wire barreters and other delicate components enables the probe to withstand overloads up to 150% without burnout or other damage. Simple operation. Rugged construction.



Frequency Range: DC-11,000 MC
Single Probe Operation
Power Ranges: 0-20 mw
0-100 mw



**Klystron Tube Tester—
Model K-100**

Compact, portable instrument designed to test performance quality of all commercially available klystron type tubes. Provides complete metering facilities, control adjustments and convenient tube data chart. Safety features.

complete coverage of the range 10 to 50,000 MCS/SEC.

650 - 10,750 MC

Signal Sources

Microwave power output with a direct reading, single dial frequency control. Provisions for external square wave and FM modulation.

Model KX, Klystron Power Supply, especially designed for Polarad Signal Sources is available. Works with all 5 models. Has 1000 cps square wave output for modulating purposes. Stable output.

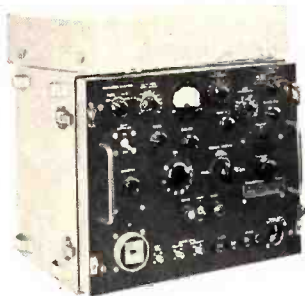
MINIMUM POWER AVAILABLE FROM POLARAD SIGNAL SOURCES IN THE RANGE OF 650 TO 10,750 MC

| FREQUENCY RANGE | MODEL SSR 650-1300MC | MODEL SSL 1050-2350MC | MODEL SSS 2200-4550MC | MODEL SSM 4350-8250MC | MODEL SSK 8000-10,750MC |
|------------------------------|-------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
| MINIMUM POWER AVAILABLE (mw) | 150 | 80 | 15 | 10 | 13 |
| Low Range | 400 | 150 | 60 | 70 | 30 |
| Middle Range | | | | | |
| High Range | 100 | 100 | 40 | 15 | 10 |

12,700 - 50,000 MC

Signal Generators—12.7-39.7 KMC—A new line of signal generators covering the K and Q Bands. Internal square wave modulation and provisions for external modulation. Power meter to check internal R.F. and external source R.F. Power.

Signal Sources—12.7-50.0 KMC—A new line of signal sources providing microwave power in the K, Q and V Bands. Internal square wave modulation and provisions for external modulation.



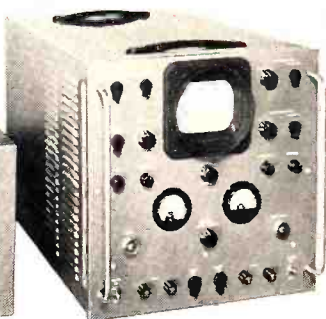
| Signal Generators | Frequency Range in KMC | Signal Sources |
|-------------------|------------------------|----------------|
| Model No. | | Model No. |
| SG-X12 | 12.8 to 17.5 | SS-1218 |
| SG-6178* | 15.75 to 16.25 | SS-1516 |
| SG-QK368* | 16.25 to 16.75 | SS-1617 |
| SG-6253 | 18.0 to 22.0 | SS-1822 |
| SG-6254 | 22.0 to 25.0 | SS-2225 |
| SG-QK289 | 27.27 to 30.0 | SS-2730 |
| SG-QK140 | 29.7 to 33.52 | SS-3033 |
| SG-QK291 | 33.52 to 36.25 | SS-3336 |
| SG-QK292 | 35.1 to 39.7 | SS-3540 |
| | 37.1 to 42.6 | SS-3742 |
| | 41.7 to 50.0 | SS-4150 |

*Provided with internal pulse and FM modulation.

8500 - 9600 MC

12,700 - 39,700 MC

Sweep Generator—Model I



The new X-Band Sweep Generator provides R.F. energy swept continuously from 8,500 to 9,600 MC. Allows the use of HF testing techniques in the microwave region. Two independent sweep amplifiers provide a simultaneous visual display of reflection and transmission characteristics.

Output Variation: ± 1 DB max. Sweep Rate: 12 CPS. Frequency Range: 8,500-9,600 MC Output: +12 DBM.

Spectrum Analyzers

| Model No. | Frequency Range KMC |
|-----------|---------------------|
| SA-X12 | 12.8 to 17.5 |
| SA-6178 | 15.75 to 16.25 |
| SA-QK368 | 16.25 to 16.75 |
| SA-6253 | 18.0 to 22.0 |
| SA-6254 | 22.0 to 25.0 |
| SA-QK289 | 27.27 to 30.0 |
| SA-QK140 | 29.7 to 33.52 |
| SA-QK291 | 33.52 to 36.25 |
| SA-QK292 | 35.1 to 39.7 |



A new line of portable spectrum analyzers covering the K and Q Bands, presenting the frequency distribution of R.F. energy on a 3 in. CRT display. The units are self-contained including an R.F. section, display unit and power supply.

10 CPS - 20 MC

Wide Band Video Amplifier—Model VT

An oscilloscope deflection amplifier for the measurement and viewing of pulses of short duration and rise time.

Frequency Response: flat from 10 cps to 20 mc.
Amplifier Gain: 320 (50 db.)
Phase: Linear with frequency.
Output: 120 V. pk. to pk.



ELECTRONICS CORPORATION

100 METROPOLITAN AVENUE
BROOKLYN 11, NEW YORK

REPRESENTATIVES • Albuquerque • Atlanta • Boston • Chicago • Cleveland • Fort Worth • Kansas City • Los Angeles • New York • Philadelphia • San Francisco • Seattle • St. Paul • Syracuse • Washington, D. C. • Canada, Arnprior—Export: Rocke International Corporation

POLARAD COLOR TV & B/W EQUIPMENT

TV PICTURE AND SIGNAL GENERATING EQUIPMENT



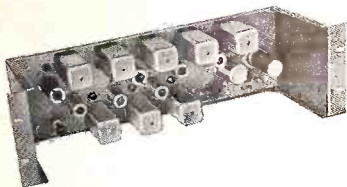
Color Synchronizing Generator—Model PT-201

Furnishes NTSC color TV subcarrier frequency component and contains divider network to yield 31.5 KC signal. Provides driving, blanking and synchronizing pulses, as well as vertical and horizontal dots for linearity checks. Utmost stability assured by driving all pulses from leading edge of crystal controlled oscillator.

Output Signals: (4 to 6 Volts, 75 Ohms, pos. & neg. polarity):
Synchronizing Signal
Camera Blanking Signal
Horizontal Drive Signal
Vertical Drive Signal
Composite Video Output
NTSC Color Subcarrier Freq. (3.579545 mc/s)

Black & White Synchronizing Generator—Model PT-104

Same as color synchronizing generator. Furnished without Subcarrier Frequency Generator.



Subcarrier Frequency Generator—Model PT-202

Modifies any existing standard (B/W) synchronizing generator in accordance with NTSC color TV standards by supplying NTSC color subcarrier frequency of 3.579545 mc/s \pm 0.0003%. Also, contains divider network to yield 31.5 KC signal.



Color Bar Generator—Model PT-203

Provides color TV test signals, NTSC standards, for color TV equipment, networks and components. Supplies complete composite video signal in the form of seven fundamental color bars simultaneously with seven gradations of gamma bars.

Output Signals: Composite Video (2 outputs) (Sync. negative & positive)
Signal Information:
7 Bars of Color
7 Bars of Gamma Gradations
White Dot Pattern (Vert. and Hor.)
Ext. Video Input for Mixing:
2 Volts neg. polarity

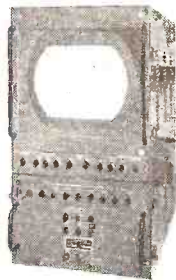
Other Equipment Available

An NTSC Color TV Flying Spot Scanner, furnished as a completely packaged unit supplying a standard color video signal. And, a Monoscope Signal Source—Model PT-102 used for transmitting a laboratory quality black and white test pattern.

TV MONITORING EQUIPMENT

Color Video Monitor—Model M-200

Consists of two portable units—uses 15 inch RCA tri-color Kinescope. Checks quality of NTSC color video signals in studio, on transmission, or in factory. Excellent synchronizing stability. Displays highest definition transmitted pictures with exceptionally good color rendition. All controls on front panel. Instrument may be rack mounted or employed as field test equipment.



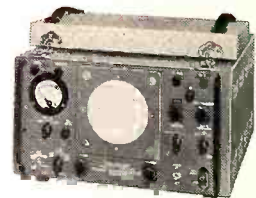
Signal Polarity: Positive, Negative, Balanced
Input Video Signal: 0.5 to 2.0 Volts, peak to peak
Input Impedance: 66 mmf across 2.2 megohms
Resolution: 250-300 lines (Full Utilization of NTSC Color Signal Bandwidth)
Linearity: Better than 2% across raster
Horizontal and Vertical

Studio Picture Monitor—Model M-105

A portable instrument used to check the picture quality of video signals in either a black/white or color television system. The unit employs a 12½" aluminized kinescope and is capable of presenting high definition transmitted pictures.



Signal Polarity: Positive, Negative, Balanced
Input Video Signal: 0.25 to 2.0 Volts, peak to peak
Input Impedance: 66 mmf across 470,000 ohms
Retrace Time: 4 microseconds
Resolution: Greater than 450 lines



Portable Wave Form Monitor—Model T0-1

Portable instrument designed for waveform analysis and amplitude measurement of NTSC color and B/W video signals in television circuits. It may be used, however, as a general purpose instrument. Means are provided for calibrating or comparing signals observed, and for selecting desired vertical amplifier bandwidth.

Deflection sensitivity:
Greater than 0.1 Volts/in.
Hor. expansion: 20 tube diameters
Input Signal Level: 0.05 to 300 Volts peak to peak
Frequency Response Vertical Amplifier:
I.R.E. —3.5 db at 2 mc.
Normal —3.0 db at 4 mc.
Line Test—3.0 db at 6 mc.

Other Monitors Available:

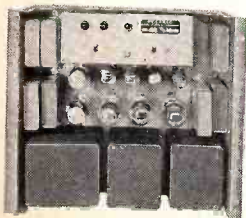
Model M-102: High quality picture and wave form monitor.

Model 102MPS: 7" Kinescope, portable picture monitor.

Power Supplies

| Model No. | Output Voltage | Output Current |
|-----------|----------------|----------------|
| PT-110 | 400-450 V. | 250-300 Ma |
| PT-111 | 250-300 V. | 100-400 Ma |
| PT-111D* | 250-300 V. | 100-400 Ma |
| PT-112 | 250-300 V. | 150-800 Ma |

*Double Output



GENERAL EQUIPMENT



ELECTRONICS CORPORATION

100 METROPOLITAN AVENUE
BROOKLYN 11, NEW YORK

REPRESENTATIVES: Albuquerque • Arnprior, Canada • Atlanta • Boston • Chicago • Cleveland • Fort Worth • Kansas City • Los Angeles • New York • Philadelphia • San Francisco • Seattle • St. Paul • Syracuse • Washington, D. C.

June, 1954 — MID-MONTH — ELECTRONICS BUYERS' GUIDE

GABRIEL

Integrated

research
through
production

33,000 mc

25 mc

ADVANCED = ANTENNA PERFORMANCE

► From Gabriel's *integrated* facilities for development and production came the unsurpassed antenna performance shown here . . .

► Gabriel *integrates* its antenna specifications with your system requirements. Ask a Gabriel Field Consultant for recommendations.

GABRIEL MICROWAVE ANTENNA

Field proved the world over, Gabriel Parabolics are produced for commercial, industrial, and military frequencies.

Request Catalog EMP for complete specifications in these and other frequencies.

◀ **7000 mc.** — 7000 mc. Railroad Microwave System Operates in mid-west weather conditions ranging from -27° to 110°F — and often mounted where difficult access makes reliability critical. Photo courtesy of Philco.

Important features are **COMPLETE COVERAGE** — 5925-7425 mc · **HIGH GAIN** — to 42.5 db over isotropic source · **LOW VSWR** — 1.13 max. · **LOW SIDELOBES** — better than 22 db down.

2000 mc. — 2000 mc. NATO Mobile Military Microwave Relay 24-channel communication relay using Gabriel 2000 mc offset feed antenna. Broadband characteristics of Horn Feed cover entire 2000 mc band. ▶

Important specifications are **HIGH GAIN** — better than 30 db over isotropic source · **LOW VSWR** — 1.2 max. over 1750-1990 mc band · **BEAMWIDTH** — H plane 6° , E plane 5.7° · **LOW SIDELOBES** — better than 23 db down.



GABRIEL HIGH GAIN UHF-TV BROADCAST ANTENNA

From station after station, in metropolitan and smaller communities, come verified reports of increased signal coverage — at relatively low cost — with Gabriel's radically new transmitting antenna. ▶

Request 24-page Report ETV for complete performance characteristics.

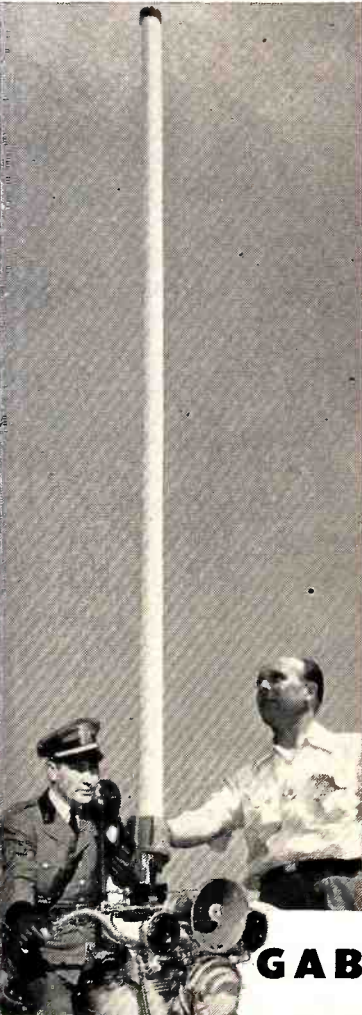
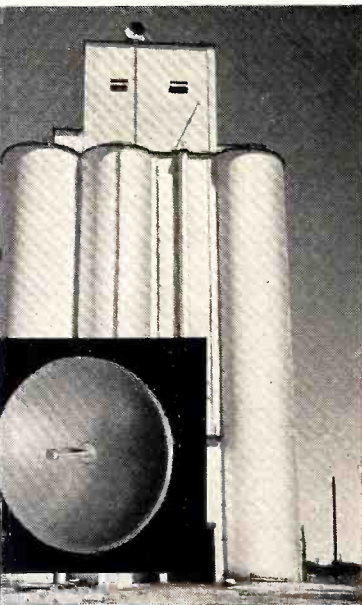
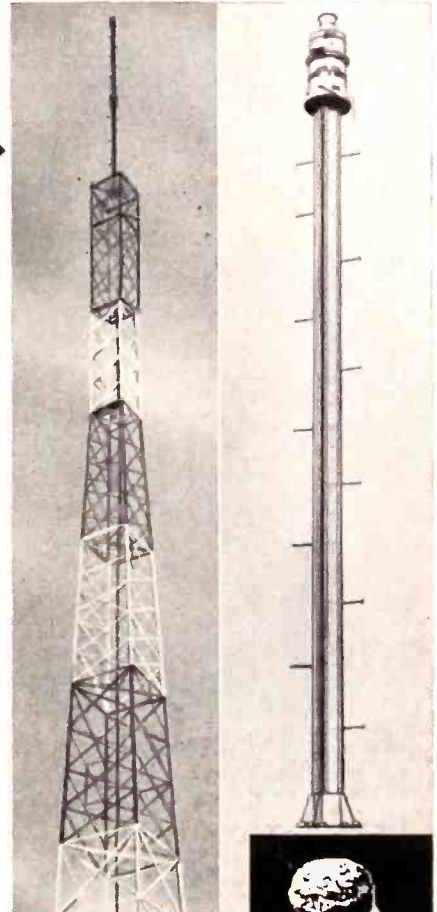
Important features are: **HIGH GAIN** — 25 and 14 power gain models available · **IDEAL VERTICAL PATTERN** — Cosecant squared radiation pattern for uniform field strength · **SHAPED HORIZONTAL PATTERN** — Omni-directional or cardioid as site requires · **NULL FILL-IN** — standard on all models · **TROUBLE-FREE** — mechanical design with greater strength, no de-icing, no insulator except as seal · **ELECTRICAL BEAM TILT** . 7° if desired.

GABRIEL COMMUNICATIONS ANTENNAS

◀ A complete line for wide-range dependable mobile communications for increased signal power with wider coverage at great savings over cost of high power station and mobile transmitters. Request 24-page Catalog EMC.

HIGH GAIN BEACON ANTENNAS — Gabriel HW series covers 450-470, 144-174, 108-144 mc bands. Gain up to 6.5 db over $\frac{1}{2}$ wave dipole, with equal power radiation in all horizontal directions and low VSWR.

MOBILE ANTENNAS — Gabriel's complete line with bases, springs, and rods, meets every mobile communications need. Typical models are famous "disguise" Model SPPB-71 for all police frequencies; Model SPP-3 series of swivel-base, spring, and whip antennas; Model SPP-18 roof-top model for 140-165 mc.



GABRIEL ELECTRONICS DIVISION

THE GABRIEL COMPANY ENDICOTT STREET, NORWOOD, MASS.





BALLANTINE

World's Leading Electronic Voltmeters

AUDIO to 150 kc MODEL 300

Voltage Range..... 1mv—100v
 Frequency Range..... 10cps—150kc
 Accuracy..... 2% ENTIRE RANGE
 Input Impedance..... ½ meg shunted by 30µf



INFRASONIC to 30 kc MODEL 316

Voltage Range..... 20 mv—200 v pk-to-pk
 Frequency Range..... 0.05 cps—30 kc
 (Down to .01 cps with corrections)
 Accuracy..... 3% ENTIRE RANGE
 Input Impedance..... 4.4 meg shunted by 50 µf



SUB-AUDIO to 150 kc MODEL 302B Battery Operated

Voltage Range..... 100µv—100v
 Frequency Range..... 2cps—150kc
 Accuracy..... 3% 5cps—100kc
 5% elsewhere
 Input Impedance..... 2 meg shunted by 15 µf*



TRUE RMS INDICATION MODEL 320

Voltage Range..... 100 µv—320 v
 Frequency Range..... 5 cps—500 kc
 Accuracy..... 3% 15 cps—150 kc
 5% elsewhere
 Stability of Internal Calibrator..... 0.5%
 Input Impedance ...
 10 megs shunted by 25 µf below 10 mv
 10 megs shunted by 8 µf above 10 mv



PEAK-to-PEAK MODEL 305

Voltage Range..... 1mv—1000v pk-to-pk
 Frequency Range..... 10cps—100kc (sine wave)
 Pulse width..... 3µsec—250µsec
 Min Rep Rate..... 20 pulses per sec
 Accuracy..... 5% for pulses
 Input Impedance..... 2 meg shunted by 15 µf*



DC & AC PRECISION CALIBRATOR MODEL 420

Voltage Range..... 0-10 v RMS; Pk-to-Pk; or DC
 Frequency (Std Model)..... 1 kc
 (other values on special order)
 Accuracy (long term) ... Better than 0.5% above 1 mv
 Distortion and Hum..... Less than 0.5%
 Setting Resolution... Approaches 0.01% above 10 mv
 Output Impedance (AC)..... 2-20 ohms depending
 on range setting



AUDIO to 2 mc MODEL 310A

Voltage Range..... 100µv—100v
 Down to 40 uv at reduced accuracy
 Frequency Range..... 10cps—2mc
 As null detector 5cps—4mc
 Accuracy..... 3% 10cps—1mc
 5% elsewhere
 Input Impedance..... 2 meg shunted by 15µf*



SENSITIVE INVERTER MODEL 700

For Measuring DC Voltages when
 combined with any AC Voltmeter
 Voltage Range..... 1µv—100v DC
 Ratios DC Input to RMS Output..... 1:100 & 10:1
 Accuracy..... 1% 100µv—100v
 Input Resistance..... >10 meg for 1:100
 50 meg for 10:1



AUDIO to 6 mc MODEL 314

Voltage Range..... 1mv—1000v
 (100µv—1mv without probe)
 Frequency Range..... 15cps—6mc
 Accuracy..... 3% 15cps—3mc
 5% elsewhere
 Input Impedance..... 11 meg shunted by 7.5 µf
 (1 meg shunted by 25µf without probe)



DECADE AMPLIFIER MODEL 220A

For Increasing the Sensitivity of any
 AC Voltmeter by 10 or 100 times
 Voltage Range..... 10µv—50mv
 Frequency Range..... 10cps—150kc
 Accuracy..... 2% ENTIRE RANGE
 Input Impedance..... 5 meg shunted by 15µf



ACCESSORIES are available for all voltmeters to extend voltage measurements down to 20 uv and up to 10 kv, and to measure alternating currents from 0.1 uamp to 10 amp, and to provide DC from the Model 300 Voltmeter to drive external recorders or remotely located meters.

Famous for SENSITIVITY • ACCURACY • STABILITY

Each Ballantine Voltmeter

- Has only ONE voltage scale with decade range switching.
- Provides the same accuracy of reading at ALL points on the logarithmic voltage scale.
- Has a linear decibel scale.

- May be used as a high gain wide band amplifier.
- Responds to the average value of the input voltage wave, thus avoiding "turn-over" discrepancy.

WRITE FOR MORE DETAILED INFORMATION TO—

*Shunt capacitance is 8µf on all ranges except two most sensitive ranges.

BALLANTINE LABORATORIES, INC.

100 Fanny Road, Boonton, New Jersey

Standardized for your convenience!

General Ceramics ALUMINA CERAMIC*

*Conforms to the requirements of Grade L-5A in accordance with JAN-1-10.

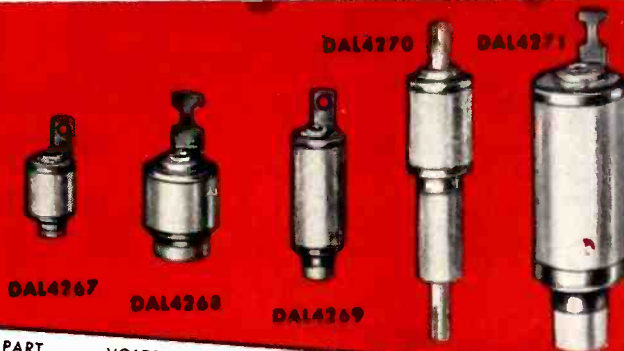
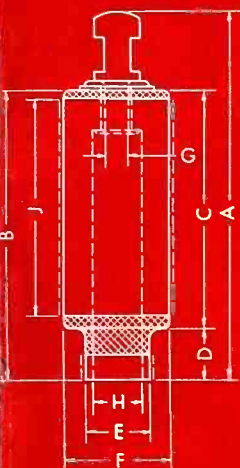
SOLDERSEAL HERMETIC TERMINALS

THE ITEMS SHOWN ARE STANDARD STOCK TERMINALS. DIMENSIONAL TOLERANCE, $\pm 1\frac{1}{2}\%$ BUT NOT LESS THAN $\pm .010''$

featuring

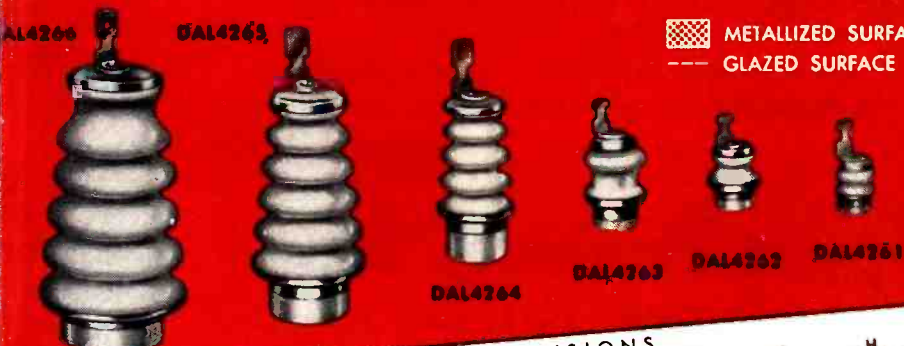
- High Mechanical Strength
- Resistance to Thermal Shock
- Fast, Easy Installation
- Permanent Hermetic Sealing

THIS TYPE TERMINAL ON DAL-4267, 4269



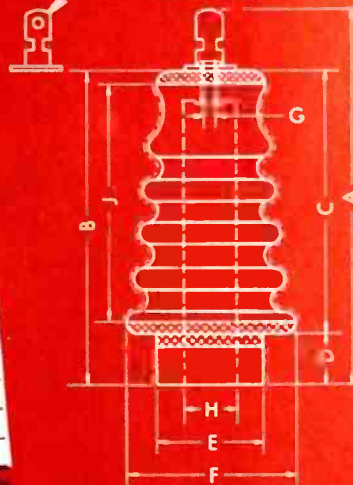
| PART NUMBER | VOLTS RMS† | DIMENSIONS | | | | | | | | |
|-------------|------------|------------|-------|------|------|------|------|------|------|------|
| | | A | B | C | D | E | F | G | H | J |
| DAL4267 | 4000 | .547 | .375 | .281 | .093 | .125 | .234 | .046 | .084 | .250 |
| DAL4268 | 5000 | .687 | .422 | .312 | .109 | .250 | .359 | .069 | .171 | .281 |
| DAL4269 | 8000 | .875 | .687 | .562 | .125 | .156 | .250 | .046 | .093 | .531 |
| DAL4270* | 10000 | 1.187 | .937 | .437 | .500 | .234 | .312 | — | — | .375 |
| DAL4271 | 15000 | 1.531 | 1.250 | .937 | .312 | .281 | .453 | .090 | .187 | .781 |

*Note: Part No. DAL4270 employs solid thru lead design at each end.



METALLIZED SURFACE
 GLAZED SURFACE

THIS TYPE TERMINAL ON DAL-4264, 4265, 4266



| PART NUMBER | VOLTS RMS† | DIMENSIONS | | | | | | | | |
|-------------|------------|------------|-------|-------|------|------|-------|------|------|-------|
| | | A | B | C | D | E | F | G | H | J |
| DAL4261 | 3000 | .672 | .391 | .282 | .109 | .250 | .312 | .067 | — | .171 |
| DAL4262 | 4000 | .750 | .468 | .312 | .156 | .312 | .437 | .067 | — | .160 |
| DAL4263 | 7000 | .968 | .687 | .500 | .187 | .375 | .500 | .095 | .156 | .375 |
| DAL4264 | 14000 | 1.343 | 1.250 | .907 | .343 | .490 | .625 | .128 | .250 | .812 |
| DAL4265 | 18000 | 2.218 | 1.750 | 1.407 | .343 | .656 | .937 | .118 | .312 | 1.250 |
| DAL4266 | 22000 | 2.655 | 2.187 | 1.844 | .343 | .812 | 1.187 | .128 | .375 | 1.640 |

These terminals are made of glazed Alumina Ceramic. Lugs and eyelets are hot tinned brass and metallized areas are silver fired on ceramic, copper electroplated and tin fused for soft soldering. Im-

mersion in 60/40 solder at 450°F for 1½ minutes for dip soldering will not injure the metallic coating. For complete information and quotations call, write or wire today.



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VALLEY 6-5100

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of ideas
you can use

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GENERAL CERAMICS FERRAMIC* CORES

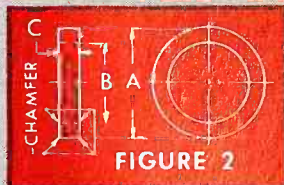
*REG. TRADE MARK

Now available in standard types that simplify design and speed delivery!

STANDARD TOROID CORES



| PART NO. | FIG. NO. | A | B | C |
|----------|----------|-------|-------|------|
| F-394 | 1 | .080 | .050 | .025 |
| F-259 | 2 | .330 | .120 | .060 |
| F-262 | 2 | .375 | .1875 | .125 |
| F-109-1 | 2 | .870 | .540 | .093 |
| F-109-2 | 2 | .870 | .540 | .156 |
| F-109-3 | 2 | .870 | .540 | .250 |
| F-226-1 | 2 | 1.125 | .750 | .125 |
| F-226-2 | 2 | 1.125 | .750 | .500 |
| F-268-1 | 2 | 1.250 | .750 | .187 |
| F-268-2 | 2 | 1.250 | .750 | .375 |
| F-268-3 | 2 | 1.250 | .750 | .250 |
| F108 | 1 | 1.875 | 1.375 | .250 |



STANDARD CUP CORES

TYPE F-269

TYPE F-270

**TYPE F-280 (ILLUSTRATED)
TYPE F-291
NO HOLE OR STEP
TYPE F-261
WITH HOLE, NO STEP**

**TYPE F-283 (ILLUSTRATED)
TYPE F-210
NO HOLE OR STEP
TYPE F-260
WITH HOLE, NO STEP**

TYPE F-289

TABLE OF MAGNETIC PROPERTIES OF FERRAMICS®

| PROPERTIES | UNIT | A | B | C | D | E | G | H | H-I | I | J | N | O | Q |
|-----------------------------|---------------------|-------|--------|--------|--------|--------|--------|--------|-------|-------|---------|---------|--------|---------|
| Initial Perm. at 1 mc/sec. | - | 20 | 95 | 250 | 410 | 750 | 410 | 850 | 550 | 900 | 330 | 200 | 1000 | 125 |
| *Max. Perm. | - | 100 | 183 | 1100 | 1030 | 1710 | 3300 | 4300 | 3800 | 3000 | 750 | 500 | 2000 | 400 |
| *Sat. Flux Dens. | GAUSS | 1500 | 1900 | 4200 | 3100 | 3800 | 3200 | 3400 | 2800 | 2000 | 2900 | 3000 | 3600 | 3300 |
| *Residual Mag. | GAUSS | 1000 | 830 | 2700 | 1320 | 1950 | 1050 | 1470 | 1500 | 700 | 1600 | 2300 | 1100 | 1050 |
| *Coercive Force | OERSTED | 5.0 | 3.0 | 2.1 | 1.0 | .65 | .25 | .18 | .35 | .30 | .80 | .50 | .35 | 2.0 |
| Temp Coef. of Initial Perm. | %/°C | .15 | .04 | .40 | .30 | .25 | 1.3 | .66 | .80 | .30 | .22 | .14 | .48 | .10 max |
| Curie Point | /°C | 300 | 260 | 330 | 165 | 160 | 160 | 150 | 125 | 70 | 180 | 290 | 140 | 350 |
| Vol. Resistivity | | High | Med. | Med. | High | Med. | High | Med. | Med. | Med. | High | High | Med. | High |
| Loss Factor: | $\frac{1}{\mu_0 Q}$ | | | | | | | | | | | | | |
| At 1 mcs/sec. | - | .0005 | .00016 | .00007 | .00005 | .00008 | .00008 | .00030 | .0004 | .0003 | .000055 | .000035 | .00025 | .000024 |
| At 5 mcs/sec. | - | .0007 | .0011 | .0008 | .0012 | .0020 | .00075 | .00155 | .0010 | .0050 | .0004 | .00012 | .0030 | .00004 |

*Measurements made on D.C. Ballistic Galvanometer with Hmax = 25 oersteds. Above data is based on nominal values.

The above standard items are available in all of the types of Ferramic material shown in the table of properties. Other shapes

and sizes of cores can be made of the above materials to your design. For further details or quotations call, write or wire today.

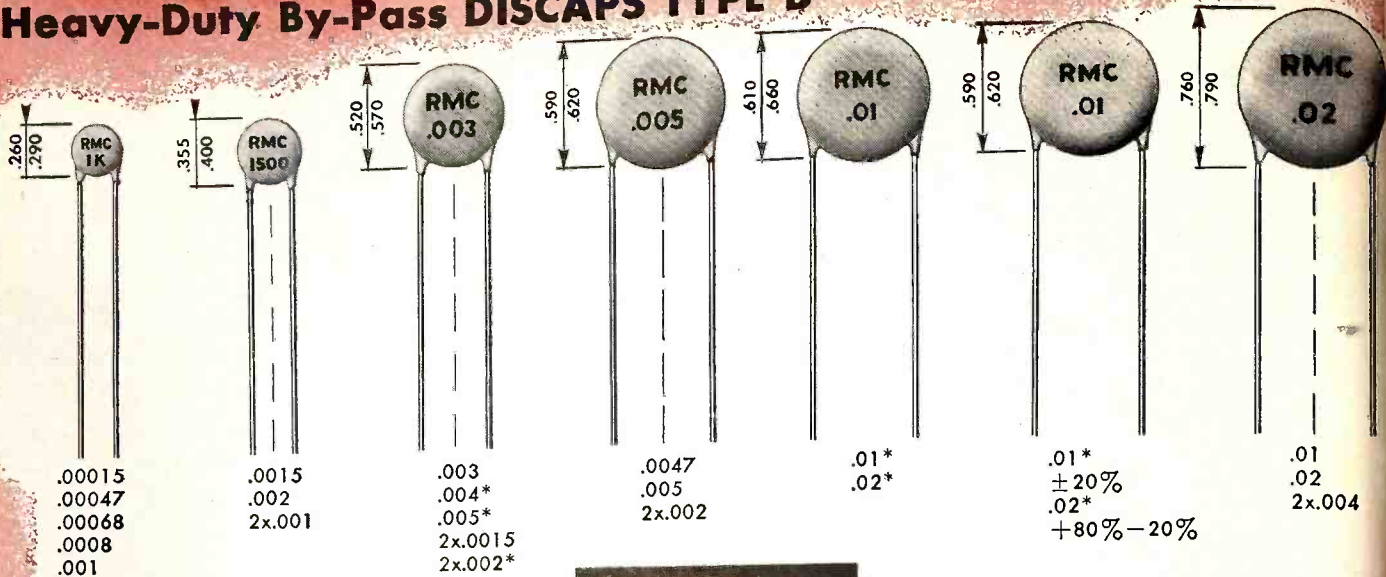


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General Offices and Plant: KEASBEY, NEW JERSEY

MAKERS OF STEATITE, ALUMINA, ZIRCON, PORCELAIN, SOLDERSEAL TERMINALS, LIGHT DUTY REFRACTORIES, CHEMICAL STONWARE, IMPERVIOUS GRAPHITE & FERRAMIC MAGNETIC CORES

Heavy-Duty By-Pass DISCAPS TYPE B



SPECIFICATIONS

*Rated 600 V.D.C.W. Flash test 1200 V.D.C.

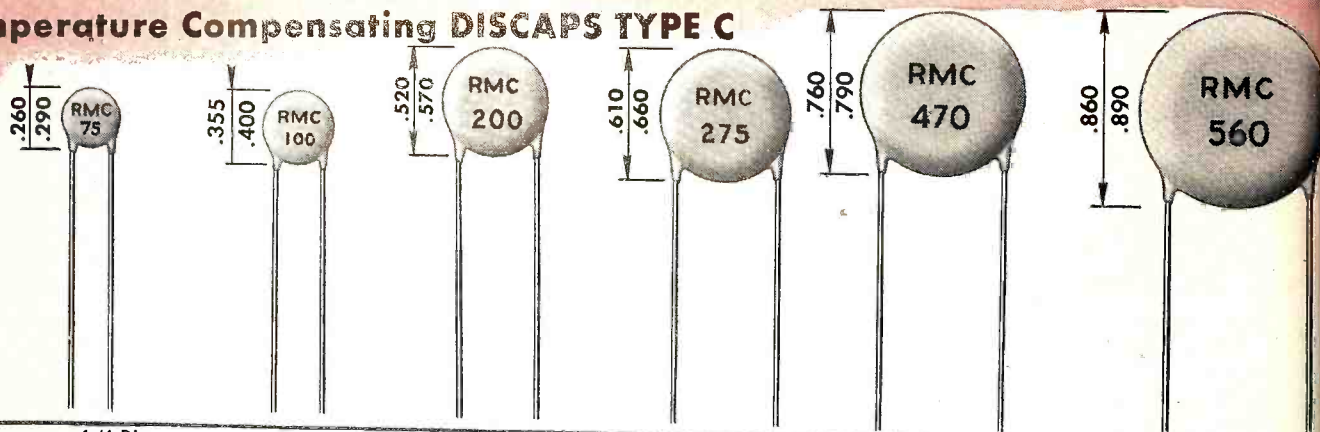
GMV TYPE

POWER FACTOR: 1.5% Max. @ 1 KC (initial)
 POWER FACTOR: 2.5% Max. @ 1 KC (after humidity)
 WORKING VOLTAGE: 1000 V.D.C.
 TEST VOLTAGE (FLASH): 2000 V.D.C.
 LEADS: No. 22 tinned copper (.026 dia.)

INSULATION: Durez phenolic—vacuum waxed
 INITIAL LEAKAGE RESISTANCE: Guaranteed higher than 7500 megohms
 AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohms

RMC DISCAPS

Temperature Compensating DISCAPS TYPE C



| TC | 1/4 Dia. | 5/16 Dia. | 1/2 Dia. | 5/8 Dia. | 3/4 Dia. | 7/8 Dia. |
|--------|----------|-----------|------------|------------|------------|-------------|
| P-100 | 1- 3 MMF | 4- 9 MMF | 10- 20 MMF | — | — | — |
| NPO | 2- 12 | 13- 27 | 28- 47 | 48- 62 MMF | 63-100 MMF | 101-150 MMF |
| N- 33 | 2- 12 | 13- 27 | 28- 47 | 48- 62 | 63-100 | 101-150 |
| N- 75 | 2- 15 | 16- 27 | 28- 56 | 57- 68 | 69-110 | 111-150 |
| N- 150 | 2- 15 | 16- 30 | 31- 60 | 61- 75 | 76-140 | 141-150 |
| N- 220 | 3- 15 | 16- 30 | 31- 75 | 76- 90 | 91-130 | 131-190 |
| N- 330 | 3- 15 | 16- 30 | 31- 75 | 76-100 | 101-150 | 151-190 |
| N- 470 | 3- 20 | 21- 40 | 41- 80 | 81-120 | 121-200 | 201-240 |
| N- 750 | 5- 25 | 26- 56 | 57-150 | 151-180 | 181-300 | 301-350 |
| N-1500 | 15- 50 | 51-100 | 101-200 | 201-250 | 251-330 | 331-560 |
| N-2200 | 47- 75 | 76-120 | 121-200 | 201-275 | 276-470 | 471-560 |

SPECIFICATIONS

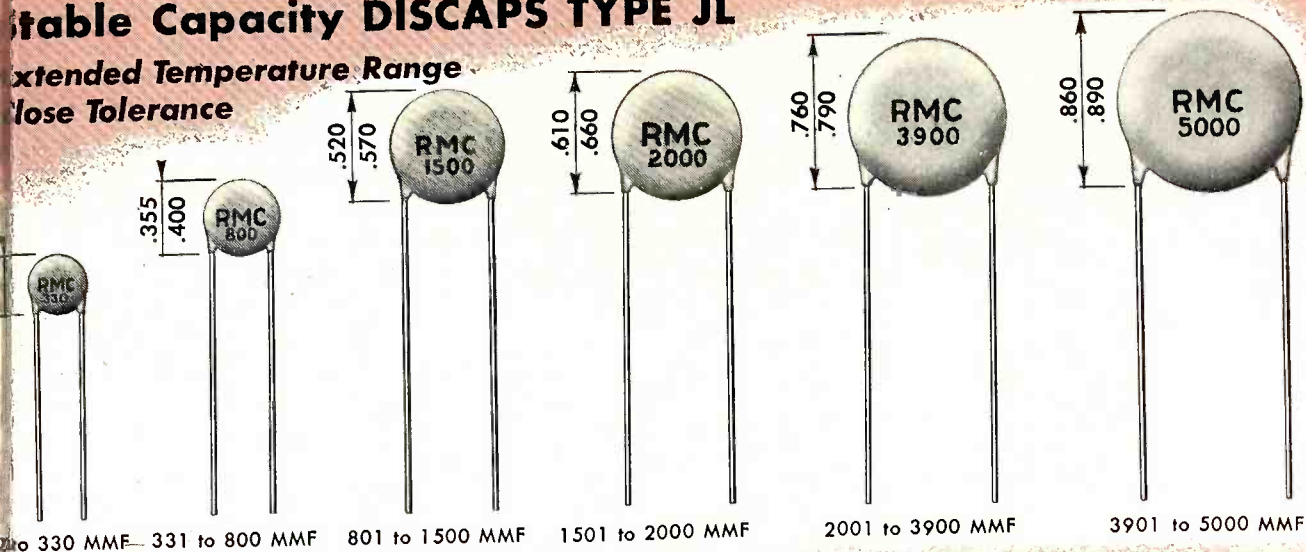
Temperature coefficients up to N-5200 available on special order.

POWER FACTOR: Over 10 MMF less than .1% at 1 megacycle. Under 10 MMF less than .2% at 1 megacycle.
 WORKING VOLTAGE: 1000 V.D.C.
 TEST VOLTAGE (FLASH): 1750 V.D.C.
 CODING: Capacity, tolerance and TC stamped on disc
 INSULATION: Durez phenolic—vacuum waxed

INITIAL LEAKAGE RESISTANCE: Guaranteed higher than 7500 megohms
 AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohms
 LEADS: No. 22 tinned copper (.026 dia.)
 TOLERANCES: ±5% ±10% ±20%
 These capacitors conform to the RTMA specification for Class 1 ceramic condensers. The capacity of these condensers will not change under voltage.

Stable Capacity DISCAPS TYPE JL

Extended Temperature Range
Close Tolerance



SPECIFICATIONS

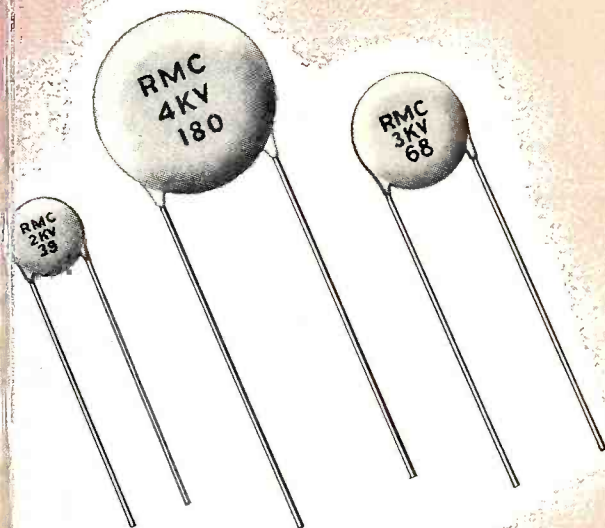
POWER FACTOR: 1% max. @ 1 K C (initial)
POWER FACTOR: 2.5% max. @ 1 K C, after humidity
WORKING VOLTAGE: 1000 V.D.C.
TEST VOLTAGE (FLASH): 2000 V.D.C.
LEADS: No. 22 tinned copper (.026 dia.)

INSULATION: Durez phenolic—vacuum waxed
INITIAL LEAKAGE RESISTANCE: Guaranteed higher than 7500 megohms
AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohms

CAPACITY TOLERANCE: $\pm 10\%$ $\pm 20\%$ at 25° C

...the **MONEY SAVING Replacement**
for Mica and Tubular Ceramic Condensers

HIGH VOLTAGE DISCAPS for yoke and other applications



SPECIFICATIONS

POWER FACTOR: .1% Max. @ 1 M C (initial)
POWER FACTOR: 2.5% Mox. @ 1 M C, after humidity
WORKING VOLTAGE: 2000, 3000, 4000, 5000, 6000 V.D.C.
TEST VOLTAGE: 4000, 6000, 8000, 10,000, 12,000 V.D.C.
LEADS: No. 22 tinned copper (.026 dia.)
INSULATION: Durez phenolic—vacuum waxed
INITIAL RESISTANCE: Guaranteed higher than 7500 megohms
AFTER HUMIDITY LEAKAGE RESISTANCE: Guaranteed higher than 1000 megohms
TOLERANCES: $\pm 5\%$ $\pm 10\%$ $\pm 20\%$

Now available in any capacity between 5 MMF and 330 MMF

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CERAMIC
CAPACITORS

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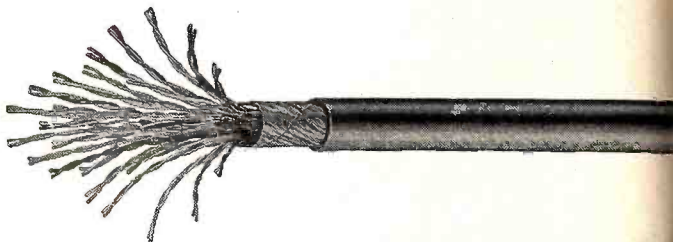
We are prepared to help solve your cord and cord set engineering problems as well as to furnish a wide variety of products under the following general classifications.



MICROPHONE CABLES with neoprene jackets. Write us about our new microphone cord with semi-conductive cotton shield. It has improved flexibility and longer service life with excellent electrical characteristics.



SOUND SYSTEM WIRES with rubber, Plastite® or textile insulation.



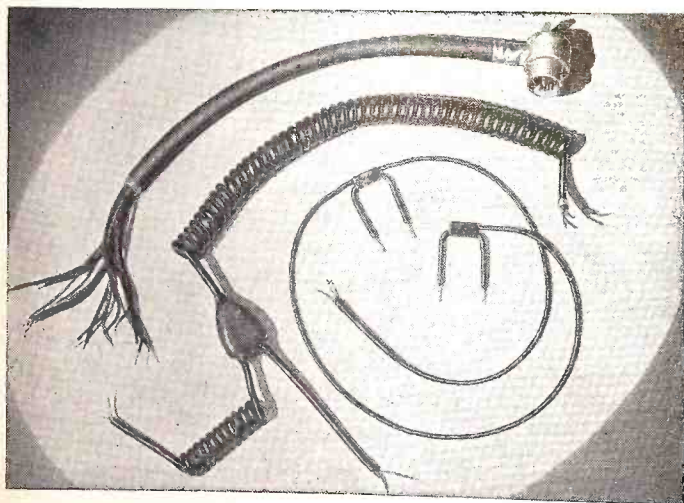
TELECABLE Multi-pair Intercommunication Cables with semi-rigid Plastite insulation and Plastite jacket 6, 11, 12 and 26 pair in #24 and #22 AWG. Light weight for easy installation. Water resistant for use in damp ducts. Other constructions upon request.

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DYNAPRENE® neoprene jacketed cord and rubber jacketed cord for power supply. Listed by Underwriters' Laboratories.

CORD SETS and CABLE ASSEMBLIES custom built to your specific requirements. Using either standard cordage or cord designed to fit your particular application, Whitney Blake can fabricate regular line cords or special purpose cords having attached or integrally molded rubber or Plastite fittings.



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C747A

A175



6V 60 ~
30° phase angle
A brand new model

A589



6V
400 ~
65° angle

A580



120V
400 ~
0° angle

A520



6V
400 ~
90° angle

A586



6V
60 ~
45° angle

CHOPPERS

Shown are five of our SPDT, break-before-make, standard choppers. Hermetically sealed, octal base, 1 1/2" can diameter, seated height 2 5/8" max. All five show outstanding life and performance, operate between -70°C and 100°C, model A100 performs up to 200°C. Model A580 corrects to a zero angle with external .04 mfd. Many other types are also available for immediate delivery.



6V
400 ~
65° phase angle

model A100 will operate continuously at a 200°C ambient.

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Airpax has the engineering ability, experience and facilities for difficult pulse problems.

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Magnetic amplifier designs to fit your problem completely require good and careful engineering. We will welcome a chance to show you our personal interest in your application.

Toriodal windings



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400 cycle vibrators permit great saving in space and weight. Transformer size is drastically reduced, filter components are much smaller.

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pulse, power and audio
transformers —
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A1220

vibrator power supplies

Model A1220, a standard Airpax supply, weighs less than 2 lbs., delivers 150 volts at 100 ma. completely filtered, from 6, 12 or 24 volts DC. Many other designs are available, to fit your specialized need for less weight and size.

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CATHALOY*

CATHALOY A30** For long life

This is an active grade 0.1% aluminum-nickel alloy designed for use in high speed electron tube production. Exhaustive testing has confirmed it as a preferred replacement for active alloys with silicon and magnesium reducing elements. Its chief advantages are long life, rapid activation, no interface impedance, no inter-electrode leakage caused by sublimed films, and a high emission value.

Composition

| | |
|-------------------------|-------------------------------|
| Aluminum.....07/.12% | Copper.....0.10% max. |
| Silicon......03% max. | Carbon......08% max. |
| Magnesium......01/.06% | Titanium......02% max. |
| Iron......0.10% max. | Nickel plus Cobalt. .99% min. |
| Manganese....0.12% max. | |

Physical Properties

| | |
|--|---|
| Density..... | .322 lb./cu. in. |
| Temperature coefficient of resistance..... | .00895 ohm/ohm/°F. (32°—212°F.) |
| Electrical resistivity..... | { 55.08 ohms/Cmf (68°F.) 159.18 ohms/Cmf (1000°F.) |
| Temperature coefficient of expansion..... | 8.97 x 10 ⁻⁶ in./in./°F. (68°—932°F.) |

Mechanical Properties***

| Temper | Tensile Strength (x 1000 psi) | Yield Strength (x 1000 psi) 0.2% offset | % Elongation in 2 inches | Rockwell Hardness |
|------------|-------------------------------|---|--------------------------|-------------------|
| Annealed | 75 max. | 15/30 | 55/30 | B70 max. |
| Half hard | 70/90 | 35/75 | 27/12 | B65/80 |
| Hard drawn | 90/120 | 75/105 | 18/8 | B80/100 |

Cathaloy A30 is used wherever an active alloy is now specified. The new features of this material will permit long life with freedom from interface buildup. It is recommended for general purpose entertainment type electron tubes.

*Reg. U.S. Trademark

**Manufactured under U.S. Patent

***These are average values representing the mechanical properties to be expected of normal wall tubes useful in comparison with other materials. These do not represent the mechanical properties of very small thin wall tubing.

CATHALOY A31 For strength

This is a premium grade 4% tungsten-nickel alloy designed for cathode use in ruggedized electron tubes. The necessity for this new alloy for indirectly heated cathodes has been demonstrated by the increase in requirements for strength, long life and reliability. Under electron tube test, Cathaloy A31 has demonstrated high hot strength and maintenance of good emission characteristics over long periods of life.

Composition

| | |
|-----------------------|--------------------------------|
| Tungsten...3.75/4.25% | Copper.....0.10% max. |
| Silicon......05% max. | Carbon......08% max. |
| Magnesium. .01/.06% | Titanium......02% max. |
| Iron......0.10% max. | Nickel plus Cobalt 95.25% min. |
| Manganese 0.12% max. | |

Physical Properties

| | |
|--|---|
| Density..... | 0.323 lb./cu. in. |
| Temperature coefficient of resistance..... | .00549 ohm/ohm./°F. (32°—212°F.) |
| Electrical resistivity..... | { 96.61 ohms/Cmf (68°F.) 145.30 ohms/Cmf (1000°F.) |
| Temperature coefficient of expansion..... | 8.74 x 10 ⁻⁶ in./in./°F. (100°—930°F.) |

Mechanical Properties***

| Temper | Tensile Strength (x 1000 psi) | Yield Strength (x 1000 psi) 0.2% offset | % Elongation in 2 inches | Rockwell Hardness |
|------------|-------------------------------|---|--------------------------|-------------------|
| Annealed | 80 max. | 20/40 | 50/30 | B80 max. |
| Half hard | 80/100 | 60/85 | 25/12 | B80/95 |
| Hard drawn | 100/125 | 80/105 | 12/4 | B95/110 |

Cathaloy A31 is resistant to bowing during assembly and processing. Its recommended use is for any electron tubes subjected to shock and vibration.

Superior Tube
The big name in small tubing

All analyses .010" to 5/8" O.D.
Certain analyses in light walls up to 2 1/2" O.D.

A new series of cathode alloys from SUPERIOR TUBE

CATHALLOY P50 For extremely long life

This is a passive grade nickel alloy designed for extremely long life, reliable electron tubes. Experiments with Cathalloy on electron tubes have shown the low rate of barium evaporation, minimum of sublimation, and freedom from surface impedance required of passive cathodes. Cathalloy is the only passive alloy available commercially in seamless and WELDRAWN* forms. It is also supplied in beam cathode form.

Composition

| | | | |
|----------------|----------|--------------------|----------|
| Carbon..... | .02 max. | Copper..... | .05 max. |
| Barium..... | .01 max. | Carbon..... | .05 max. |
| ..... | .05 max. | Titanium..... | .01 max. |
| Manganese..... | .02 max. | Nickel plus Cobalt | Balance |

Physical Properties

| | |
|--|--|
| Density..... | 0.322 lb./cu. in. |
| Temperature coefficient of resistance..... | .01190 ohm/ohm/°F. (32°—212°F.) |
| Electrical resistivity..... | { 46.06 ohms/Cmf (68°F.) 159.82 ohms/Cmf (990°F.) |
| Temperature coefficient of expansion..... | 8.69 x 10 ⁻⁶ in./in./°F. (86°—932°F.) |

Mechanical Properties***

| | Tensile Strength (x 1000 psi) | Yield Strength (x 1000 psi) 0.2% offset | % Elongation in 2 inches | Rockwell Hardness |
|----------|-------------------------------|---|--------------------------|-------------------|
| Temper | | | | |
| Annealed | 75 max. | 30 max. | 50/33 | B70 max. |
| Hard | 75/95 | 33/75 | 25/12 | B75/90 |
| Drawn | 95/120 | 75/105 | 10/4 | B90/105 |

Cathalloy P50 is used for power output tubes requiring low grid emission and for tubes which need a seamless passive cathode. Cathalloy is especially treated to provide good uniformity.

STANDARD ELECTRONIC PRODUCTS

Superior Tube is the world's leading fabricator of nickel sleeves for indirectly heated oxide-coated cathodes in electron tubes. These parts are manufactured to exact specifications within close tolerances and using a wide variety of different alloys. Superior Tube engineers can work hand in hand with you to develop parts and special characteristics.

Cathode Sleeves. Made in round, oval, elliptical and rectangular shapes. These cathodes are available in:

Seamless—from .010" to .121" O.D. inclusive with wall thicknesses from .0015" to .005" inclusive. Larger diameters and heavier walls can also be produced. May be cut to practically any length desired. Bead (emboss) may be located anywhere except within .040" from the end of the cathode.

Lockseam** Produced from nickel strip especially rolled for the purpose. From .040" to .185" O.D. inclusive with wall thicknesses from .0021" to .0035". Lengths are from 9 mm to 50 mm inclusive. Vertical and circumferential beads permissible.

Disc Cathode. Superior is now ready to offer to the industry a new disc cathode for use in guns for color TV picture tubes. This is smaller in design than the present assembly which has been used so successfully in monochrome guns for the past eight years. In addition to the two big advantages of the present type disc cathode, namely choice of materials and close control of the E dimension (distance from the top of ceramic to top of emission cap), the new assembly has the following advantages:

1. The cathode surface area is reduced, which means less power input.
2. Lower heat radiation due to less power, which means constant temperature and cooler continual operation.
3. A smaller shank and emission cap, which means better transmission of electrons to the TV screen.
4. The smaller guns which are now possible permit the manufacturer to bring the guns closer together in the mount. This means better control of the deflection of the electron beams.

Electronics Division, Superior Tube Company
 14 Germantown Ave., Norristown, Pa.
 Please send me technical information and literature on products checked below.

- CATHALLOY A30 Standard Cathode and anode materials
- CATHALLOY A31 Glass sealing alloys
- CATHALLOY P50 Nickel & Nickel alloy tubing

Name.....

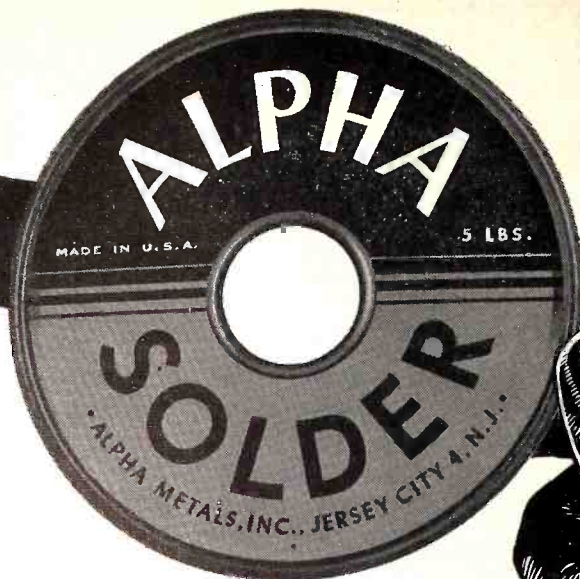
Department.....

Company.....

Street.....

City..... Zone..... State.....

PRODUCTION MEN PREFER



CEN-TRI-CORE
 "ENERGIZED or PLASTIC"
ROSIN-FILLED SOLDER

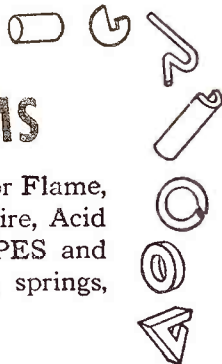
Standard for Television, Radio and fine Electronic and Electrical work. Non-corrosive, melts faster, more joints per pound, insured continuity of flux. Available in 6 different flux percentages. Meets Federal Specifications.

*foremost
 in
 Quality*

the mighty midgets

SOFT-SOLDER PREFORMS

Designed for YOUR application. For Flame, oven or induction heating. Solid Wire, Acid or Rosin Core. ALL SIZES, SHAPES and ALLOYS...rings, washers, pellets, springs, discs and other shapes.



**SPECIALISTS IN
 SOLDERS AND FLUXES
 FOR OVER 50 YEARS**

**SOLDERS FOR
 PRINTED CIRCUITRY**

For dip soldering copper, solder plated and gold systems a 60% tin or a 63% tin alloy is recommended. For silver containing systems a silver bearing alloy is recommended to prevent silver take-up by the solder bath.

**SOLDERS FOR LOW
 TEMPERATURES — INDIUM**

INDIUM pellets in all sizes. Made of pure indium and tolerances can be closely held. Indium pellets are most useful in Transistors, Resistors and Junction Resistors of all types, where very low temperatures are required. Alpha also makes solder pellets of all alloys for the soldering of GERMANIUM and SILICON DIODES.



EXTERNAL FLUXES

for all soldering applications

**ROSIN, ACTIVATED ROSIN,
 GENERAL PURPOSE AND
 STAINLESS STEEL FLUXES**

Consult us on YOUR Soldering Problems!

Trained Field Engineers are always available to assist YOU.



ALPHA METALS, INC.

59 WATER STREET

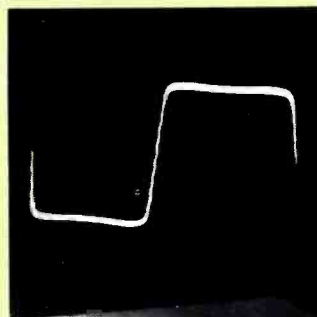
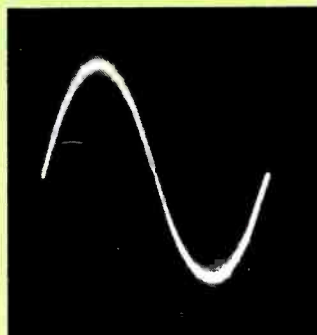
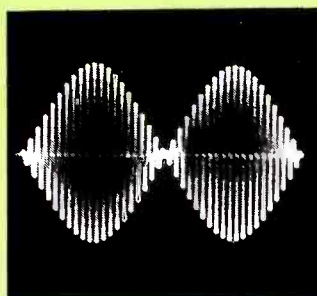
OTHER ALPHA PRODUCTS

- LAMP FLUX CORE • SOLID WIRE
- BAR • RADIATOR and BODY
- FOIL • RIBBON • PASTE SOLDER
- PRINTED CIRCUIT SOLDERS
- INDIUM PELLETS & ALLOYS AVAILABLE
- UNI-CORE LEAK-PRUF ACID FLUX

JERSEY CITY 4, N. J.



Precision Electronic Systems Instruments



The Servoscope® is designed for testing and analyzing feedback control systems and very low frequency electronic systems. The instrument accepts carriers without adjustment and produces suppressed carrier envelopes sinusoidally modulated over the frequency ranges listed below. For D.C. systems, either sinusoids or square wave signals are available by turning a selector switch. The output frequency and voltage are indicated by direct reading meters. The transfer characteristics, frequency, and transient response of a system may be quickly evaluated in the following manner: The test signal is supplied to the system and also displayed on the Y axis of a D.C. oscilloscope. The oscilloscope can be conveniently switched from Servoscope test signal to system response. A built-in synchronized linear sweep serves as a time base for the X axis of the oscilloscope. Phase measurements are read directly on a dial which shifts the signal with respect to the time base. The attenuation, and transient data are directly available from the oscilloscope pattern.

Frequency Range: Model A—0.1 to 20 cps
Model B—0.15 to 30 cps
Model C—0.3 to 60 cps
Special—From 0.001 cps.

Signal Carriers: Models A and B 50 to 800 cps
Model C 50 to 2000 cps

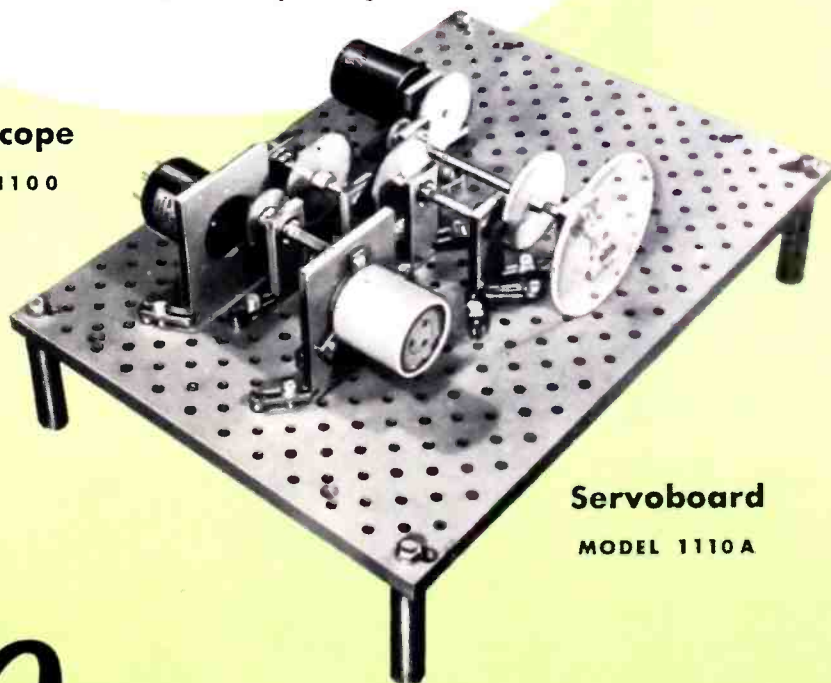
Amplitude: 0 to 20 volts RMS

Reading Method: Pattern shift or Rotating pattern

Phase lead or lag accuracy: 1 degree

Servoscope

MODEL 1100



Servoboard

MODEL 1110A

Servoboard® components are precision experimental mechanical parts available as a kit or as separate items. Parts include various gears, shafts, bearings, bearings, dials, component brackets and mounting hardware. The Servoboard is designed to provide means for quickly synthesizing the electromechanical parts of a control system. The method of clamping provided allows the components to be located in any position.

SERVO

CORPORATION OF AMERICA

New Hyde Park, New York

Precision Electronic Systems Controls



Servo Amplifier—60 cycle—D.C.

MODEL 1120

The Model 1120 Servo Amplifier is a three stage vacuum tube amplifier with full output of 10 watts. The power supply is self-contained and transformerless. No AC line is required. The amplifier is furnished with a built-in motor for convenient operation with a two phase Servo motor. It has a feedback network accepting three single ended inputs. It is designed for connection to servos with multiple feedback loops. It is also available with a chopper to convert D.C. control signals. The power supply has a tapped secondary winding for impedance matching with motors of 300 to 3000 ohms.



Laboratory Equipment

MODEL 1121

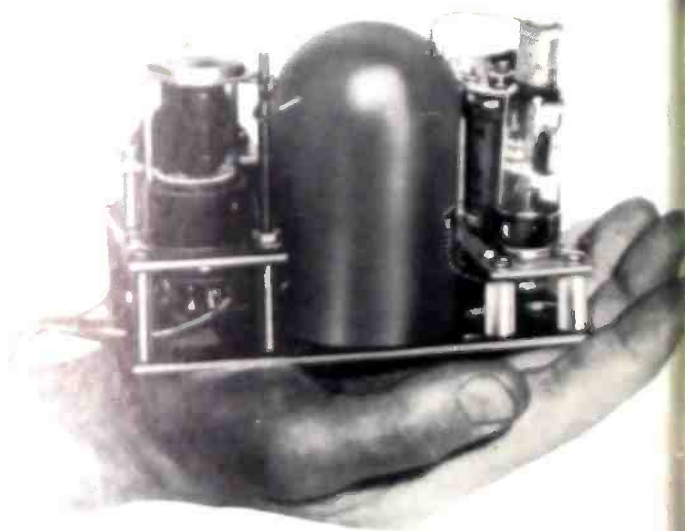
This Laboratory Equipment is designed and developed to provide a complete, reliable, low cost electro-mechanical building block for constructing feedback control systems. With these units, systems can be built with a minimum of time and effort. All units are designed to mount in standard racks with the circuit boards held in place by patch cords. The equipment includes: A.C. and D.C. Servo Analysis and Synthesis Equipment, Vacuum Tube Amplifiers, Magnetic Amplifiers, Servoboards, Servoboard Rack Assemblies, Demodulators, and a Patch Cord Network—Insertion Units, Jack and Patch Cord. The units can be used individually or grouped in a cabinet for use in the laboratory or as specialized equipment.



Servo Amplifier

MODEL 1121

A small, lightweight, and efficient amplifier for 60 cps servo motors. Measures 3 1/4" x 5 1/2" x 3 1/4". Weighs 3 1/4 lbs. Inputs A.C., D.C. or combination. Rated output: 10 watts continuous or 18 watts reversing. Operates from 115 v.a.c. line. 60 cycle model available.



5000 Volt R. F. Power Supply

MODEL 1122

Ideal for applications requiring minimum size and weight. Measures 4" x 2 3/8" x 5 1/2". Weighs 2 lbs. Transformer hermetically sealed in epoxy resin casting. Output: 5000 v.d.c. at 500 microamps. Input: 275 v.d.c. 40 ma. 6.3 v.a.c. 1.0. Operating freq: 30 kc. Ripple: less than 1%.

SERVO CORPORATION OF AMERICA

Precision Electronic Systems Radiation

Servo-therm® Preamplifiers

MODELS 1321 AND 1322

Low noise, low microphonic preamplifiers for amplification of bolometer output permit approach to theoretical detection limits. Model 1321 serves as mount for 1312 bolometer. Model 1322 is potted plug-in type.



INFRARED RADIATION COMPONENTS • SYSTEMS • INSTRUMENTATION

FOR: Industry, Laboratories, Universities, Military

IN: Spectroscopy, Process Control, Analysis, Production Testing



SERVOTHERM

Thermistor Bolometers

MODELS 1312 AND 1340

Small and rugged, yet fast and sensitive infrared radiation detectors from 1-25 microns. Time constant less than 5 milli-seconds. Servofrax and coated Silver Chloride windows standard. Other windows available.



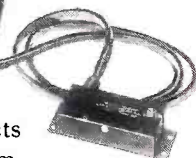
SERVOTHERM

Recorder Amplifier

MODEL 1350

Power Supply

MODEL 1330

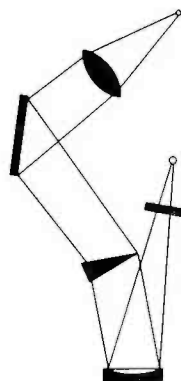


Servo-therm products bolometer and preamplifier constitute a complete infrared detection system. Recorder Amplifier has indicating meter and decade attenuation will drive a 5 ma. recorder. Power Supply furnishes all voltages for Bolometer, Preamplifier, and Recorder Amplifier. Power Supply and Recorder Amplifier used with Pyrometer Heads described below.

SERVOFRAX*

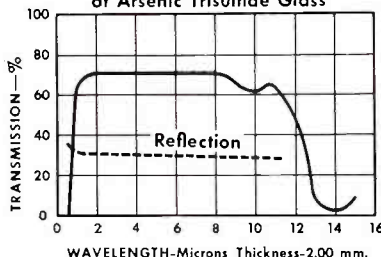
Optical Elements

MADE OF SERVOFRAX
(As₂S₃) GLASS

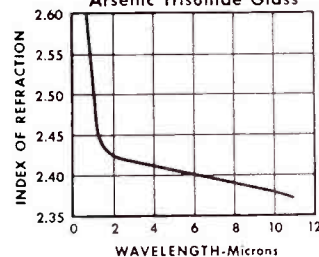


Servofrax is an infrared transmitting glass with physical, chemical, and optical properties superior to other available materials in its transmission range. Windows, lenses, prisms, corrector plates, and other optical elements are available. Write your requirements. Transmission and index of refraction shown below.

Average Transmission and Reflection of Arsenic Trisulfide Glass



Indices of Refraction Arsenic Trisulfide Glass



MODEL 1360B-1

MODEL 1360A-3

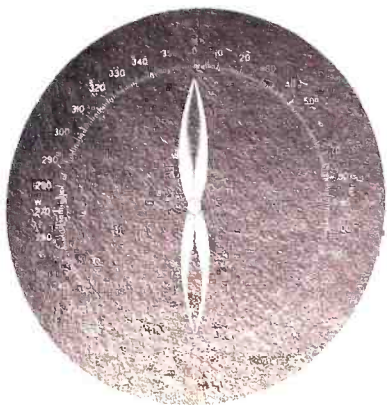


PYROMETER HEADS

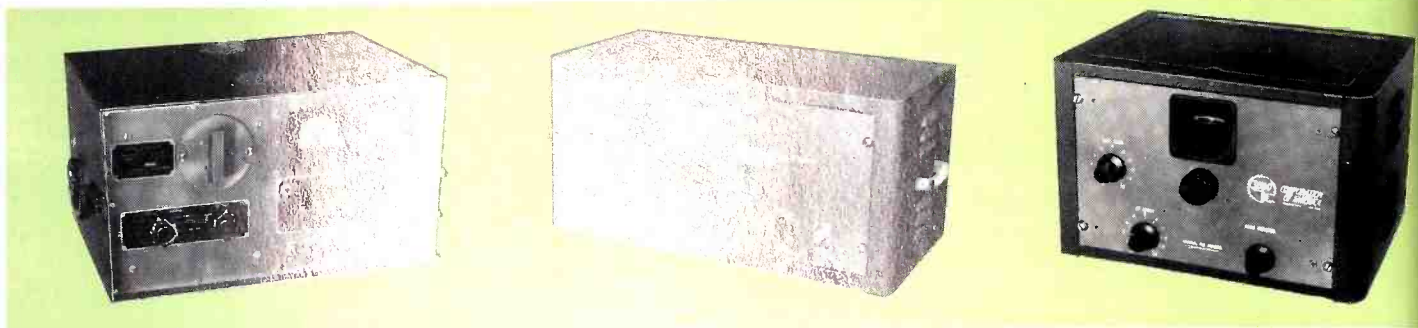
Measure radiation flux in infrared region. When suitably calibrated, serve as remote temperature indicators. Model 1360A-3 highly sensitive, Model 1360B-1 has built-in reference source. Both models have self-contained preamplifiers and synchronous rectifiers. Write for details.

Precision Electronic Systems Radio

**Radio
Direction
Finders
for Every
Application**



| Model | Freq. Range | Antenna | Indicator |
|-------|--------------|--------------------------------|------------------|
| DFG-1 | 0.54 - 30 Mc | Crossed adcock with Goniometer | Aural - Null |
| DFG-2 | 0.54 - 30 Mc | 4-Element spaced aerial | Automatic-Visual |
| DFM-2 | 0.54 - 30 Mc | Crossed loops with Goniometer | Aural - Null |
| DFM-3 | 0.54 - 30 Mc | Crossed loops with Goniometer | Automatic-Visual |
| DFG-4 | 50 - 200 Mc | 8-Element Quasi-Doppler | Automatic-Visual |



Crystal Controlled Signal Generator

Positive crystal control from 100 to 150 Mc; precision zero-beat frequency measurement of output level from 100,000 microvolts; and measurement of modulation free from FM distortion features of the Model 2400 Signal Generator make it possible to produce signals "on-the-head", to know signal sensitivity without guessing, to standardize squelch threshold and other settings. Ideal for testing and calibrating airline radio equipment, radar receivers and TV tuners. Write for product literature and information.

Battery Standard

MODEL BS-100

For accurate comparison, measurement of frequency from 1 Kc to 100 Mc. The crystal-controlled crystal oscillator circuit provides accuracy of one part per million. Permits comparison of any standard of frequency. The Model BS-100 is strong and rugged. Features Standard harmonic outputs of 2, 3, 10, 50 and 100 Mc. Also available for 100 Kc harmonic outputs from 100 Kc to 100 Mc. Frequency range 15 Mc; 25 millivolts; 100 to 100 Mc.

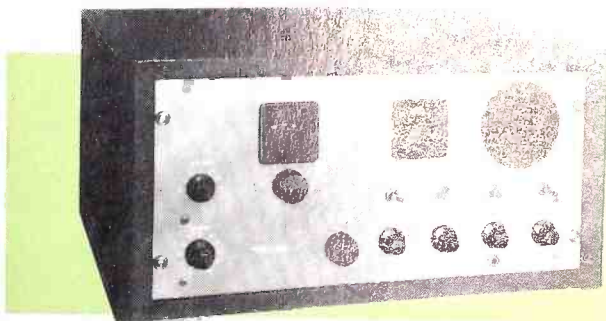
VHF Receiver Converter

MODEL RC 50-200

This converter, in conjunction with a receiver tuned to 30 Mc, provides a general purpose receiver for the 50 to 200 Mc range. Signal sensitivity, frequency stability, and rejection of spurious responses are unusually high. Has an internal 115V, 50/60 cps power supply.

Further inquiry is invited for product applications in the fields of radio, electronics, servomechanisms, metrology and automation.

*TRADE MARK



VHF

Receiver

MODEL R-5200

This is a professional quality A.M. and F.M. receiver covering 50 to 200 Mc. The directly-calibrated 72-inch bandspread dial has all portions of the scale masked off except the frequency region of interest. Sensitivity, selectivity, stability and spurious rejection are outstanding.

SERVO

CORPORATION OF AMERICA

New Hyde Park, New York

Domestic Representatives: **BURLINGAME ASSOCIATES, 103 Lafayette Street, New York 13, N.Y.**
H. A. KITTLESON CO., 7614 Melrose Ave., Los Angeles 46, Calif.

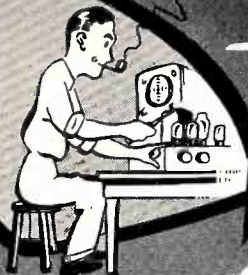
EXPORT REPRESENTATIVE: **ANDREW S. SZUCS, INC., 50 BROAD STREET, NEW YORK 4, N. Y.**

BUILD YOUR OWN

Heathkits

- TEST INSTRUMENTS
- AMPLIFIERS
- RECEIVERS, etc.

- ① Save by ordering direct from manufacturer.
- ② All high quality standard brand components.
- ③ Increased knowledge through actual construction.
- ④ Sound engineering insures excellent performance.
- ⑤ Kit construction is fascinating and enjoyable.



Heathkit MODEL O-9

OSCILLOSCOPE KIT



MODEL O-9

\$59.50

Shipping
Wt. 28 lbs.

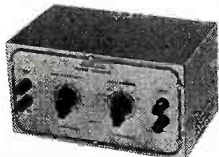
New features unheard of in a kit oscilloscope have been added to the already popular Heathkit series. All top quality components are used including a brand new RCA 5U1 CRT. Ten other first line tubes complete the lineup. Voltage regulation provides a rock steady pattern regardless of normal line voltage variations. A built-in blanking amplifier eliminates the retrace line entirely. Other important advantages are a phasing control, Z axis input, direct connections to the deflection plates, 1 volt peak-to-peak calibration voltage and a calibrated grid screen.

Wiring is simplified by the use of the harness technique which also results in a neat professional appearance. Extremely wide vertical bandwidth allows accurate reproduction of even a 500 KC square wave. Excellent focusing characteristics are made possible by the use of the new RCA 5U1 CRT and a spot shape control. One of the most versatile of test instruments, the Heathkit O-9 Oscilloscope will be invaluable in the radio and TV service shop, as a work project in schools and for all types of circuit investigation work in the laboratory. Its new features make Model O-9 comparable in every way to many commercially built oscilloscopes selling for as much as \$400. Don't pass up this opportunity to add a really fine instrument to your service or experimental lab.

Heathkit

VOLTAGE CALIBRATOR KIT

The use of a Voltage Calibrator will greatly increase oscilloscope usefulness. Provides a convenient method of making peak to peak voltage measurements by establishing a relationship between the unknown wave shape and the Voltage Calibrator. Voltage ranges 0-100 volts peak to peak. The Voltage Calibrator features direct reading scales and a regulated power supply system.



MODEL VC-2

\$11.50

Shipping Wt. 4 lbs.

Heathkit

ELECTRONIC SWITCH KIT

The Heathkit Electronic Switch Kit will further extend scope usefulness by permitting simultaneous observation of two individually controlled traces. Continuously variable switching rates 10 cps to 2,000 cps in three ranges. Will also serve as a square wave generator over the range of switching frequencies.



MODEL S-2

\$23.50

Shipping
Wt. 11 lbs.

Heathkit VACUUM TUBE VOLTMETER KIT

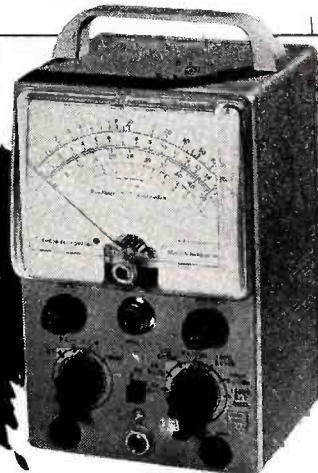
The beautiful new 1953 Heathkit Model V-6 VTVM, the world's most popular kit instrument, now offers many outstanding new features in addition to retaining all of the refinements developed and proven through the production of over 70,000 VTVM kits. The Heathkit VTVM now features extended voltage ranges with 50% greater coverage on the DC range. New 1 1/2 volt low scale provides well over 2 1/3 inches of scale length per volt permitting faster measurements with greater accuracy. AC and DC ranges are 0-1.5-5-15-50-150-500-1500 volts (1,000 volts maximum on AC). Ohmmeter ranges are X1, X10, X100, X1,000, X10K, X100K (1 meg. Measures .1 ohm to 1,000 megohms. Other features are db scale, center scale zero adjust and polarity reversal switch. High 11 megohm input resistance virtually eliminates circuit loading.

The low anti-inflation price of this tremendously popular kit includes all tubes, necessary constructional material, test leads and the construction manual.

MODEL V-6

\$24.50

Shipping
Wt. 6 lbs.



Heathkit AC VACUUM TUBE VOLTMETER KIT

MODEL AV-2

\$29.50

Shipping
Wt. 5 lbs.

A new amplifier type AC VTVM that makes possible those sensitive measurements so essential in laboratory or audio work. Ten voltage ranges covering from .01 RMS full scale to 300 volts RMS full scale. Input impedance 1 megohm with frequency response 20-50,000 cycles. Ten DB ranges from -52 to +52 DB. Four diodes in meter bridge circuit for maximum linearity.



Heathkit

HANDITESTER KIT

The ever popular Handitester is now supplied with a Simpson 400 microampere meter movement. Provides AC and DC voltage ranges 0-10-30-300-1,000-5,000 volts. Ohmmeter ranges 0-3,000 and 0-300,000 ohms. DC current measurements 0-10 and 0-100 milliamperes. A completely self contained portable instrument.

MODEL M-1

\$14.50

Shipping
Wt. 3 lbs.



HEATH COMPANY • Benton Harbor 14, Mich.

HEATHKITS for the ENGINEER

Heathkit VISUAL AURAL SIGNAL TRACER KIT

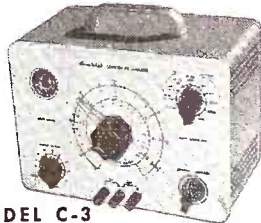


MODEL T-3 **\$23⁵⁰**
Shipping
Wt. 10 lbs.

Designed especially for service applications in AM-SW-FM-TV repair work. RF and audio two channel input. More than adequate sensitivity—new noise locator circuit—calibrated wattmeter—substitution speaker—visual signal indication. Can be used with scope and VTVM, checks phono cartridges, phono mechanisms, microphones, tuners, etc. Let the Heathkit Visual Aural Signal Tracer help you.

Heathkit CONDENSER CHECKER KIT

An instrument designed solely for its particular job. Not a "sideline" or a multiple function instrument. Measures value and quality of unknown condensers and resistors. Capacity range .00001 mfd to 1,000 mfd. Resistance range 100 ohms to 5 megohms. Sensitive electron beam indicator—five polarizing test voltages—safety spring return leakage test switch. An amazingly accurate instrument at this low price.



MODEL C-3 **\$19⁵⁰** Shipping
Wt. 8 lbs.

Heathkit SIGNAL GENERATOR KIT



MODEL SG-8 **\$19⁵⁰**
Ship. Wt. 8 lbs.

The standard service instrument for alignment work. .1 volts output from 160 KC to 110 MC. Calibrated harmonics up to 220 MC. Internal (400 CPS) and external modulation. Pre-calibrated coils for all 5 bands. Good stability and accuracy. All test leads included.

Heathkit GRID DIP METER KIT

One hand operation. 5 pre-wound coils cover 2—250 MC. Controlled sensitivity. Usable as an oscillator or an absorption wave meter. Extra low frequency coils available.



MODEL GD-1B **\$19⁵⁰**
Ship. Wt. 4 lbs.

Heathkit LABORATORY REGULATED POWER SUPPLY KIT



MODEL PS-2 **\$33⁵⁰**
Ship. Wt. 20 lbs.

A regulated variable 160-450 volt DC output power supply for the lab or service shop. Accurate voltage and current measurements with large Simpson meter. AC supply 6.3 volts at 4 amperes—standby switch eliminates warmup time. Low hum content—5 tube circuit. AC and DC output voltages isolated from panel for maximum operational flexibility.

Heathkit RESISTANCE SUBSTITUTION BOX KIT

MODEL RS-1
Ship. Wt. **\$5⁵⁰**
2 lbs.



Choice of 36 switch selected resistance values 15 ohms to 10 megohms. All standard RTMA 1 watt 10% resistors. Buy several for those lab and service applications.

NEW Heathkit 20,000 OHMS PER VOLT MULTIMETER KIT

Here is the solution to all service problems requiring a portable measuring device of high accuracy. 20,000 ohms/volt sensitivity on DC and 5000 ohms/volt on AC. Full scale voltage ranges of 1.5, 5, 50, 150, 500, 1500 and 5000. DC current ranges of 150 microamperes; 15, 150 and 500 milliamperes; and 15 amperes. Resistances are measured from .2 ohms to 20 megohms in 3 ranges and decibels from -10 to +65 db.

Model MM-1 uses standard commercially available batteries and is not affected by strong RF fields as encountered in and near transmitting equipment. 1% precision resistors on a very easily wired ring type range switch and a highly accurate Simpson 50 microampere meter fully qualifies the Heathkit Multi-meter for close tolerance laboratory and service work. The meter movement is placed in a recessed position for maximum non-glare readability. The kit includes the attractive black bakelite cabinet, 2 color meter scales, test leads, batteries and all other necessary components. Overall cabinet size is 5½" wide x 4" deep x 7½" high.



MODEL MM-1 **\$26⁵⁰**
Ship. Wt. 6 lbs.

Heathkit TUBE CHECKER KIT



MODEL TC-2 **\$29⁵⁰**
Shipping Wt. 12 lbs.

Checks overall tube quality, filament continuity, and individual elements for shorts and opens. Features chart illumination, harness type wiring, and large 3-color meter scale.

Portable Model TC-2P at \$34.50. Wt. 14 lbs. No. 91-8 Cabinet only at \$7.50. Wt. 7 lbs. No. 355 TV Picture Tube Adapter at \$4.50. Wt. 1 lb.

Heathkit LABORATORY GENERATOR KIT



MODEL LG-1 **\$39⁵⁰**
Ship. Wt. 16 lbs.

A professional laboratory instrument designed for extreme accuracy in frequency and output level. Colpitts oscillator operates in 5 ranges from 150 KC to 30 MC. Panel meter calibrated in output voltage and percent of modulation. Output in excess of .1 volts. Features complete shielding of oscillator, buffer and attenuator sections; regulated power supply and 50 ohm output cable. Comparable instruments priced many times higher than the cost of this new kit.

Heathkit AUDIO WATTMETER KIT



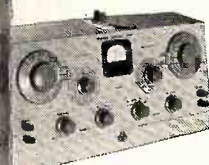
MODEL AW-1 **\$29⁵⁰**
Ship. Wt. 6 lbs.

Measure output power levels directly with the Heathkit Audio Wattmeter. Flat response to frequencies from 10 CPS to 250 KC. Full scale ranges of 5 MW, 50 MW, 500 MW, 5 W and 50 W. Db calibration from -10 to +48. Uses non-inductive built-in load resistors providing impedances of 4, 8, 16 and 600 ohms. Meter bridge uses 4 germanium diodes.

HEATH COMPANY • Benton Harbor 14, Mich.

SERVICEMAN • AMATEUR • STUDENT

Heathkit IMPEDANCE BRIDGE KIT



MODEL IB-2
\$59.50
Ship. Wt. 15 lbs.

Modern design with built-in 1 KC generator for AC measurements. A choice of the Wheatstone, Maxwell, Hay or capacitance comparison bridges for measuring resistance, capacitance, inductance, dissipation factor and storage factor. 1/2% resistors and precision mica condensers provide maximum accuracy. Completely AC operated.

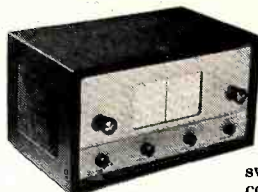
Heathkit DECADE RESISTANCE KIT



MODEL DR-1
\$19.50
Ship. Wt. 4 lbs.

Individual switch selection of twenty 1% precision resistors in 1 ohm steps from 1 to 99,999 ohms. Sturdy ceramic wafer switches featuring silver plated contacts and smooth, positive detent action.

Heathkit COMMUNICATIONS RECEIVER KIT



MODEL AR-2
\$25.50
Ship. Wt. 12 lbs.
(Less Cabinet)

Full coverage from 550 KC to 35 MC on 4 bands, with good sensitivity and selectivity. Features electrical bandspread, BFO, headphone jack, slide rule dial with ham band identification, RF gain control, noise limiter and phone-standby-CW switch. Top quality, high gain components used throughout. Pre-wound coils in a shielded turret assembly and a transformer operated power supply assure trouble-free performance.

Cabinet available separately. No. 91-10. Shipping wt. 5 lbs. Price \$4.50.

Heathkit AUDIO OSCILLATOR KIT

MODEL AO-1
\$24.50
Ship. Wt. 11 lbs.



Features sine or square wave coverage from 20-20,000 cycles in 3 ranges. Variable 10 volt output level at 600 ohms impedance. Thermistor controlled linearity—precision multiplier resistors—distortion less than .6%. An outstanding instrument value at this amazing low price.

Heathkit Q METER KIT



MODEL QM-1
\$44.50 Ship. Wt. 14 lbs.

A typical Heathkit invasion of the laboratory instrument field. Here is the first successful low priced Q meter ever offered in kit form. Oscillator supplies RF in the range of 150 KC to 18 mc. Reads Q directly on calibrated meter scales. Measures Q of condensers, RF resistance and distributed capacity of coils. Calibrate capacitor with range of 40 mmf to 450 mmf with vernier ± 3 mmf. All measurements made at the operating frequency.

Heathkit AMATEUR TRANSMITTER KIT



MODEL AT-1
\$29.50
Ship. Wt. 16 lbs.

Power input up to 35 watts on 80, 40, 20, 15, 11 and 10 meters. Can be crystal or VFO excited. Complete with modulator input socket and VFO power output provisions. Other desirable features are good shielding, AC line filter, key click filter, standby switch and a 52 ohm coaxial output. Model AT-1 is AC operated and is suitable as an exciter for a higher powered rig. Complete with full instructions for construction and use.

Heathkit TELEVISION SWEEP GENERATOR KIT



MODEL TS-3
\$44.50
Ship. Wt. 18 lbs.

Simplify your TV alignment jobs with the new Heathkit TS-3. Full coverage on fundamentals from 4 MC to 220 MC at an output of well over 100,000 microvolts... Automatic blanking and wide range phasing. A triple marker system ranges from 19 MC to 180 MC using a Colpitts oscillator plus the 4.5 MC crystal controlled oscillator for check points (crystal finished). Provisions are also made for using an external marker. Featured is the new sweep system, using an *INCREDUCTOR changeable inductor. Sweep width is variable from 0 to 12 MC at the lower frequencies and increases to 0-50 MC at the highest... Other advantages are power supply regulation, constant RF output level, independent marker and RF output control circuits, low impedance output and properly terminated output cables. The construction manual is complete in all detail and with a reasonable amount of Model TS-3 will serve faithfully for many years to come.

*Trademark, C.G.S. Laboratories, Stamford, Connecticut

Heathkit DECADE CONDENSER KIT

Switch selected 1% silver mica precision condensers providing capacity range of 100 mmf. to 0.111 mfd. in steps of 100 mmf.

MODEL DC-1
\$16.50

Shipping Wt. 4 lbs.



Heathkit AUDIO GENERATOR KIT

A new extended range 18 cycles — 1 megacycle audio instrument at a remarkably low price. Five continuously variable output ranges—600 ohm output impedance—low distortion figure, less than .4% from 100 cps through audible range.



MODEL AG-8
\$29.50
Ship. Wt. 11 lbs.

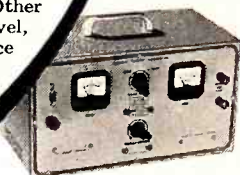
Heathkit BAR GENERATOR KIT



Small, compact and easy to use, Model BG-1 supplies horizontal or vertical bars for TV linearity adjustments. Output cable clips directly to the TV receiver antenna terminals.

MODEL BG-1
Ship. Wt. 6 lbs. **\$14.50**

Heathkit BATTERY ELIMINATOR KIT



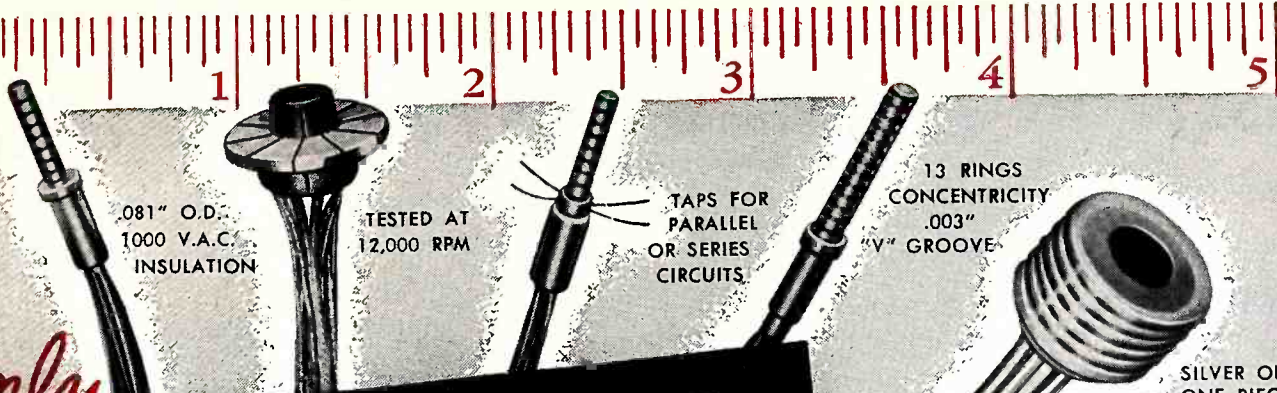
MODEL BE-4
Ship. Wt. 18 lbs. **\$31.50**

6 or 12 volt operation with current and voltage constantly monitored. Double protection with a fused transformer and automatic overload relay. Well filtered output and all heavy duty components. Designed for auto radio repair and as a storage battery charger.

WRITE FOR Free CATALOG

New 40 page 1954 Catalog lists all kits, specifications, schematics and latest price information.

HEATH COMPANY • Benton Harbor 14, Mich.



.081" O.D.
1000 V.A.C.
INSULATION

TESTED AT
12,000 RPM

TAPS FOR
PARALLEL
OR SERIES
CIRCUITS

13 RINGS
CONCENTRICITY
.003"
"V" GROOVE

SILVER ON
ONE PIECE
NYLON FORM

RINGS
ANCHORED
IN DOVETAIL

8 FLAT
RINGS
WITHIN
5/8" RADIUS

Only

ELECTRO TEC

PRECISION-MINIATURE

slip ring assemblies AND COMMUTATORS

offer all these advantages:

EXCLUSIVE* ELECTRO TEC TECHNIQUES

*insure closer tolerances, absolute uniformity,
and the ultimate in miniaturization*

Electro Tec units are the product of an exclusive manufacturing technique that results in accuracy unattainable by conventional fabricating methods. In this process a plastic is moulded around the wire leads. Accurate machining reduces this blank to the proper shape, complete with grooves. Hard silver is deposited into the grooves by electroplating to produce the required rings. Final machining insures concentricity and dimensional accuracy. The result is one-piece, unitized construction with conducting rings of 60 to 70 Brinell hardness.

Diameters of these assemblies range from .045" to 24" cylindrical or flat. Cross-sections may range from .005" to .060" or more. Rings are polished to a jewel-like finish and can be held to 4 micro-inches or better. Even the smallest sizes withstand a 1000 V.A.C. breakdown test. Most types easily withstand rotational speeds up to 12000 rpm.

**ELECTRO TEC Assemblies are Specified by the Nation's
Leading Precision Instrument and Equipment Manufacturers for Proven
Greater Dependability, Longer Life, Smoother Functioning.**

The uniformly superior performance of Electro Tec slip ring and commutator assemblies in thousands of industrial and governmental applications has resulted in wide adoption of these component units by most leading manufacturers of precision instruments and equipment. Although these products provide improved performance and extra dependability, prices are strictly competitive. Write today for fully illustrated literature.

- ONE PIECE, UNITIZED CONSTRUCTION
- ABSOLUTE MINIMUM TORQUE FRICTION
- DIAMETERS FROM .045" TO 24.0"
- MINIMUM 1000 V.A.C. HI-POT INTER-CIRCUIT
- UNIFORMLY HARD SILVER RINGS PLATED INTO GROOVES ON PRECISION MACHINED ONE PIECE PLASTIC FORM
- SPECIAL SURFACE DEPOSITS PREVENT TARNISH, MINIMIZE FRICTION, BRUSH NOISE AND PRACTICALLY ELIMINATE WEAR

ELECTRO TEC CORPORATION

SO. HACKENSACK

NEW JERSEY



PRODUCTS OF PRECISION CRAFTSMANSHIP BY A NEW AND REVOLUTIONARY PROCESS




*PATENTS PENDING

BUSS Fuses

FUSETRON dual-element Fuses and Fuse Holders

for Protection of Radios, Instruments and Electronic Equipment

FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.

 Formerly called 8AG
Dimension $\frac{1}{4} \times 1$ inch, Glass tube.
Provide high speed action necessary to protect instruments.
Test specification—carry 100%, open at 200% in 5 seconds.
AGX are listed as approved by Underwriters' Laboratories.
Voltage Symbol Amperes
or 250 less MJB $\frac{1}{500}, \frac{1}{200}, \frac{1}{100},$ or $\frac{1}{32}$
" MJW $\frac{1}{16}$ or $\frac{1}{8}$
" AGX $\frac{1}{8}, \frac{1}{4}, \frac{3}{8}$ or $\frac{1}{2}$
125 or less AGX $\frac{3}{4}, 1, 1\frac{1}{2}$ or 2
The MJW fuses are special low resistance fuses.

BUSS FUSES — SFE STANDARD

Fuses of different amperages are of different lengths — to make it impossible to insert too large a size — thereby preventing over-fusing.



Glass tube — diameter $\frac{1}{4}$ inch. Length as per table below.

| Voltage | Symbol & Amperes | Length Inches | Pounds per 100 |
|------------|------------------|----------------|----------------|
| 32 or less | SFE4 | $\frac{5}{8}$ | .70 |
| " | SFE6 | $\frac{3}{4}$ | .71 |
| " | SFE9 | $\frac{7}{8}$ | .72 |
| " | SFE14 | $1\frac{1}{8}$ | .77 |
| " | SFE20 | $1\frac{1}{4}$ | .83 |
| " | SFE30 | $1\frac{1}{2}$ | 1.05 |

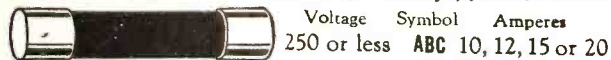
BUSS GLASS TUBE FUSES, $\frac{1}{4} \times 1\frac{1}{4}$ inch



| Voltage | Symbol | Amperes |
|-------------|--------|--|
| 250 or less | AGC | $\frac{1}{8}, \frac{1}{4}, \frac{3}{8}, \frac{1}{2}, \frac{3}{4}, 1, 1\frac{1}{2}, 2$ or 3 |
| " | MTH | 4, 5, 6 or 8 |
| 32 or less | AGC | 5, 6, $7\frac{1}{2}, 10, 15, 25$ or 30 |

20 ampere size is an SFE 20 fuse.

BUSS CERAMIC TUBE FUSES, $\frac{1}{4} \times 1\frac{1}{4}$ inch



| Voltage | Symbol | Amperes |
|-------------|--------|------------------|
| 250 or less | ABC | 10, 12, 15 or 20 |

FUSETRON FUSES, $\frac{1}{4} \times 1\frac{1}{4}$ inch



Glass tube — Dual-Element type

LONG TIME-LAG OR SLOW BLOWING TYPE

These fuses avoid needless blows from starting currents or surges. They have a fuse link which operates only on very high overloads or short-circuits — they have a thermal cutout which functions on low overloads — the thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% in 1 hour.
Approximate blowing time: at 200% load MDL 25 sec. MDX 12 sec.
at 300% " " 8 " " 3 "
at 500% " " 3 " " $\frac{1}{2}$ "

125 and 250 volt sizes listed as approved by Underwriters' Laboratories.

Shipping weight 0.9 lbs. per 100.

| Voltage | Symbol | Amperes |
|-------------|--------|--|
| 250 or less | MDL | $\frac{1}{100}, \frac{1}{32}, \frac{1}{16}, \frac{1}{10}, 1, 1\frac{1}{2}, 2, 3, 4, 5, 6, 7, 8, 10, 15, 20, 25, 30,$ $\frac{1}{10}, \frac{1}{2}, \frac{6}{10}, \frac{8}{10}$ or 1 |
| 125 or less | MDL | $1\frac{1}{4}, 1\frac{1}{2}, 2, 2\frac{1}{2},$ or $2\frac{3}{4}$ |
| " | MDX | $3\frac{3}{4}, 4, 5, 6\frac{1}{4}$ or 7 |
| 32 or less | MDL | $3\frac{3}{4}, 4, 5, 6\frac{1}{4}, 8, 10, 15, 20, 25$ or 30 |

PIG-TAIL FUSES



Pig tail fuses are available in both ordinary and FUSETRON dual-element fuse types.
Write for full information.

BUSS FUSE CLIPS & CLIP ASSEMBLIES

for $\frac{1}{4}$ inch Fuses (SFE 4, 6, 9, 14, 20 AGX, AGC, ABC, MDL, MDX, MJB, MJW, MTH fuses).



Spring bronze clips are made of Herculyon. This metal gives great gripping strength and retains spring under adverse conditions.



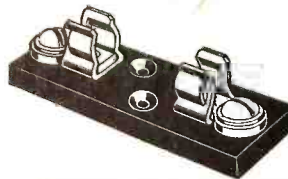
Beryllium copper clips combine low electrical resistance with great gripping strength. This means cooler operation of clips and fuse.
4548 Spring bronze clip, nickel plated.
4592 Beryllium copper clip, Silver plated.

Assemblies consist of clip, terminal screw, brass terminal, and mounting screw.

4431 uses No. 4548 clip — described above.

4432 uses No. 4592 clip — described above.

BUSS FUSE BLOCKS



Blocks are made of bakelite with mounting holes. Clips are of spring bronze.

Fuse blocks are made in many sizes and types.

Tell us your requirements.

BUSS PANEL MOUNTED HOLDERS

for $\frac{1}{4}$ inch Fuses



Holders are inserted through hole in panel and locked in place by nut on holder. Can be used on panels up to $\frac{5}{16}$ thick.

Bayonet type knob requires only quarter turn to remove fuse. No screw driver is needed.

Normal current carrying capacity: 15 amperes.
HJM for $\frac{1}{4} \times 1$ inch fuses (AGX, MJB, MJW, SFE 14)
HKP for $\frac{1}{4} \times 1\frac{1}{4}$ " " (ABC, AGC, SFE20, MDL, MDX, MTH)

IN-THE-LINE HOLDERS

for $\frac{1}{4}$ inch fuses

These holders are for mounting fuse in wire. Holders consist of body and bayonet type knob — two contacts ready to be staked on ends of wire — a pressure spring that is used under contact in base of holder.

Holders can also be mounted in panel up to $\frac{5}{16}$ inch thick by means of a No. 9969 Spring nut (not furnished). Flat spot on holder permits it to be locked against rotation.

Normal current carrying capacity: 15 amperes.

Shipping weight, holders: 4 lbs. per 100.

| Symbol | Description |
|--------|---|
| HDI | for $\frac{1}{4} \times 1$ inch fuses (AGX, MJB, MJW, SFE 14) Takes No. 18 or smaller wires. |
| HDI-A | for $\frac{1}{4} \times 1\frac{1}{4}$ inch fuses (ABC, AGC, MDL, MDX, MTH, SFE 20) Takes No. 18 or smaller wires. |
| HDI-B | for $\frac{1}{4} \times 1\frac{1}{4}$ inch fuses (as above) Takes No. 14 or 16 wires. |

No. 9969 Spring nut for panel mounting above holders.

Holder-and-Fuse Assemblies

Assembly consists of holder, fuse and 19 inch loop of No. 14 wire already staked and soldered to terminals.



Offer simplest way to install protection. Wire can be cut to give leads of desired length. A spring nut, furnished with holder, can be used to mount holder on panel up to $\frac{3}{32}$ inch thick.

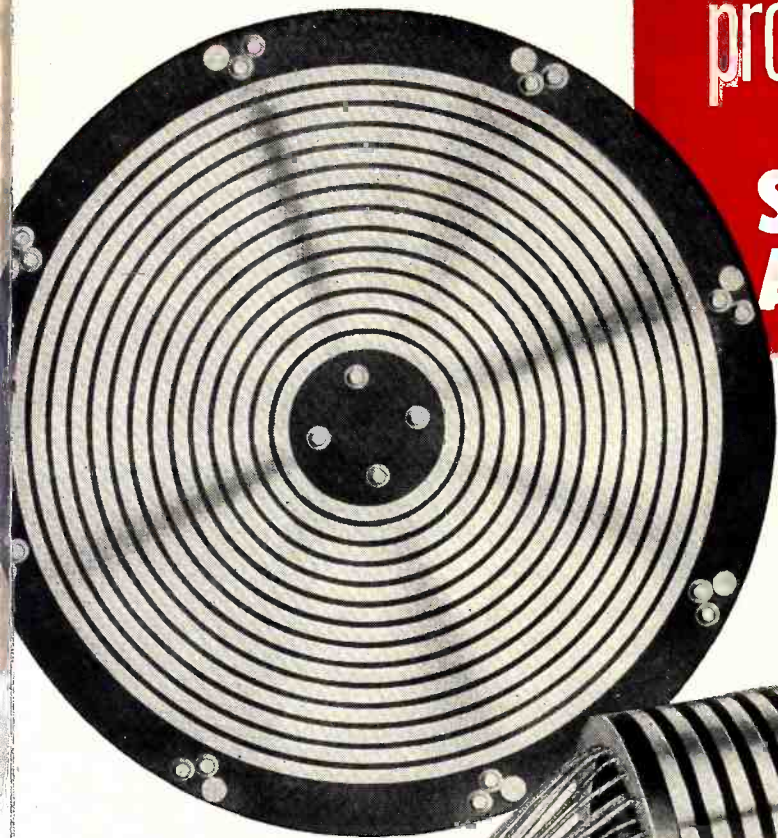
| | |
|-----|---------------------------|
| HRJ | Complete with SFE 20 fuse |
| HRI | Complete with SFE 14 fuse |
| HRH | Complete with SFE 9 fuse |

GET FULL INFORMATION

Ask for bulletin SFB on Small Dimension
BUSS FUSES — FUSETRON FUSES — HOLDERS
BUSSMANN MFG. CO., University at Jefferson, St. Louis 7, Mo.
Division McGraw Electric Company

Now available

the revolutionary
ELECTRO TEC
 process* for your
LARGE
SLIP RING ASSEMBLIES



featuring

- LOWER COST • CLOSER TOLERANCES
- ONE-PIECE CONSTRUCTION • JEWEL-LIKE FINISH • UNIFORM RING HARDNESS
- REDUCED WEIGHT



Now a Complete Service
 in all sizes of Slip Ring Assemblies

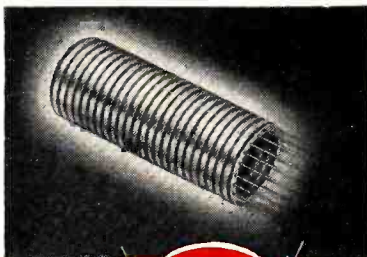
an assembly with 14 concentric, hard silver electro deposited machined plastic rings. Dovetail locks in place. Mated blank insures accuracy. Diameter approx. 11", thickness approx. 5/16".

→ Cylindrical assembly with 25 rings. Three wide rings accommodate large contact area brushes for high current capacity. Length 14", O.D. approx. 5 3/8".

an assembly with 30 rings of various widths to accommodate various contact requirements. Diameter approx. 4-5/16", designed for easy mounting.



Cylinder type assembly approx. 3 3/4" long with 24 hard silver rings. 1 5/8" O.D. with thickness less than



ELECTRO TEC is now tooled up, with new expanded facilities for production of large Slip Ring Assemblies to exact customer specification. Sizes range up to 24" in diameter, either cylindrical or disc type.

The exclusive ELECTRO TEC PROCESS*—the electro-deposition of hard silver rings into an accurately machined plastic blank—consistently yields a high degree of dimensional accuracy, excellent concentricity, and a jewel-like ring finish. This process also eliminates expensive tooling and mold charges, frequently lowers costs to 30% of other methods of manufacture. The silver rings are uniformly hard for long life—75-90 Brinell.

ELECTRO TEC one-piece construction precludes dimensional variation due to accumulated errors. The plastic base is fully cured before rings are plated into it, thus preventing separation of base material from the rings.

ELECTRO TEC LARGE SLIP RING Assemblies are widely used in Radar Equipment, Fire Control Systems, Test Tables and many other critical applications. Light weight combined with rugged durability recommends their use in airborne applications.

Every user knows the ELECTRO TEC reputation for quality and superiority in miniature and sub-miniature slip ring assemblies.

*PATENTS PENDING

Our Engineering Department is available for consultation on any of your slip ring problems without obligation.

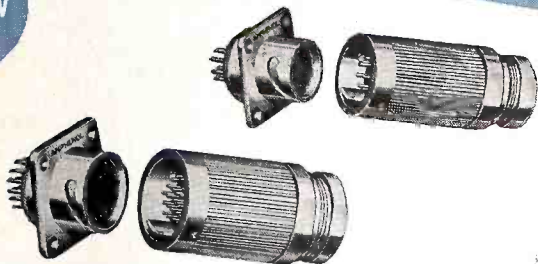


ELECTRO TEC CORPORATION
 SOUTH HACKENSACK • NEW JERSEY

Quality Components for the Radio-Electronics Industry

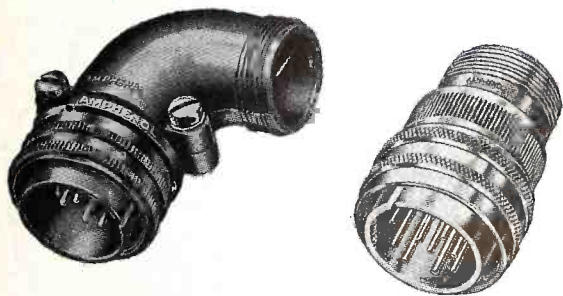
by **AMPHENOL**

new



165 SERIES miniature connectors

These new miniature AN-type connectors are obtainable in two connector sizes and six contact configurations. 165 series connectors, besides their very small size, are pressure-proof and completely waterproof.



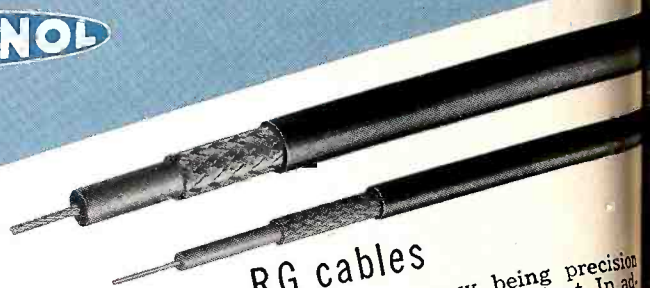
A N connectors

A complete selection of plugs, receptacles and fittings, a wide variety of insert contact arrangements. AMPHENOL AN connectors have many unique features, including gold-plated contacts and famous 1-501 blue dielectric material.



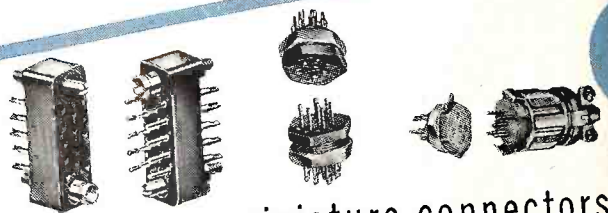
RF connectors

Made in strict accordance with government specifications, AMPHENOL RF connectors are the most efficient link between coaxial cables now available. Series include N, BN, HN, BNC, C, LC, Push-on, and splices, fittings and adapters.



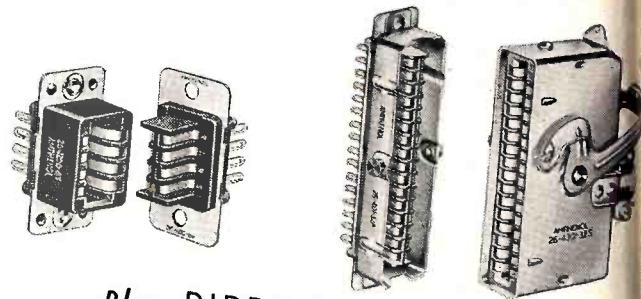
RG cables

Ninety RG-/U coaxial cables are now being precision manufactured in AMPHENOL's up-to-date cable plant. In addition, AMPHENOL makes special cables, including aluminum jacketed ALJAK, miniature, triaxial, and low-noise.



26 SERIES miniature connectors

Miniature connectors with 5, 7 or 9 contacts, rack & panel or hex nut sizes. Hood and clamp hardware available for hex nut connectors. Fine materials, electrical efficiency, makes the 26 series ideal in miniaturized application.



Blue RIBBON connectors

Famous AMPHENOL blue Ribbon connectors now available with pin or barrier polarization. Keyed shells and latch-lock cans are available for the barrier connectors. Both types have gold-plated contacts, AMPHENOL blue dielectric.

new



Qwik microphone connectors

Modern design makes the new QWIKs the most attractive, most efficient microphone connectors for every audio application. QWIKs are lightning-fast to use—plugs click-in to receptacles, disconnection is easily made with one hand.

AMPHENOL

AMERICAN PHENOLIC CORPORATION
chicago 50, illinois

VICTOREEN ELECTRONIC COMPONENTS

HI-MEG RESISTORS

Victoreen Hi-Meg resistors are designed for applications requiring extreme stability and accuracy. Elements are vacuum sealed in glass tubes then aged for lasting stability.

SPECIFICATIONS

Resistance R.T.M.A. Values.... 10^6 to 10^{12} ohms

**Tolerance from Specified Value $\pm 10\%$
 Temperature Coefficient $-0.15\%/^{\circ}\text{C}$
 Voltage Coefficient $-0.03\%/V$
 Maximum Voltage 1000 V
 *Higher Values to Order
 **Also available within $\pm 5\%$ or $\pm 2\%$ of specified value up to 5×10^{12} ohms.

CARBON DEPOSITED RESISTORS

Carbon deposited resistors, sealed in glass and with inert gas are available for applications where long term accuracy and stability are required. Impervious to mechanical damage, humidity, deviations of pressures, fumes, etc.,

they are capable of operating up to voltages of 15 KV or wattages up to 10 watts. They can be furnished in 2 - 5 - 10% tolerances. Temperature coefficient averages 0.0005 with voltage coefficient almost nil.

VOLTAGE REGULATOR TUBES

Current voltage regulator tubes are used to provide a wide range of battery-operated R.F. generator high voltage power supplies, voltage limiting, voltage limiting, coupling in D.C. amplifiers, and almost all voltage limiting applications.

Tubes meeting JAN or MIL specifications are supplied on special order.

GENERAL SPECIFICATIONS

Many standard voltages: 50 to 30,000 volts (nominal)

D. C. starting voltages: About 5% above nominal
 D. C. regulated voltage tol. from nominal: Varies ± 2.0 to $\pm 5.0\%$

Voltage regulation: $\pm 1.5\%$

Maximum rating regulation current: Varies 100 to 1000 μa (except glow tubes to 250 MA)

Regulator tubes for operating 18 KV, 25 KV and 27 KV, designed for regulation and protection of the kinescope in color and chrome TV are available in quantity. Regulation will be made on special orders for any starting point between 50 and 30,000 volts.

SUBMINIATURE ELECTROMETER AND D. C. AMPLIFIER TUBES

Type 5800 tetrode and the type 5886 pentode 10 mil filament power subminiature tubes are designed specifically for electrometer applications where low grid current is a paramount consideration.

Applications where high transconductance is desired.

The type 5828 is a conventional low filament power triode.

Type 5803 is a low filament power subminiature triode designed for electrometer applications.

Other subminiature types include the 5799 high vacuum half wave rectifier and the VX-10 thermal time delay relay.

SPECIFICATIONS

| TUBE TYPE | DESIGNATION | TYPICAL SERVICE | PLATE VOLTS (volts) | ACCEL. GRID VOLTS (volts) | CONTROL GRID VOLTS (volts) | PLATE CURRENT (μa) | CONTROL GRID CURRENT (amps) | Mu | Gm** (μmhos) |
|-----------|-------------|-----------------|---------------------|---------------------------|----------------------------|---------------------------------|-----------------------------|------|---------------------------|
| 5800 | Tetrode | Electrometer | +4.5 | +3.4 | 3.0 | 12 | 3×10^{-15} | 1 | 15 |
| 5886 | Pentode | Electrometer | +12 | +4.5 | 2.0 | 6 | 3×10^{-15} | — | 14 |
| 5886 | (Connected) | Electrometer | +10.5 | — | 3.0 | 200 | 2×10^{-13} | 2 | 160 |
| 5828 | Triode | D.C. Amplifier | +45 | — | -1.0 | 250 | 10^{-9} | 17.5 | 450 |
| 5803 | Triode | Electrometer | +7.5 | — | -1.7 | 100 | 2×10^{-14} | 2.0 | 150 |

filament 1.25 volts at 10ma. *JAN tubes available except for 5828.
 Higher Gm may be obtained at the expense of high Ic by operating at higher Ib.

COUNTER TUBES

Victoreen Counter tubes are a series of quenching geiger tubes designed to cover the general field of beta, gamma, X-ray and alpha ray measurements. Some meet the needs of laboratory reliability and accuracy, others are

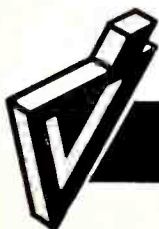
adapted to the more rugged requirements of portable operations.

A convenient socket, our part No. 380-26, is available for probe or chassis mounting of the IB85 and 6306 tubes.

SPECIFICATIONS

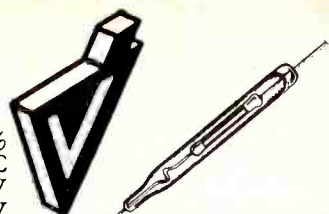
| TUBE TYPE | DESCRIPTION | OPERATING VOLTAGE (volts) | THRESHOLD VOLTAGE (volts) | PLATEAU LENGTH (volts) | PLATEAU SLOPE PER 100 v (%-100V) | ACTIVE LENGTH (inches) | WALL (mg-cm ²) | LIFE (counts) | TYPE BASE |
|-----------|--|---------------------------|---------------------------|------------------------|----------------------------------|------------------------|----------------------------|-----------------|---------------|
| IB85 | Beta-Gamma Aluminum Wall | 900 | 800 | 200 | 3 | 2.75 | 30 | 10^9 | Coaxial A1-A2 |
| IB86 | Gamma Ray Glass Wall | 300 | 280 | 60 | 10 | 2.5 | 200 | 5×10^7 | Tinned Leads |
| IB87 | Gamma Ray Glass Wall | 900 | 850 | 100 | 10%/50v | 0.5 | 200 | 10^8 | Tinned Leads |
| IB88 | Gamma Ray Glass Wall | 300 | 275 | 50 | 30%/50v | 0.5 | 200 | 5×10^7 | Tinned Leads |
| 6306 | Beta-Gamma Bismuth Lined Aluminum Wall | 900 | 800 | 150 | 5 | 2.75 | 30 | 10^8 | Coaxial A1-A2 |

Consult our engineering staff on applications of these components.

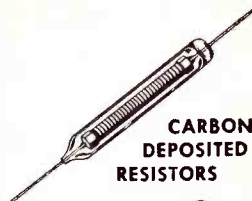


The Victoreen Instrument Co.

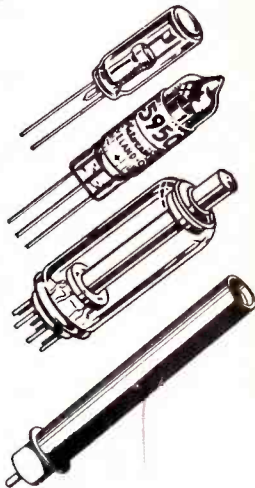
COMPONENTS DIVISION: 3800 PERKINS AVE. • CLEVELAND 14, OHIO



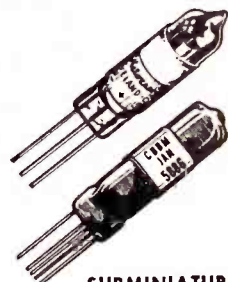
HI-MEG RESISTORS



CARBON DEPOSITED RESISTORS



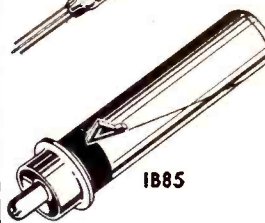
VOLTAGE REGULATORS



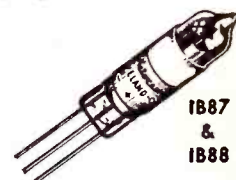
SUBMINIATURE ELECTROMETER AND D.C. AMPLIFIER TUBES



IB86

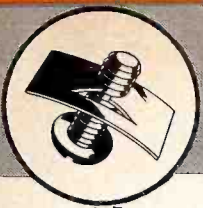


IB85



IB87 & IB88

COUNTER TUBES













TINNERMAN

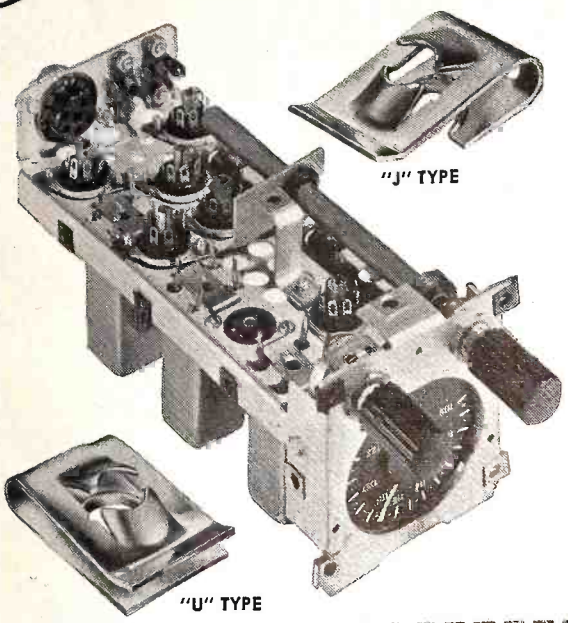
Speed Nuts® ...

FASTEST THINGS IN FASTENINGS®

FOR RADIO-TELEVISION AND ELECTRONIC EQUIPMENT

TYPES FOR EVERY USE

-  Wire & Cable Clips
-  Wood Anchor Nuts
-  Control Knob Clips
-  Yoke Clamps
-  "IF" Can Retainers
-  Chassis Mounting Fasteners
-  Switch Retainers
-  Bezel Fasteners
-  Terminal Fasteners
-  Iron Core Clamps



"J" TYPE

"U" TYPE



PUSH-ON TYPE

Push-On type SPEED NUTS are lightning-fast, zip over integral studs, rivets, tubing, nails or other unthreaded parts.

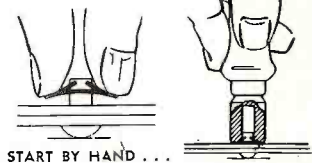
They provide a bite-lock that grips securely on smoothest, hardest surfaces. These self-locking, one-piece fasteners eliminate costly threaded parts, reduce machining of die castings. They provide line balance, reduce costs, speed-up production... are the last word in low cost fastening efficiency.

SPECIAL TYPES: "U"-TYPE SPEED NUTS are available in many special designs to meet a broad variety of applications.

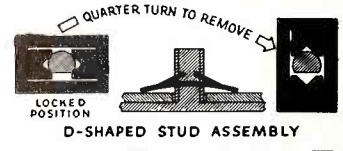


example shows the "U" type ring shaped soldering tab for electronic connections. SPEED NUT is used over bakelite panel.

HOW TO APPLY



START BY HAND ...



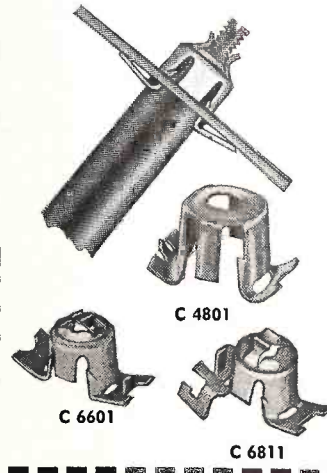
QUARTER TURN TO REMOVE
LOCKED POSITION
D-SHAPED STUD ASSEMBLY

... zip down, lightning fast, over studs, or any unthreaded part. Locks on smooth surfaces; equally effective on metal or plastic.

An exclusive Tinnerman feature is its use over studs. Diagram shows how to lock position for tension grip of spring stud where removable.

COIL FORM FASTENERS

The SPEED NUT principle of spring tension fastening is particularly adaptable to fasteners for retaining coil forms in communications equipment. SPEED NUT Coil Form Fasteners are quickly and easily installed and assure vibration-proof adjustments. Millions of SPEED NUT fasteners are performing cost-cutting assembly jobs on all types of radio, TV and communications equipment.

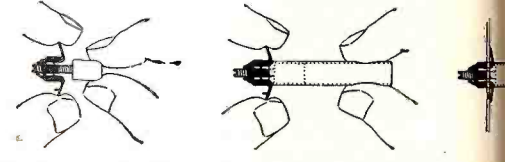


C 4801

C 6601

C 6811

SPECIAL TYPES: Coil tube assembly is simplified by any one of these three SPEED NUTS. Only a few seconds to complete trouble-free attachment of coil tubes. SPEED NUTS provide constant pressure to maintain tuning adjustment. Note that C6811 has "L" shaped locking tab. C4801 retains coil tube only and has clearance hole for core rod.



Core screw is first threaded into SPEED NUT. Prongs provide correct tension on screw.

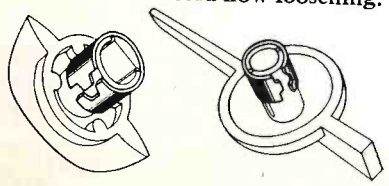
Coil tube is inserted into the SPEED NUT and retained by means of 4 small barbs on inside of SPEED NUT.

Assembly snapped into place. Tab on SPEED NUT fits hole in coil tube to prevent SPEED NUT turning.

COMPRESSION RINGS



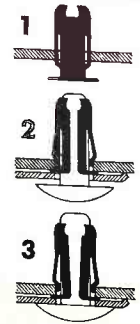
Easily adapted to all thermo-plastic knob-to-shaft assemblies, they eliminate inserts, set screws; provide lower mold costs, permit thinner walled hubs. Insure permanent attachments and prevent cold-flow loosening.



TUBULAR TYPE SPEED CLIPS



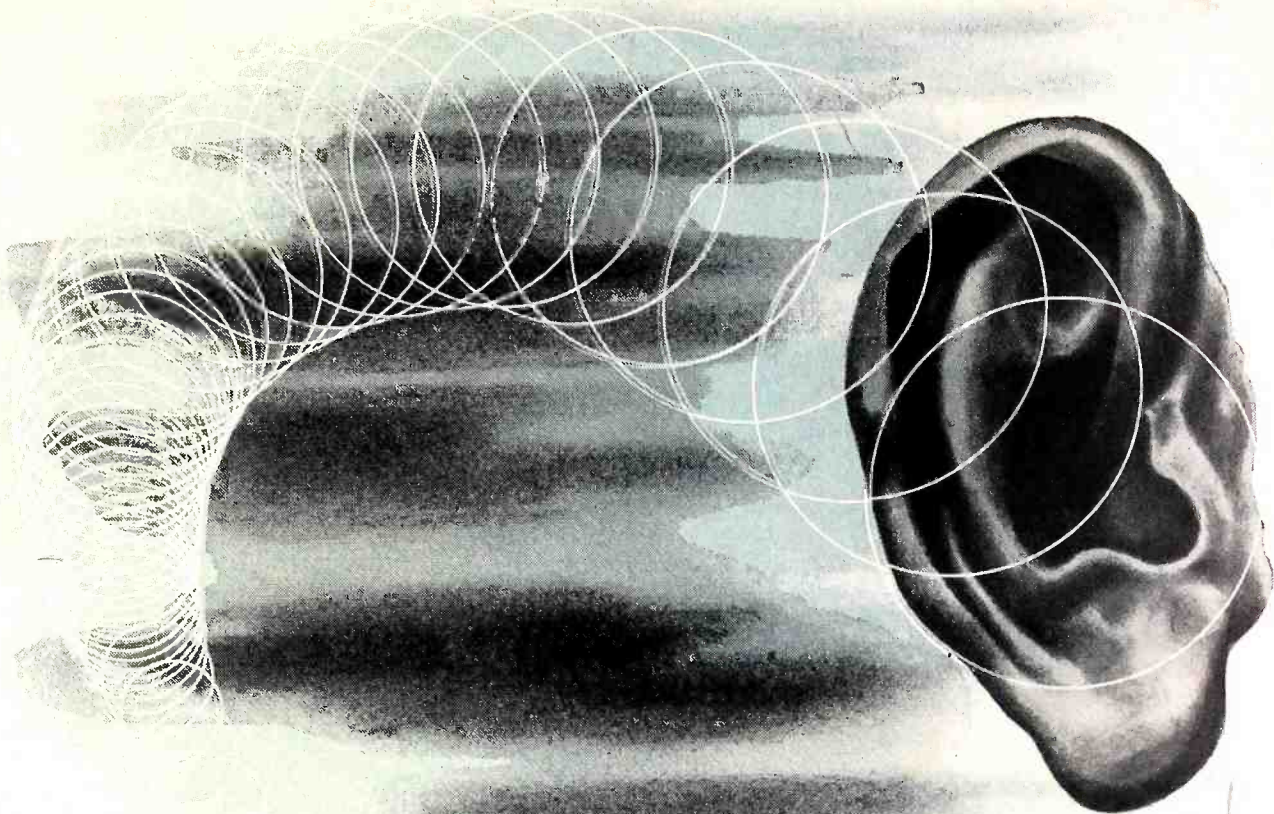
HOW TO APPLY



1. Snap into place by hand. Cam-like prongs compress, then spring out when inserted into hole, holding Clip in position.
2. Line up second part of assembly; start rivet or unthreaded stud into Clip.
3. Seat rivet; turned-in end of SPEED CLIP bites rivet making a locked, vibration-proof attachment. Perfect where only one side of the assembly is accessible!



Provide easiest, safest attachment for wire harness installations in electronic equipment. It can be pre-assembled on wire bundles; opens and closes without the use of tools for easy disassembly. Positive locking feature prevents accidental opening. Has extruded insulation. Available in clamp sizes from 1/8" to 1 1/2"



IT'S NO SECRET...

At this time our company is working on electronic projects for the defense departments of our country. Missile guidance systems . . . firing error indicators . . . and special communications equipment about which the strictest security must be maintained . . . but what we're privileged and proud to reveal

NO SECRET. The competence which makes these achievements possible is in our engineering staff.

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J. P. Ashman
PRESIDENT



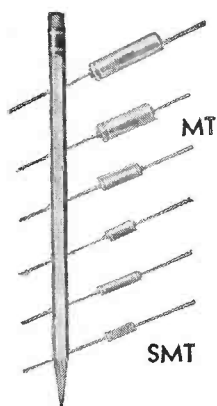
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These Types MT and SMT capacitors are especially designed for use with transistors, printed circuit applications, portable equipment and wherever minimum capacitor size and weight are required. Case styles are of $\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ " and $\frac{3}{8}$ " diameters.

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Write for new ILLINOIS catalog — now!

IHT This popular pigtail type in aluminum can features internal inverted construction that assures immunity to shock and vibration. Available with or without outer cardboard insulating sleeve, with brass-tinned wire leads or solder lugs in capacity ranges from 1 to 2,000 MFD and from 3 to 700 W.V.D.C.

IHC Ideal for replacement or original equipment, this type has flexible wire leads, is sealed with high temperature compound, has electrolytic grade cardboard tubes and has radial or tangential clamps attached. Supplied in common negative/ four section types or dual negatives with separate cathodes. Available in capacity ranges from 25 to 250 MFD and from 5 to 500 W.V.D.C.

LN Has screw neck type mounting, expanded aluminum cans and is available in $\frac{1}{4}$ " to $\frac{1}{2}$ " diameters. Capacity ranges from 8 to 80 MFD and from 450 to 600 W.V.D.C.

BT (Bathtub) Developed for military, fixed and portable communication equipment. Has hermetically sealed, drawn metal case with corrosion resistant finish. Will stand shock and vibration. Fully meets government JAN specifications. Available in any capacity range required and from 25 to 600 W.V.D.C.

PE For use in all communication equipment, fixed and mobile. Plug-in octal base, hermetically sealed. Features new molded through pin design. Available in types to meet all government JAN specifications.

UMT Specifically designed for use in high quality equipment. Complete line meets all government JAN specifications. Hermetically sealed, shock resistant. Newly designed molded capacitor design and terminal construction.

UMS Inverted screw mounting, hermetically sealed. Entire line fully meets all government JAN specifications.

UMC Popular for use in telephone equipment, power factor correction voltage stabilization, high current energy sources, motor starting and other types of phase shifting networks. Available in capacity ranges up to 10,000 MFD and from 5 to 500 W.V.D.C.

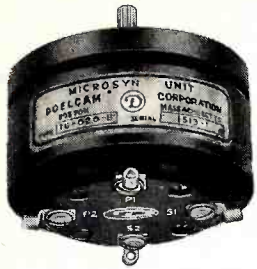
UMP Ideal for communication, radio and TV. Standard twin prong mounting. Uses recently developed molded capacitor construction and will operate efficiently under wide temperature ranges. Remains stable under all operating conditions. Available in capacity ranges from 40 to 3,000 MFD and from 10 to 525 W.V.D.C.



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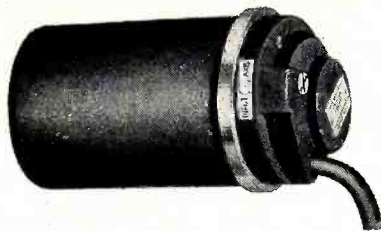
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CABLE "MINTHORNE"

Write for Bulletin MP7



MICROSYN POSITION INDICATORS linearly transform an angular displacement into an electrical signal for application in fire control systems and gyro instrumentation.
Resolution to less than 1/100 of 1 degree

Write for Bulletin KG7



TYPE K RATE GYROS measure absolute angular rates about any one axis for flight test evaluation or control of aircraft. They are also proven components for use in control and homing systems in guided missiles.

Accurate to 1/4 of 1% of full scale

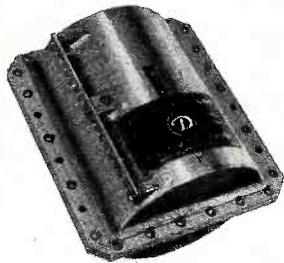
Write for Bulletin S7



SYNCHROS size 11 (1.062" O.D.) 115 volt, 400 cps Control Transmitters and Transformers are approved standard military components (MIL-S-16892). Other sizes and types are also available.

Average electrical error — 5 minutes of arc

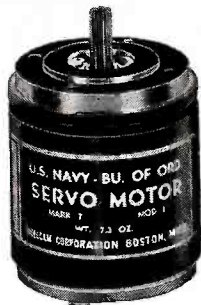
Write for Bulletin CFG7



GAGEABLE FREE GYROS are designed expressly for guided missile applications. They are available with either Synchro or Potentiometer type pickoffs.

Drift is less than 1/4 degree/minute

Write for Bulletin SM7



SERVO MOTORS two-phase, 115 volt, 400 cps fulfill the requirements of MIL-S-17087 (BuOrd). Available in sizes from 1.062 inches O.D. to 1.750 inches O.D.

Acceleration 33,800 radians/second²

Write for Bulletin VF7



VFDD POWER SUPPLY - DEMODULATOR serves as a link between sensing instruments and recording equipment. With the DOELCAM Type K Rate Gyros it comprises a complete system for flight evaluation of military aircraft.

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Frequency stabilized to 0.2%
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Master-precision

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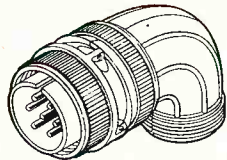
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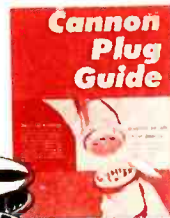
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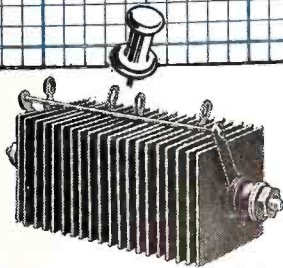
CANNON ELECTRIC

Really



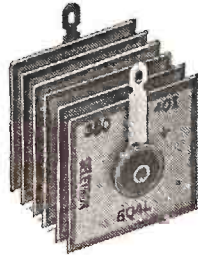
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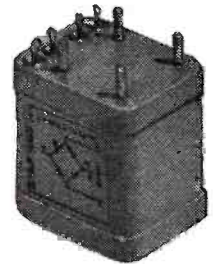
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B-178—Cartridge assemblies.



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Germanium Products

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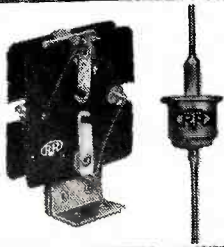


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| 1N38 | 1N55A | *1N70 |
| 1N38A | 1N58 | 1N72 |
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*JAN type

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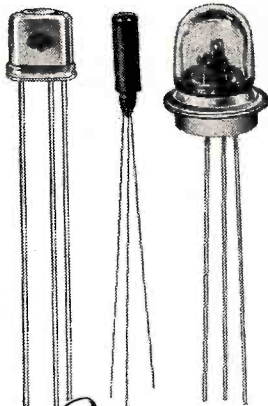
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| 1N113 |
| 1N114 |
| 1N115 |

TRANSISTORS



Types RR14, RR20, RR34, 2N34, 2N36, 2N37 and 2N38 intended for applications in low level audio circuits. Particularly applicable where small size and economy of operation are desirable.

Type RR21 intended for applications in low level audio circuits requiring power outputs in the 10 milliwatt range.

Type RR38 intended for applications requiring economy of operation at low power levels. Particularly applicable as the output stage for hearing aids and personal receivers.

Type RR66, photo transistor.

Types RR83 and RR87 intended for service in switching applications such as flip-flop, multivibrator and pulse circuits.

| | |
|-------|-------|
| RR14 | †RR83 |
| RR20 | †RR87 |
| RR21 | 2N34 |
| RR34 | 2N36 |
| RR38 | 2N37 |
| *RR66 | 2N38 |

*Photo Transistor
†Computer Transistor

Our engineers will be glad to offer suggestions regarding your Germanium Diode and Transistor applications without obligation. For further information write for the following bulletins:

- BG16A — Replacement Guide.
- BG24 — Computer Diodes.
- BG23 — General Diodes & PNP Transistors.
- BG25 — Diffused Junction Power Diodes.
- BG26 — 1N110 Measuring Technique.
- BG27 — Photo Transistor.

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The Pocket-Size Oscilloscope

S-14-A



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6 INCHES

S-14-B



WIDE

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S-15-A



TWIN

6 INCHES

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HIGH

The S-14-A HI-GAIN POCKET-

SCOPE provides the optimum in oscilloscope flexibility for analysis of low-level electrical impulses. Extremely light weight (12 $\frac{3}{4}$ lbs.), compact in size (12 x 5 $\frac{3}{4}$ x 7 in.), dependable and accurate in performance. Vertical and horizontal channels: 10mv rms/inch with response within 2DB from DC to 200 KC and pulse rise of 1.8 μ s . . . non-frequency discriminating attenuators and gain controls with internal calibration of trace amplitude . . . repetitive or trigger time base with linearization from $\frac{1}{2}$ cycle to 50 KC with \pm sync or trigger.

WIDE

The S-14-B WIDE BAND POCKETSCOPE is ideal for investigations of transient signals, DC signals, aperiodic pulses or recurrent waveforms. Vertical channel: 50 mv rms/in. within -2DB from DC to 700 KC . . . pulse rise time of 0.35 μ s. Horizontal channel: 0.15v rms/in. within -2DB from DC to 200 KC . . . pulse rise of 1.8 μ s. Attenuators and gain controls are non-frequency discriminating . . . trace amplitude calibration . . . repetitive or triggered time base from $\frac{1}{2}$ cycle to 50 KC . . . \pm sync or trigger . . . trace expansion, filter graph screen and many other features . . . 14 lbs. . . 12 x 6 x 7 inches.

TWIN

The S-15-A POCKETSCOPE is a portable, twin tube, high sensitivity oscilloscope with two independent vertical as well as horizontal channels. It is indispensable for investigation of electronic circuits in industry, school and laboratory. Vertical channels 10

mv rms/in. with response within -2DB from DC to 200 KC and pulse rise time of 1.8 μ s . . . horizontal channels 1v rms/in. within -2DB from DC to 150 KC . . . non-frequency discriminating controls . . . internal signal amplitude calibration . . . linear time base from $\frac{1}{2}$ cycle to 50 KC, triggered or repetitive, for both horizontal channels.

S-11-A

The S-11-A INDUSTRIAL POCKETSCOPE is a small, compact (5x7x11 inches), and lightweight (8 $\frac{3}{4}$ lbs.) instrument for observing electrical circuit phenomena. The flexibility of the POCKETSCOPE permits its use for AC measurements as well as for DC. The vertical and horizontal amplifiers are capable of reproducing within -2DB from DC to 200 KC with a sensitivity of 0.1v rms/in. . . repetitive time base from 3 cycles to 50 KC continuously variable throughout its range . . . variations of input impedance, line voltage or controls do not "bounce" the signal—the scope stabilizes immediately.

RAYONIC CATHODE RAY TUBES BY WATERMAN

| TUBE | PHYSICAL DATA | | STATIC VOLTAGE | | DEFLECTION* | | LIGHT OUTPUT** |
|------|---------------|--------|----------------|------|-------------|-----|----------------|
| | FACE | LENGTH | A3 | A2 | VERT | HOR | |
| 3JP1 | 3" | 10" | 3000 | 1500 | 111 | 150 | 352 |
| 3MP1 | 3" | 8" | | 750 | 99 | 104 | 33 |
| 3RP1 | 3" | 9.12" | | 1000 | 61 | 86 | 44 |
| 3SP1 | 1.5x3" | 9.12" | | 1000 | 61 | 86 | 44 |
| 3XP1 | 1.5x3" | 8.875" | | 2000 | 33 | 80 | 218 |

*Deflection in volts per inch.

**Light output of an element of a raster line (one mm long and not exceeding .65 mm in width) in microlumens.

The basic properties of the cathode ray tube that concern the designer or the user are: deflection sensitivity, unit line brightness, line width, static voltage requirements and physical size. A comparison between cathode ray tubes manufactured by Waterman Products Company is shown in the table adjoining. These tubes are available in P1, P2, P7 and P11 phosphors. 3JP1, 3JP7, 3SP1 and 3XP1 are available as JAN tubes.

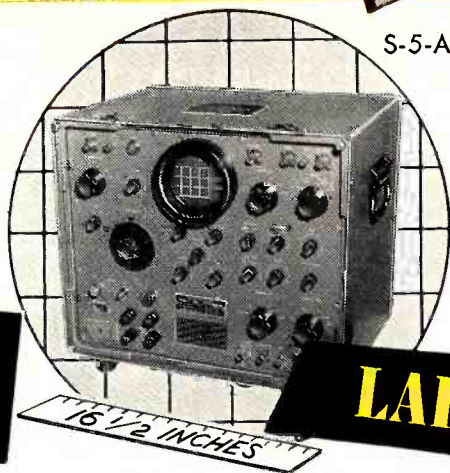
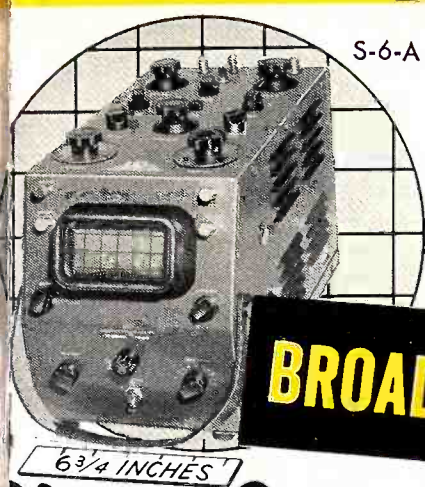
Write for your complimentary copy of "POCKETSCOOP" . Official Waterman publication.

PULSESCOPE

by

Waterman

Oscilloscope that Portrays the Pulse



Classic Examples of Precision Engineering...

The PULSESCOPES are cathode ray tube oscilloscopes that portray the attributes of the pulse: shape, amplitude, duration and time displacement. All PULSESCOPES have internally generated markers with the basic difference that in the SAR PULSESCOPE the markers initiate the sweep while in the others the sweep starts the markers.

BROAD

The S-6-A BROAD BAND Scope is a PULSESCOPE

in performance, POKETSCOPE in size. The instrument measures DC as well as AC signals. Unique DC calibration methods permit rapid measurements of either positive or negative, AC or DC signals. Vertical amplifier sensitivity of 0.2v rms/inch, and response to 5 mc within 3DB... pulse rise time of 0.1 μ s... internal markers from 1 to 1000 μ s... repetitive or trigger sweep from 5 cycles to 500 KC with 5X sweep expansion... sweep, marker and DC calibrating voltage available externally. Size 8 3/4 x 6 3/4 x 13 3/4 in. Weight 22 lbs. Operates from 50 to 400 cycles at 115 volts AC.

LAB

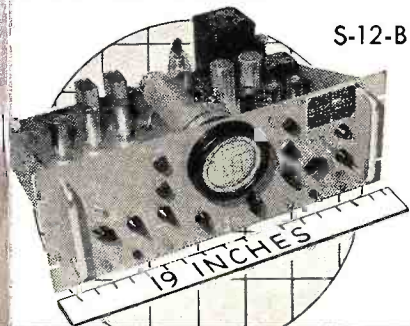
The S-5-A LAB PULSESCOPE is a JANized (Gov't Model No. OS-26)

portable, AC, wide band-pass, laboratory oscilloscope ideal for pulse as well as general purpose measurements. Internal delay of 0.55 μ s permits observation of pulse leading edge. Includes precision amplitude calibration, 10X sweep expansion, internal trace intensity time markers, internal trigger generators and many other features. Video amplifier 0.1v p to p/inch... pulse rise time of .035 μ s or response to 11 mc. 1.25 to 125,000 μ s triggered or repetitive sweep... internally generated markers from 0.2 to 500 μ s... trigger generator from 50 to 5000 pps. for internal and external triggering. Operates from 50 to 400 cycles at 115 volts AC.

SAR

The S-4-C SAR PULSESCOPE is a JANized (Gov't Model No. OS-4)

portable instrument (31.5 lbs.) for precision pulse measurements for radar, TV and all electronic measurements. Portrays all attributes of the pulse... internal crystal controlled markers of 10 and 50 μ s available for self-calibration... in R operation a small segment of the A sweep is expandable for detailed observation with a direct-reading calibrated dial accurate to 0.1%. Video amplifier band-pass up to 11 mc... optional video delay 0.55 μ s... pulse rise and fall time better than 0.07 μ s... R pedestal (sweep) 2.4 to 24 μ s... video sensitivity of 0.5v. p to p/inch. Easily convertible from μ s to yards. Operates from 50 to 400 cycles at 115 volts AC.



RAKSCOPE

Because the panel is only 7" high and fits any standard rack, the S-12-B RAKSCOPE admirably fills the need for a small oscilloscope of wide versatility. With all the features of the S-11-A POKETSCOPE, the RAKSCOPE is JANized (Gov't Model No. OS-11), and has many additional advantages; the sweep, from 5 cycles to 50 KC, is either repetitive or triggered... vertical and horizontal amplifiers are 50 mv rms/inch with band-pass from 0 to 200 KC... special phasing circuitry for frequency comparison.

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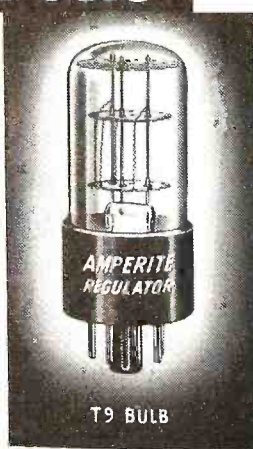
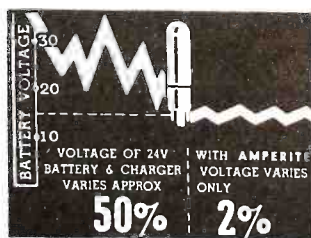
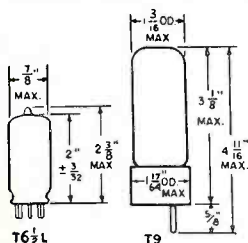
Amperite Thermostatic Delay Relays are compensated for ambient temperature changes from -55° to $+70^{\circ}$ C. Heaters consume approximately 2 W. and may be operated continuously. The units are most compact, rugged, explosion-proof, long-lived, and — inexpensive!

TYPES: Standard Radio Octal, and 9-Pin Miniature.

PROBLEM? Send for Bulletin No. TR-81

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- For currents of 60 ma. to 5 amps. Operates on A.C., D.C., Pulsating Current.
- Hermetically sealed, light, compact, and most inexpensive.



T9 BULB

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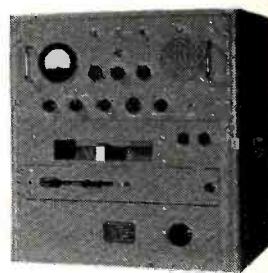
Amperite Regulators are the simplest, most effective method for obtaining **automatic regulation** of current or voltage. Hermetically sealed, they are not affected by changes in altitude, ambient temperature (-55° to $+90^{\circ}$ C), or humidity. Rugged; no moving parts; changed as easily as a radio tube.

Write for 4-page Technical Bulletin No. AB-51

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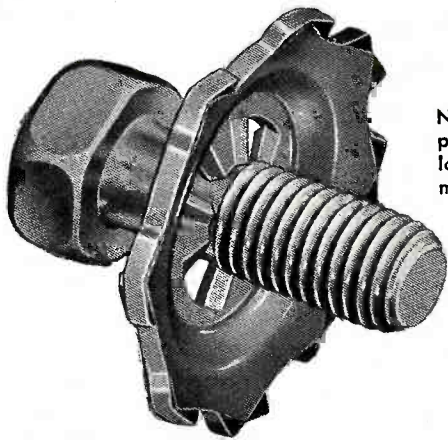
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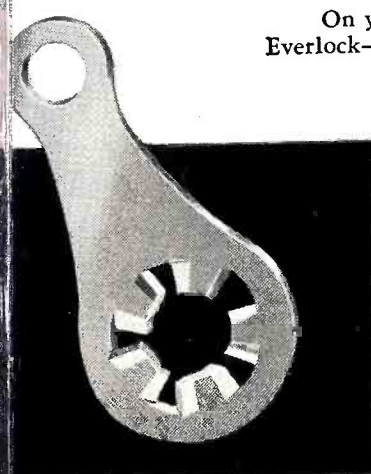
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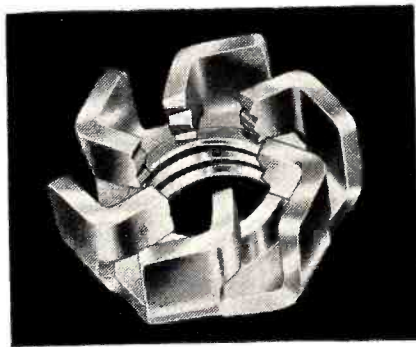
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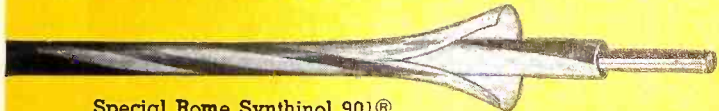
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Rome offers commercial type hook-up wires with three standard insulations.

Rome Hi-temp—a rubber insulation with exceptionally high resistance to heat and moisture. Underwriters' approved for 75° C.

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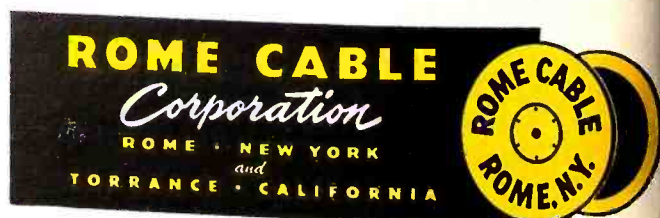
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700 SERIES MULTICHANNEL RECORDING OSCILLOGRAPH—For recording of static and dynamic current phenomena—Simultaneous recording of as many as 60 separate channels on either 8 or 12 inch record widths and with record speeds as high as 144 inches per second assures accurate measurement of events occurring in the 0 to 5000 cps range.

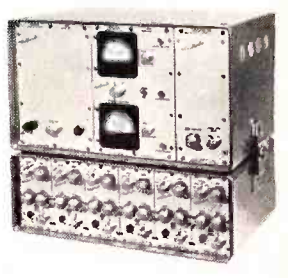
Features include relay rack, table or aircraft mounting; convenient one surface operation; daylight loading; selective record speeds; trace identifier; scanning system; precision timing lines; AC or DC models available.



Heiland

MODEL 119 — SIX CHANNEL AMPLIFIER SYSTEM — Carrier linear and integrating type amplification of static and dynamic phenomena for oscillographic recording is simple and accurate when using the Heiland Amplifier System in conjunction with the Heiland Recording Oscillograph.

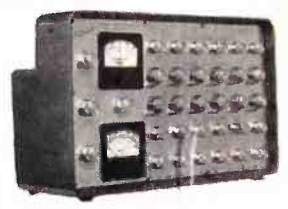
Among its many features are: One surface operation; high sensitivity; high power output; local and remote calibration; carrier amplification 0 to 1000 cps; linear and integrating amplification 5 to 3000 cps; relay rack, table or aircraft mountings; plug-in units.



Heiland

MODEL 82-6 — SIX CHANNEL BRIDGE BALANCE & STRAIN INDICATOR UNIT—Provides a simple and accurate means of calibrating, measuring and controlling static and dynamic phenomena from resistive type transducers before applying such phenomena to the galvanometer circuits of the recording oscillograph.

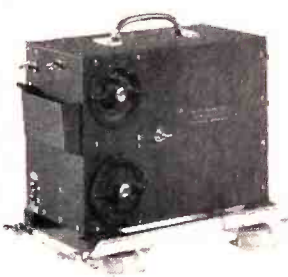
Designed for relay rack, table or aircraft mounting. Each of the six separate channels may be individually calibrated to gages of different resistances and having two, three or four external arms. A micro-ammeter is provided to aid in calibration and also serves as a static strain indicator.



Heiland

MODEL 500B — PORTABLE RECORDING OSCILLOGRAPH — Provides maximum portability when it is desired to record up to 12 separate phenomena and with small size and economy as controlling factors.

Record width—4 inches; record length—100 feet; highly accurate timing system; daylight loading; easy access; shock mount base; wide range of record speeds.



Heiland

MODEL 401 — PORTABLE SIX CHANNEL RECORDING OSCILLOGRAPH—The Heiland 401 recording oscillograph has its own self contained storage battery power source. Its low cost, small size and ability to record up to six separate phenomena on two inch recording media have made this instrument popular for laboratory and industrial testing as well as in schools and universities.

Included in its features are: Accurate timing system; choice of record speeds; local or remote operation; direct monitoring; daylight loading.

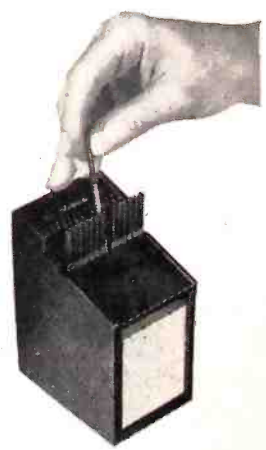


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GALVANOMETERS—Heiland Galvanometers are employed in recording oscillographs to transfer minute voltage and current variations to the photographically processed record where they can be measured and studied. Heiland galvanometers are available having natural frequencies up to 5000 cps and sensitivities such that only a few micro-amperes are required for each inch of deflection on the record.

Their small size permits as many as sixty elements to be placed adjacently in a 12 inch space. One common magnet assembly provides the necessary magnetic field for each group of 12 galvanometers. Each magnet assembly is individually heated and thermostatically controlled.

Its features are: high sensitivity; broad range of frequencies; hermetically sealed; plug-in connection; precision balance; low zero drift; high amplitude recordings.



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GAS SWITCHING TUBES

| BAND | FREQUENCY | POWER LEVEL (KW Max) | TYPE | DESCRIPTION | TUBE DESIGNATION |
|------|-------------|----------------------|--------|---|------------------|
| L | 900-1200 | 450 | TR | Cell Type, One Disc, Fixed-Tuned | 1B23 |
| L | 1075-1095 | 1 | TR | Electrodeless Discharge, Fixed-Tuned | 1B40 |
| L | 1215-1355 | 450 | TR | Cell Type, Two Disc, Tunable | 6322/BL-25 |
| L | 1215-1355 | 2000 | TR | Tunable | BL-18 |
| L | 1220-1365 | 2000 | TR | Band Pass, Fixed-Tuned | BL-37 |
| L | 1250-1350 | 4000 | Pre TR | Band Pass, Fixed-Tuned | BL-96 |
| L | 1285 | 2000 | ATR | Low Q, Fixed-Tuned, Tuned in 1/4 Height Guide | BL-38 |
| L | 1250-1350 | 550 | | Gas Switching Window | 5939A |
| S | 2600-3000 | 750 | TR | Band Pass, Fixed-Tuned | 1B58 |
| S | 2600-3000 | 750 | TR | Band Pass, Fixed-Tuned | 6117 |
| S | 2600-3000 | 750 | TR | Dual 1B58 | BL-87 |
| S | 2700-3300 | 350 | TR | Cell Type, Two Disc, Fixed-Tuned | 721B |
| S | 2700-3400 | 450 | TR | Ruggedized 1B27 without tuner knob | BL-31 |
| S | 2700-3400 | 450 | TR | Cell Type, Two Disc, Tunable | 1B27 |
| S | 2900-3200 | 750 | TR | Band Pass, Fixed-Tuned | 5853 |
| S | 3100-3500 | 750 | TR | Band Pass, Fixed-Tuned | 5927 |
| S | 3350-3750 | 750 | TR | Band Pass, Fixed-Tuned | 1B55 |
| S | 2700-2900 | 750 | Pre TR | Band Pass, Fixed-Tuned | 1B38 |
| S | 3400-3700 | 750 | Pre TR | Band Pass, Fixed-Tuned | 1B54 |
| S | 2750 | 750 | ATR | Fixed-Tuned | 1B44 |
| S | 2750 | 750 | ATR | 1B44, 15μ Recovery Time | BL-41 |
| S | 2800 | 1000 | ATR | Fixed-Tuned | 6024/ATR387 |
| S | 2850 | 750 | ATR | Fixed-Tuned | 1B56 |
| S | 2850 | 750 | ATR | 1B56, 15μ Recovery Time | BL-40 |
| S | 2950 | 750 | ATR | Fixed-Tuned | 5792 |
| S | 3050 | 750 | ATR | Fixed-Tuned | 5793 |
| S | 3200 | 750 | ATR | Fixed-Tuned | 5921 |
| S | 3325 | 750 | ATR | Fixed-Tuned | 1B57 |
| S | 3400 | 750 | ATR | Fixed-Tuned | 5922 |
| S | 3479 | 750 | ATR | Fixed-Tuned | 1B53 |
| S | 3625 | 750 | ATR | Fixed-Tuned | 1B52 |
| C | 5200-5530 | 1000 | TR | Band Pass, Fixed-Tuned | 5925/TR |
| C | 5220-5340 | 1000 | TR | Dual TR | BL-86 |
| C | 5400-5900 | 700 | TR | Dual 5865, Band Pass, Fixed-Tuned | BL-60 |
| C | 5400-5900 | 300 | TR | Band Pass, Fixed-Tuned | 5865/TR361 |
| C | 5450-5650 | 20 | TR | Integral Cavity, Tunable | BL-46 |
| C | 5365 | 1000 | ATR | Fixed-Tuned | 6022/ATR332 |
| C | 5435 | 300 | ATR | Fixed-Tuned | BL-52 |
| C | 5640 | 300 | ATR | Fixed-Tuned | 6081/ATR407 |
| C | 5640 | 300 | ATR | Fixed-Tuned, Contact Mount | 6455/BL-61 |
| C | 5370-5430 | 100 | | Complete Duplexer, Integral TR & ATR | BL-88 |
| Xb | 6000-7100 | 500 | TR | Integral Cavity, Tunable | 1B50 |
| Xb | 6425 | 500 | ATR | Fixed-Tuned | 1B51 |
| X | 8490-9560 | 1000 | TR | 5863 with Full Flanges and no Struts | BL-82 |
| X | 8490-9560 | 1000 | TR | Band Pass, Special Flange, for use in RG 51/U Guide | 5863 |
| X | 8490-9578 | 200 | TR | Band Pass, Fixed-Tuned | 1B63A |
| X | 8490-9578 | 200 | TR | Band Pass, Fixed-Tuned, Long Life | 1B63B |
| X | 8490-9578 | 200 | TR | Band Pass (1B63A), Fixed-Tuned | 6035 |
| X | 8490-9578 | 250 | TR | 1B63A, for RG 51/U Guide | 6232/TR427 |
| X | 8490-9578 | 250 | TR | Dual 1B63A | 6334/BL-27 |
| X | 8490-9578 | 200 | TR | 6334 Tapped Flanges both sides | BL-78 |
| X | 8490-9578 | 200 | TR | 6334 Plus Separate Channel 1B63A | BL-81 |
| X | 8490-9578 | 250 | TR | 6334 with 1μ Recovery Time at 1 db point | BL-84 |
| X | 8500-9600 | 1000 | TR | Dual TR for use in 51/U Guide | BL-71 |
| X | 8490-9600 | 100 | TR | Integral Cavity, Tunable | 1B24A |
| X | 8490-9600 | 100 | TR | Integral Cavity, Tunable | 1B60 |
| X | 8490-9600 | 100 | TR | No Reservoir, Tube Flanges do not protrude beyond UG39/U & UG40/U Flanges | 6378/BL-62 |
| X | 8490-9600 | 30 | TR | No Reservoir | BL-30 |
| X | 8541-9862 | 75 | TR | Cell Type, Two Disc, Fixed-Tuned | 724B |
| X | 10000-10500 | 100 | TR | Integral Cavity, Tunable | BL-51 |
| X | 8750 | 250 | ATR | Fixed-Tuned | 1B37A |
| X | 8750 | 250 | ATR | (1B37A) Mounting Flange Flat within .003" | 6034 |
| X | 8750 | 250 | ATR | Miniature 1B37A, Contact Mount | 6369 |
| X | 8800 | 250 | ATR | 1B37A with KA | BL-94 |
| X | 8800 | 250 | ATR | BL-43 for RG 51/U Guide | BL-54 |
| X | 8800 | 250 | ATR | 5883 in 6393 Outline for use in 51/U Guide | BL-69 |
| X | 8800 | 250 | ATR | Fixed-Tuned | 5883 |
| X | 9300 | 250 | ATR | Fixed-Tuned | 1B35A |
| X | 9300 | 250 | ATR | (1B35A) Mounting Flange Flat within .003" | 6033 |
| X | 9300 | 250 | ATR | 1B35A with K.A. | 6214 |
| X | 9300 | 250 | ATR | Miniature 1B35A, Contact Mount | 6304/BL-43 |
| X | 9300 | 250 | ATR | Miniature 1B35A with Special Flange | 6393/BL-68 |
| X | 9300 | 250 | ATR | 6393 Tuned in Half Height Guide | |
| X | 9375 | 500 | ATR | .900 x .200 I.D. Guide | 6396 |
| X | 9375 | 500 | ATR | 5864 in 6393 Outline for use in 51/U Guide | BL-70 |
| X | 9375 | 250 | ATR | BL-43 for RG 51/U Guide | BL-55 |
| X | 9375 | 500 | ATR | 1B35A Outline, Fixed-Tuned | BL-45 |
| X | 9300-9450 | 10 | | Fixed-Tuned, Tuned in RG 51/U Guide | |
| X | 9300-9450 | 100 | | Cross Guide Duplexer, BL-29 Beacon Application | 5864/ATR321 |
| X | 9300-9450 | 100 | | Cross Guide Duplexer | BL-47 |
| | | | | | BL-29 |

| FREQUENCY | POWER LEVEL (KW Max) | TYPE | DESCRIPTION | TUBE DESIGNATION |
|-----------|----------------------|------|--------------------------|------------------|
| 0-17000 | 100 | TR | Dual TR | BL-35 |
| 0-17000 | 100 | TR | Single BL-35 | BL-56 |
| 0-16700 | 40 | TR | Integral Cavity, Tunable | BL-16 |
| 0-16700 | 40 | ATR | Fixed-Tuned | BL-15 |
| 0-24950 | 35 | TR | Band Pass, Fixed-Tuned | 6282/BL-11 |
| 0-24580 | 100 | TR | Integral Cavity, Tunable | 1B26 |
| 0-24580 | 100 | TR | 1B26 No Reservoir | BL-67 |
| 0-24580 | 75 | ATR | Fixed-Tuned | 1B36 |

DUAL AND TRIPLE TR'S

| FREQUENCY | POWER LEVEL (KW Max) | TYPE | DESCRIPTION | TUBE DESIGNATION |
|-----------|----------------------|------|----------------------------------|------------------|
| 0-3000 | 750 | TR | Dual | BL-87 |
| 0-5340 | 1000 | TR | Dual | BL-86 |
| 0-5900 | 700 | TR | Dual 5865 | BL-60 |
| 0-9578 | 200 | TR | Dual 1B63A | 6334/BL-27 |
| 0-9578 | 200 | TR | 6334 Tapped Flanges Both Ends | BL-78 |
| 0-9578 | 200 | TR | 6334 Plus Separate Channel 1B63A | BL-81 |
| 0-9578 | 250 | TR | Large X Band Wave Guide | BL-71 |
| 0-9600 | 1000 | TR | Dual | BL-35 |
| 0-17000 | 100 | TR | Dual | BL-35 |

BOMAC SHUTTER TUBES

| FREQUENCY | POWER LEVEL (KW Max) | TR TUBE TYPE | OPERATING VOLTAGE | OPERATION TYPE | TUBE DESIGNATION |
|-----------|----------------------|---------------|-------------------|------------------------------|------------------|
| 0-5530 | 1000 | 5925 | 28VDC | TR Shutter | BL-309 |
| 05-5905 | 1000 | 5865 | 28VDC | TR Shutter | BL-311 |
| 0-9560 | 200 | BL-82 | 28VDC | TR Shutter | BL-310 |
| 0-9578 | 200 | 1B63A | 28VDC | TR with self-locking shutter | BL-314 |
| 0-9578 | 200 | 6334/BL-27 | 28VDC | TR Shutter | BL-307 |
| 0-9578 | 200 | 1B63A Special | 28VDC | TR Shutter | BL-308 |
| 0-9578 | 200 | 1B63A | 28VDC | TR Shutter | BL-312 |
| 0-9600 | 30 | 6378 | 28VDC | TR Shutter | BL-313 |

Tubes available for 6 volt AC DC operation upon request.

SPECIAL SHUTTER TUBES

| FREQUENCY | POWER LEVEL | TUBE TYPE | OPERATING VOLTAGE | OPERATION TYPE | TUBE DESIGNATION |
|-----------|-------------|-----------|-------------------|---------------------|------------------|
| 0-27000 | Low Level | BL-11 | 28VDC-Ballast | Switch | BL-53 |
| 0-3400 | Low Level | 1B27 | 28VDC-Ballast | Switch | BL-301 |
| | | | | Operating Time < 1μ | |

REFERENCE CAVITIES

| FREQUENCY | DESCRIPTION | TUBE DESIGNATION |
|-------------|---|------------------|
| 49.7-9250.3 | Temperature compensated ±0.3 MC from 0°C to 100°C | 1Q22 |
| 79.7-9280.3 | Temperature compensated ±0.3 MC from 0°C to 100°C | 1Q23 |

SILICON DIODES

| FREQUENCY (MC) | CONVERSION LOSS (db MAX.) | NOISE RATIO (MAX.) | VSWR (MAX.) | RANGE IF IMPEDANCE | TUBE DESIGNATION |
|----------------|--|--------------------|-------------|--------------------|------------------|
| 0-300 | Noise figure tests on this UHF Diode can be made in special mixers according to customer requirements. | | | | |
| 0-60 | 6.5 | 2.0 | | | 1N82 |
| 0-60 | 6.5 | 2.0 | | | 1N21B |
| 0-60 | 5.5 | 1.5 | | | 1N21BR |
| 0-60 | 5.5 | 1.5 | | | 1N21C |
| 0-375 | 6.5 | 2.7 | | | 1N21CR |
| 0-375 | 6.5 | 2.7 | | | 1N23B |
| 0-375 | 6.5 | 2.7 | * | * | 1N23BM |
| 0-375 | 6.5 | 2.7 | * | * | 1N23BR |
| 0-375 | 6.5 | 2.7 | * | * | 1N23BMR |
| 0-375 | 6.0 | 2.0 | 1.50 | 325-475 | 1N23C |
| 0-375 | 6.0 | 2.0 | 1.50 | 325-475 | 1N23CR |
| 0-375 | 4.8 | 1.7 | 1.25 | 300-400 | 1N23D |
| 0-375 | 4.8 | 1.7 | 1.25 | 300-400 | 1N23DR |

See Bomac Test Spec. 1N23BM

GERMANIUM DIODES

| Continuous Reverse Working Voltage (Volts Max) | Reverse Voltage for Zero Dynamic Resistance (Volts Min) | Forward Current at +1 Volt (ma Min) | Average Anode Current (ma Max) | Recurrent Peak Anode Current (ma Max) | Instantaneous Surge Current (ma Max for 1 sec) | Reverse Currents | | | | | Rectification Efficiency (% Min) |
|--|---|-------------------------------------|--------------------------------|---------------------------------------|--|------------------|------|-------|-------|--------|----------------------------------|
| | | | | | | @-3v | @-5v | @-10v | @-50v | @-100v | |
| 25 | 30 | 4.0 | 50 | 150 | 500 | | | | | | 50 at 24.5 MC |
| 25 | 75 | 12.75 | 22.5 | 60 | 100 | | | | | | |
| 50 | 75 | 7.5 | 22.5 | 60 | 100 | | | | | | |
| 60 | 75 | 5.0 | 50 | 150 | 500 | | | | | | |
| 60 | 75 | 5.0 | 50 | 150 | 500 | | | | | | |
| 60 | 75 | 5.0 | 40 | 125 | 400 | | | | | | 35 at 100 MC |

| TYPE | Continuous Reverse Working Voltage (Volts Max) | Reverse Voltage for Zero Dynamic Resistance (Volts Min) | Forward Current at +1 Volt (ma Min) | Average Anode Current (ma Max) | Recurrent Peak Anode Current (ma Max) | Instantaneous Surge Current (ma Max for 1 sec) | Reverse Currents | | | | | Rectification Efficiency (% Min) |
|----------|--|---|-------------------------------------|--------------------------------|---------------------------------------|--|------------------|------|-------|-------|--------|----------------------------------|
| | | | | | | | @-3v | @-5v | @-10v | @-50v | @-100v | |
| 1N111*** | 60 | 70 | 5.0 | 25 | 150 | 500 | | | | | | |
| 1N112*** | 60 | 70 | 5.0 | 25 | 150 | 500 | | | | | | |
| 1N38 | 100 | 120 | 3.0 | 50 | 150 | 500 | 6 | | 25 | 125 | | |
| 1N38A | 100 | 120 | 4.0 | 50 | 150 | 500 | 5 | | 50 | 250 | | 625 |

* The type 1N35 is a pair of matched germanium diodes assembled in brackets for easy mounting. The resistance of the units are matched to within 10% at 1.0 volt in the forward direction. Ratings shown are for each diode.

** The type 1N40 consists of four matched germanium diodes whose resistances are balanced within ±2.5% in the forward direction at 1.5 volts. In addition, the forward resistances of each pair of crystals are matched within 3 ohms. The crystals are mounted on a standard octal base which is enclosed in compact metal radio tube shell. Ratings shown are for each diode.

*** Diodes 1N111 and 1N112 are specifically designed and tested for computer use. The reverse resistance of these diodes is measured at +55°C by sweeping Eb/Ib from 0 to -70 volts at 60 cps. Recovery time measurements are made at 0.5 and 3.5μ. To insure maximum stability all units are visually observed for any evidence of flutter, drift, hysteresis, zero or negative AC resistance in the reverse voltage region, or increasing AC resistance with increasing forward voltage.

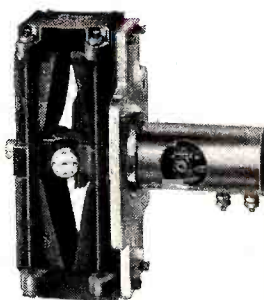
PRESSURIZING WINDOWS

| BAND | FREQUENCY | WAVE-GUIDE SIZE | TYPE MOUNTING | DESCRIPTION | WINDOW DESIGNATION |
|------|-----------|-----------------|---------------|--|--------------------|
| S | 2800 | 48/U | Solder | Oval, Kovar Finish | BL-124 |
| S | 2800 | 48/U | Solder | Oval Viewing Window, Optically Clear | BL-127 |
| C | 5350 | 49/U | Solder | Oval, Kovar Finish | BL-141 |
| Xb | 5550 | 50/U | Solder | Oval, Kovar Finish | BL-134 |
| Xb | 6500 | 50/U | Solder | Oval, Kovar Finish | BL-123 |
| X | 8500-9600 | 52/U | Choke | Mica Window, Rectangular, 4 Mounting Holes, Plated | BL-132 |
| X | 8800 | 52/U | Choke | Round, Plated | BL-119 |
| X | 9080 | 52/U | Choke | Round, Plated | BL-112 |
| X | 9080 | 52/U | Choke | Round, Plated | BL-117 |
| X | 9100 | 52/U | Choke | Round, Plated, 4 Mounting Holes | BL-122 |
| X | 9100 | 51/U | Choke | Round, Plated, 4 Mounting Holes | BL-139 |
| X | 9245 | 52/U | Choke | Round, Plated, 4 Mounting Holes | BL-106 |
| X | 9250-9405 | 52/U | Choke | Round, Plated, Tapered at Edge | BL-126 |
| X | 9310 | 52/U | Solder | Oval, Kovar Finish (0.3 db loss) | BL-125 |
| X | 9310 | 51/U | Solder | Oval, Kovar Finish | BL-107 |
| X | 9310 | 52/U | Solder | Oval, Kovar Finish | BL-114 |
| X | 9375 | 51/U | Choke | Round, Plated, 4 Mounting Holes | BL-105 |
| X | 9500 | 52/U | Solder | BL-114, Centered 9500 ± 100 MCS | BL-136 |
| Ku | 16500 | 91/U | Solder | Oval, Kovar Finish Pressure Viewing Window, 1" Iris, Deep Drawn Cup | BL-116 |

HYDROGEN THYRATRONS

| PEAK ANODE VOLTAGE (KV Max) | PEAK ANODE CURRENT (Amps Max) | AVERAGE ANODE CURRENT (Ma Max) | PEAK TRIGGER VOLTAGE (VOLTS Min) | TYPE |
|-----------------------------|-------------------------------|--------------------------------|----------------------------------|------------------|
| 1.0 | 20 | 50 | 175 | 1258 |
| 3.0 | 35 | 45 | 175 | 3C45 |
| 3.0 | 35 | 45 | 175 | 6130 |
| 8.0 | 35 | 45 | 175 | High Altitude |
| 3.0 | 35 | 45 | 175 | 5959/E41 |
| 3.0 | 35 | 45 | 175 | 3C45 in T-8 Bulb |
| 3.0 | 35 | 45 | 175 | 3 Pillar Stem |
| 3.0 | 35 | 45 | 175 | BL-253 |
| 8.0 | 90 | 100 | 175 | 3 Pillar Stem |
| 8.0 | 90 | 100 | 175 | BL-255 |
| 8.0 | 90 | 100 | 175 | 4C35 |
| 8.0 | 90 | 100 | 175 | Low Jitter 4C35 |
| 8.0 | 90 | 100 | 175 | BL-254 |
| 16.0 | 325 | 200 | 200 | Wafer Base |
| 16.0 | 325 | 200 | 200 | 5957/E37A |
| | | | 200 | 5C22 |
| | | | 200 | Low Jitter |
| | | | 200 | HT415 |

MAGNETRONS



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Series 300 console



Series 350 table top console on base



Series 600 single case portable



Model 450 console on base

For uses where utmost reliability, "perfect" fidelity and accuracy of timing are of prime importance, Ampex Tape Recorders are universally preferred. America's four major broadcasting networks, the country's leading phonograph record manufacturers and various important musical organizations are among those whose usage has established Ampex as the world's standard of excellence in sound recording.

SERIES 300—THE SUPREME AMPEX

These, the finest of the Ampex line, are the machines used where speaking or musical performances justify the best recordings it is possible to make. Because of their supreme reliability, the 300 Series machines are used by major radio networks to originate, delay and rebroadcast important radio shows. Record manufacturers use the Series 300 for master recordings because of their high signal-to-noise ratio and low flutter and wow.

SERIES 350—THE STANDARD AMPEX

Newest of Ampex's general purpose audio recorders, the 350 has a 30° slant on the top-plate. This puts reels, editing knobs and all controls within easier reach of the operator. Tape editing is faster and less tedious. A three motor tape transport (also used on the higher priced Model 300) provides excellent tape control and utmost reliability of operation. The Series 350 is unusually accessible for servicing.

SERIES 600—THE MOST VERSATILE AMPEX

The Series 600 brings Ampex standards of quality within the reach of the most limited budget. Weighing less than 28 pounds, the Ampex 600 is the first truly miniaturized recorder which can provide full professional quality for remote broadcast pickups, schools and conservatories, high fidelity enthusiasts and other semi-professional users.

MODEL 450—FOR BACKGROUND MUSIC

For background music, automatic broadcasting and TV test patterns, the Model 450 Continuous Tape Reproducer provides up to 8 hours of continuous unrepeated program. The Model 450 uses 14-inch NARTB reels with double track pre-recorded tapes. Starting, stopping, reversing and program repeating are controlled automatically with no attention from a standby operator.

SERIES 3200—FOR TAPE DUPLICATION

Designed to make duplicate tapes at minimum labor cost, the Ampex Tape Duplicator makes from 1 to 10* duplicates simultaneously and employs a time-saving speedup. Double track tapes are made in one pass. Fidelity is high (see specifications). Duplicates of any standard tape speed can be made from masters of any standard speed.

*User has the option of buying from 1 to 10 slaves to operate from one master unit.

*SPECIFICATIONS

| | SERIES 300 | SERIES 350 | SERIES 600 | MODEL 450 | SERIES 3200 |
|--|--|-----------------------------|------------------------------|------------------------------|-----------------------------|
| Frequency Response (Tape speeds shown are not all available in all models) | 15 in/sec—30 to 15,000 cps \pm 2 db 7½ in/sec—40 to 15,000 cps (40 to 10,000 cps \pm 2 db) (down no more than 4 db at 15,000 cps) 3¾ in/sec—50 to 7,500 cps (50 to 5,000 cps \pm 2 db) (down no more than 4 db at 7,500 cps) | | | | |
| Signal-to-Noise Ratio (by NARTB standards) | Over 60 db | Over 60 db | Over 55 db | Over 50 db | Over 45 db |
| | (for full track machines at optimum speed) | | | | |
| Flutter and Wow | Under 0.1% rms at 15 in/sec | Under 0.2% rms at 15 in/sec | Under 0.25% rms at 7½ in/sec | Under 0.25% rms at 7½ in/sec | Under 0.2% rms at any speed |

AMPEX CORPORATION

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AMPEX DATA RECORDERS

Ampex magnetic tape machines retain test data in "live" electrical form. Hence a playback of the data is like a rerun of the original test. The tremendous "memory capacity" of magnetic tape retains more complete and detailed information than any other data recording method. The data can be scanned, speeded up, slowed down, automatically reduced or converted to any other electrical, visual or physical form. To cover the widest range of data situations, Ampex data recorders are offered with various frequency ranges, numbers of tracks and modes of recording.

F-M CARRIER TYPE RECORDER—MODEL 306*

Explosions, shock waves, geophysical data and other highly transient phenomena can be recorded on the Model 306 with excellent "instantaneous" accuracy. Because the data signals modulate an fm carrier, the accuracy of the recording is unaffected by minor tape imperfections.

Also, the Model 306 is able to record the vast majority of all mechanical occurrence, since it covers the extremely useful frequency range from 5000 cycles/sec. down to zero (D.C.).

OPTIONS: One to 14 tracks
Rack, console or combination mounting
Record and playback, record only or playback only

WIDE RANGE DIRECT RECORDER—MODEL 307*

With a frequency response from 100 to 100,000 cycles per second, the Model 307 is particularly suited to steady state data occurring over a wide range of frequencies. The 307 has had extensive application in fm-fm telemetering, sharing this field with the Model 500 described below.

OPTIONS: Same as Model 306

PULSE WIDTH RECORDER—MODEL 303*

This model can record any type of phenomena that lends itself to pulse width coding. Pulses can range from 60 to 1000 microseconds and will be accurate in duration to closer than 2 microseconds. Since each track on the machine may record commutated data consisting of many channels, it is possible to record hundreds of parallel data channels on one tape on a Model 303 machine.

OPTIONS: Same as Model 306

"LOW FLUTTER" WIDE RANGE RECORDER—MODEL 500

The Model 500 is a four-track, two-speed magnetic tape recorder designed to achieve extreme stability of tape motion while recording information in the frequency range between 100 and 100,000 cycles. Thus it is able to record fm-fm telemetering data without introducing any objectionable data error from small variations in tape speed. It has the lowest known flutter and wow characteristics of any tape recorder—less than 0.1% peak-to-peak by RDB standards.

Console mounting only
Four tracks only

SEISMIC DRUM RECORDER—MODEL 700

The Model 700 is a highly specialized instrument for seismic exploration for oil. It records 26 channels of information in fm-modulated form on a single tape, 4"x40 1/16". The tape is mounted on a constant speed drum, and is replaceable after each test shot. Frequency response is within ± 1 db from 3 1/2 to 300 cps, with a corresponding dynamic range of more than 45 db. The total time alignment between all data channels is closer than 1 millisecond.

Rack mounting only

* These models are available as two-track Combination Recorders. One 303 track plus one 307 track becomes a Model 309; one 306 track plus one 307 track becomes a Model 311.

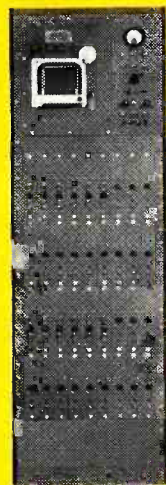
Write today for further information and complete specifications.



Series 300 data recorder
in rack mounting.



Ampex Model 500 Recorder



Ampex Model 700 Drum Recorder

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AMPEX

MAGNETIC RECORDERS

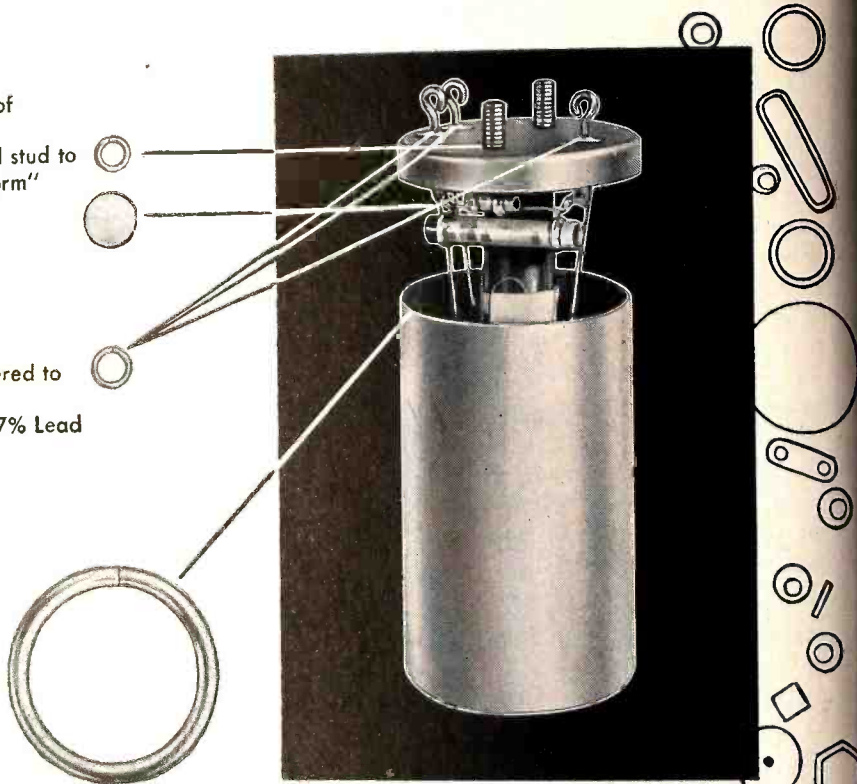
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A First step in resistance soldering of this high-precision oscillator coil consisted of soldering screws and stud to can cover. Used Kester "Solderform" Disc and Rings composed of 5% Silver—95% Lead Alloy. Melting Point 680°F.

B Three glass terminals were soldered to cover with Kester "Solderform" Rings comprised of 63% Tin—37% Lead Alloy. Melting Point 361°F.

C Final operation, hermetically sealing cover on can, used Kester "Solderform" Ring 28.5% Bismuth—28.5% Tin—43% Lead Alloy. Softening Point 250°F.



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Tough jobs like this one can be made easy by Kester-engineered "Solderforms." Progressively lower melting temperatures at the various points of solder contact were mandatory, so as not to loosen each previous solder bond. And, typical of all Kester "Solderform" applications, the completely assembled coil successfully met all exacting tests, including 45 lbs. air pressure under alternate hot and cold water immersions.

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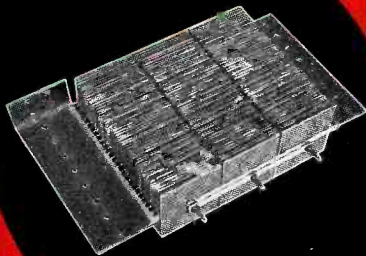
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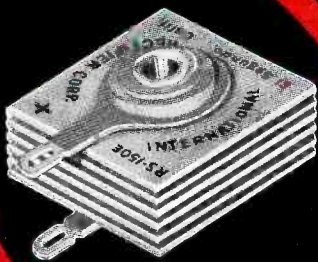
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For greater strength: Allen Head Screws permit the use of smaller sizes. For instance a No. 6 Allen Head Cap Screw is equivalent to a No. 8 conventional screw.

For space economy: Allen Head Screws permit closer spacing of screws, eliminate projecting heads.

For greater holding power: Allen Head Screws are insurance against avoidable costly service operations.

In hard-to-reach places: Allen Head Screws, plus Allen Hex Keys and Drivers start screws easily and save awkward "fingering in."

For fine adjustments, close, snug fit between key and screw permits delicate adjustments that stay put.

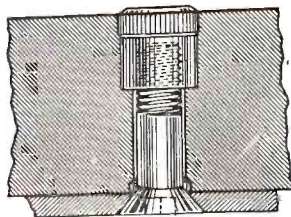
For tamper-proof settings in gauges and instruments, Allen Head Screws can be set below surface and wax sealed.

If vibration is a factor, the precise Class 3 fit of Allen Head Screws will build longer trouble-free life into the product.

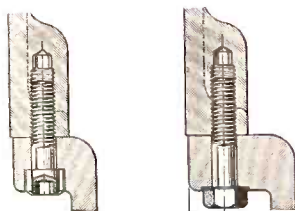
For a ready-made threaded hole, the new Allenut offers greater holding power and positive anchor in soft metals.

Allen Head Screws are available as standard items in a wide range of sizes ranging upward from No. 2 x 1/8". NC and NF threads. Popular sizes also available in 18-8 stainless steel. Set screws stocked in Allen-point, oval, flat cone and half dog points (full dog, special).

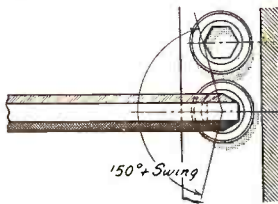
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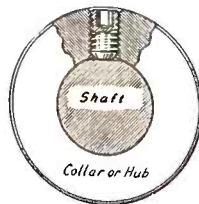
Allenut and Allen Flat Head Cap Screw used to hold thin metal plate to metal base. Allenut has been pressed into counterbored hole. Will not fall out or turn against driving action.



Allen Head Cap Screws contribute to compact designing. Can be countersunk without allowing for wrench clearance.



Allen Heads permit close spacing impossible with conventional heads.



Firm grip without the use of weak slots or projecting heads.

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 Household Appliances
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 Photographic and Projection Equipment
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 Printing Machinery
 Pumps and Compressors
 Radio and Radar Equipment
 Refrigeration and Air Conditioning Equipment
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 Transportation Equipment
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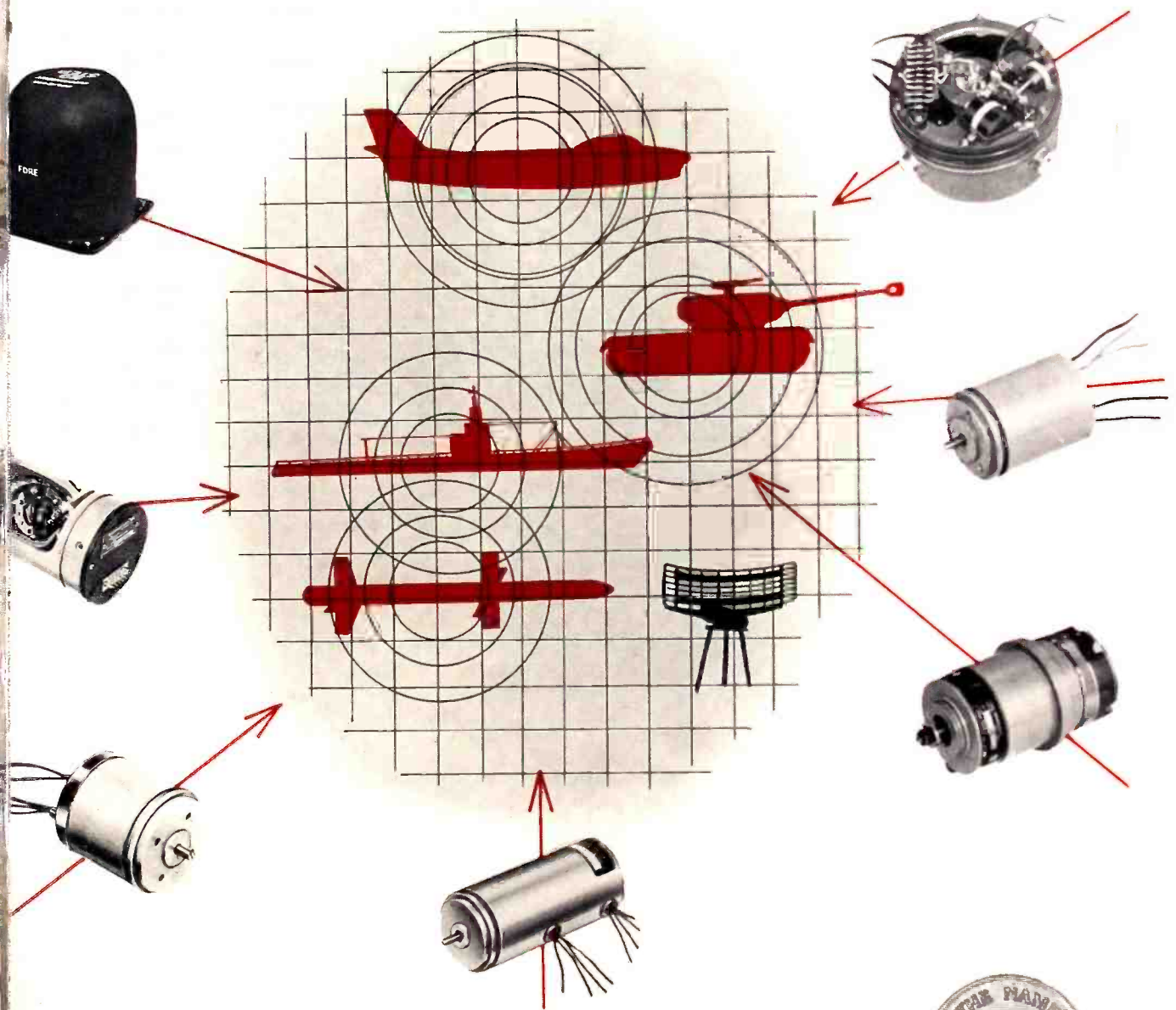
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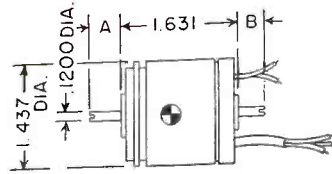
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AY-200 SERIES AUTOSYN® SYNCHROS

| TYPE No. | FUNCTION |
|--------------|--|
| AY-20()-1 | Multi-Power Transmitter |
| AY-20()-2 | Synchronous Receiver |
| AY-20()-3 | Control Transformer |
| AY-20()-4 | Single Power Transmitter |
| AY-20()-5 | Control Transformer (High Impedance) |
| *AY-20()-25 | Control Transformer |
| *AY-20()-26 | Transmitter |
| AY-20()-34 | Control Transformer (Grease Lubricated Bearings) |
| AY-22()-3 | Resolver |
| AY-22()-5 | Resolver (High Impedance) |
| *AY-22()-25 | Resolver |
| AY-22()-27 | Resolver (Double Heavy Brushes) |



| TYPICAL NO. | Dimen. | |
|-------------|--------|------|
| | A | B |
| AY-200-1 | 1/4" | 0 |
| AY-201-1 | 1/2" | 0 |
| AY-202-1 | 7/16" | 3/8" |

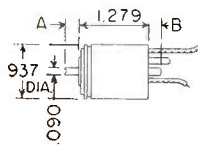
| TYPE No. | FUNCTION |
|--------------|---|
| AY-22()-34 | Resolver (Grease Lubricated Bearings) |
| *AY-22()-38 | Resolver (High Impedance) |
| AY-23()-3 | Differential (Servo Applications) |
| AY-23()-4 | Differential (Synchronous Applications) |
| *AY-23()-25 | Differential |
| AY-23()-34 | Differential (Grease Lubricated Bearings) |
| AY-24()-5 | Resolver (Omni Applications) |
| AY-25()-24 | Resolver (High Frequency) |
| *AY-25()-39 | Resolver (High Frequency) |
| AY-26()-3 | Resolver (Control Transformer) |

*Corrosion resistant

®Registered trademark Bendix Aviation Corporation

AY-500 SERIES "PYGMY" AUTOSYNS

| TYPE No. | FUNCTION |
|-------------|--------------------------------------|
| AY-50()-2 | Receiver |
| AY-50()-3 | Control Transformer |
| AY-50()-4 | Transmitter |
| AY-50()-5 | Control Transformer (High Impedance) |
| AY-50()-25 | Control Transformer |
| AY-50()-26 | Transmitter |



| Typical No. | Dimension | |
|-------------|-----------|------|
| | A | B |
| AY-500-2 | 1/4" | 0 |
| AY-502-2 | 1/4" | 1/4" |
| AY-503-2 | 3/8" | 0 |



*Corrosion resistant

| TYPE No. | FUNCTION |
|--------------|---------------------------|
| AY-52()-3 | Resolver |
| *AY-52()-25 | Resolver |
| AY-53()-3 | Differential |
| *AY-53()-25 | Differential |
| AY-54()-5 | Resolver |
| AY-55()-24 | Resolver (High Frequency) |

ORDNANCE AND NAVY TYPE AUTOSYN SYNCHROS

| TYPE No. | | FUNCTION |
|-----------------|----------|----------------------------------|
| ECLIPSE-PIONEER | MILITARY | |
| AY-1100-1 | 11CX4A | Control Transmitter |
| AY-1100-2 | 11CT4A | Control Transformer |
| AY-1601-1 | 15CX4A | Control Transmitter |
| AY-1601-2 | 15CT4A | Control Transformer |
| AY-1601-5 | 15TR4A | Torque Receiver |
| AY-1631-3 | 15CDX4A | Control Differential Transmitter |
| AY-1900-8 | 18CT6A | Control Transformer |
| AY-2400-1 | 23CX4 | Control Transmitter |
| AY-2400-2 | 23CT4 | Control Transformer |
| AY-2400-3 | 23CDX4 | Control Differential Transmitter |
| AY-2400-4 | 23TX4 | Torque Transmitter |
| AY-2400-5 | 23TR4 | Torque Receiver |
| AY-2400-9 | 23CX6 | Control Transmitter |
| AY-2400-10 | 23CT6 | Control Transformer |
| AY-2400-12 | 23TX6 | Torque Transmitter |
| AY-2400-13 | 23TR6 | Torque Receiver |
| AY-2401-1 | 23CX4A | Control Transmitter |
| AY-2401-2 | 23CT4A | Control Transformer |

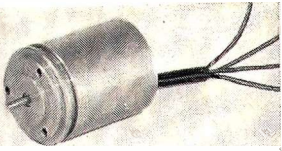


| TYPE No. | | FUNCTION |
|-----------------|----------|----------------------------------|
| ECLIPSE-PIONEER | MILITARY | |
| AY-2401-4 | 23TX4A | Torque Transmitter |
| AY-2401-5 | 23TR4A | Torque Receiver |
| AY-2401-10 | 23CT6A | Control Transformer |
| AY-2401-12 | 23TX6A | Torque Transmitter |
| AY-2401-13 | 23TR6A | Torque Receiver |
| AY-2430-7 | 23TDX4 | Torque Differential Transmitter |
| AY-2430-8 | 23TDR4 | Torque Differential Receiver |
| AY-2451-3 | 23CDX4A | Control Differential Transmitter |
| AY-2451-7 | 23TDX4A | Torque Differential Transmitter |
| AY-3200-9 | 31TX4A | Torque Transmitter |
| AY-3200-10 | 31TR4A | Torque Receiver |
| 2323-1 | 1HCT | Control Transformer |
| 2324-1 | 1HG | Transmitter |
| 2325-1 | 1HDG | Differential Transmitter |
| 2330-1 | 1F | Receiver |
| 2333-1 | 2R | Double Receiver |
| 2343-1 | 1D | Differential Receiver |

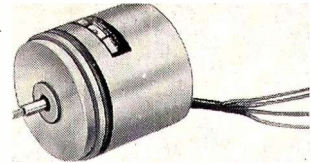
ECLIPSE-PIONEER DIVISION
TETERBORO, NEW JERSEY



AVIATION CORPORATION



SERVO MOTORS

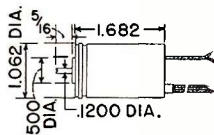


LOW INERTIA

| Number | Rated Voltage | | Max. Power Input Total (Watts) | No Load Speed (RPM) | Stall Torque (Oz. in) | Torque To Inertia Ratio (Radians/sec ²) | Type Number | Rated Voltage | | Max. Power Input Total (Watts) | No Load Speed (RPM) | Stall Torque (Oz. in) | Torque To Inertia Ratio (Radians/sec ²) |
|---------|---------------|----------|--------------------------------|---------------------|-----------------------|---|----------------------|---------------|---------|--------------------------------|---------------------|-----------------------|---|
| | Phase 1 | Phase 2 | | | | | | Phase 1 | Phase 2 | | | | |
| 1000-1 | 40 | 50 | 7 | 5500 | 0.28 | 10,000 | CK-2000-3 | 100 | 130 | 30 | 7200 | 2.7 | 46,000 |
| 1000-2 | 42 | 42 | 7 | 5500 | 0.28 | 10,000 | CK-2000-4 | 95 | 95 | 30 | 7200 | 2.7 | 46,000 |
| 1000-4 | 26 | 50 | 7 | 5500 | 0.28 | 10,000 | CK-2000-5 | 110 | 110 | 30 | 6600 | 3.0 | 4,700 |
| 1006-7 | 18 | 18 | 5 | 10000 | 0.13 | 13,000 | CK-2006-1 | 64 | 64 | 30 | 7200 | 2.6 | 70,000 |
| 1018-7 | 18 | 18 | 5 | 10000 | 0.13 | 13,000 | CK-2006-3 | 100 | 130 | 30 | 7200 | 2.6 | 70,000 |
| 1022-13 | 115 | 115/57.5 | 12 | 4800 | 1.45 | 33,800 | CK-2006-4 | 95 | 95 | 30 | 7200 | 2.6 | 70,000 |
| 1025-13 | 115 | 115/57.5 | 12 | 4800 | 1.45 | 33,800 | CK-2006-5 | 110 | 110 | 30 | 6600 | 3.0 | 5,700 |
| 1026-13 | 115 | 115/57.5 | 12 | 4800 | 1.45 | 33,800 | CK-3000-1 | 110 | 220 | 80 | 3700 | 14.0 | 3,750 |
| 1027-14 | 115 | 115/57.5 | 7 | 6200 | 0.63 | 41,500 | CK-3000-2 | 220 | 290 | 80 | 3700 | 14.0 | 3,750 |
| 1027-15 | 115 | 180/90 | 7.2 | 6200 | 0.63 | 41,500 | *X-1224641-1 | 110 | 110 | 30 | 6600 | 3.0 | 5,700 |
| 1028-16 | 26 | 26 | 6 | 10000 | 0.28 | 13,000 | *X-1224642-1 | 64 | 64 | 30 | 7200 | 2.6 | 70,000 |
| 1029-17 | 26 | 50 | 6 | 5500 | 0.4 | 14,000 | *X-1224642-3 | 100 | 130 | 30 | 7200 | 2.6 | 70,000 |
| 1031-18 | 26 | 55 | 9 | 6400 | 0.35 | 10,000 | *X-1224642-4 | 95 | 95 | 30 | 7200 | 2.6 | 70,000 |
| 2000-1 | 64 | 64 | 30 | 7200 | 2.7 | 46,000 | *Corrosion Resistant | | | | | | |

AY-190 SERIES AUTOSYNS

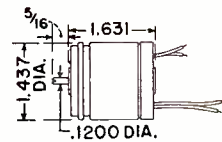
| TYPE | FUNCTION |
|--------|---------------------|
| AY-190 | Transmitter |
| AY-191 | Control Transformer |
| AY-192 | Resolver |
| AY-193 | Differential |
| AY-194 | Receiver |



All Corrosion Resistant

LINEAR AUTOSYN SYNCHROS

| TYPE No. | APPLICATION |
|----------|----------------------|
| AY-141 | High Temperature |
| AY-172 | High Temperature |
| AY-173 | Standard Temperature |
| AY-179 | Standard Temperature |



Typical Outline

RATE AND MOTOR GENERATORS

| TYPE | FUNCTION | RATED VOLTAGE | | MAX. POWER INPUT TOTAL (WATTS) | NO LOAD SPEED (RPM) | STALL TORQUE (OZ. IN.) | TORQUE TO INERTIA RATIO (Radians/Sec. ²) | GEN. OUTPUT (VOLTS) |
|------------|------------|---------------|---------|--------------------------------|---------------------|------------------------|--|---------------------|
| | | PHASE 1 | PHASE 2 | | | | | |
| *FV-100-5 | Motor Gen. | 26 | 26 | 9.5 | 10000 | 0.28 | 10,000 | 0.3/1000 |
| *FV-101-5 | Motor Gen. | 26 | 26 | 9.5 | 10000 | 0.28 | 10,000 | 0.3/1000 |
| FV-2000-1 | Motor Gen. | 64 | 64 | 30 | 7200 | 2.6 | 70,000 | 0.3/1000 |
| FV-2001-2 | Motor Gen. | 115 | 115 | 30 | 6600 | 3.0 | 70,000 | 0.3/1000 |
| FV-3000-1 | Motor Gen. | 110 | 220 | 80 | 3700 | 14.0 | 3,750 | 0.15/1000 |
| *FT-102-5 | Rate Gen. | 18 | ..... | 3.5 | ..... | ..... | ..... | 0.3/1000 |
| *X-1214382 | Motor Gen. | 26 | 26 | 9.7 | 6000 | 2.6 | 21,000 | 0.5/1000 |
| *X-1220798 | Motor Gen. | 110 | 110 | 30 | 7000 | 2.6 | 10,000 | 0.3/1000 |

*Corrosion resistant





NOW! . . .

from the world's largest producer of gyros . . .



RATE GYRO

Type No. 15814-1-A

Overall Size—2" x 2"

MOTOR: 26 volts, 400 cps, 3 phase with rated speed of 22,000 rpm and a rotor moment of inertia of 175 gram-cm².

PICKOFF: 26 volts, 400 cps, single phase with "E" type variable coupling. With resistive load of 10,000 ohms. Tuned output is 6 to 7 volts at maximum rate. Null is 30 millivolts with an armature travel of 2½° to 3° either side of null.

DAMPING: Accomplished by fluid flotation of gimbal. Damping factor is 0.5 to 0.7 of critical, but values up to and including 1.0 of critical can be provided.

NATURAL FREQUENCY: 50-55 cps (undamped).

WARM-UP TIME: One minute.

RANGE: Maximum rate is 450 ± 20°/second. Minimum detectable rate is less than 1.5°/second. Other maximums and minimums are available.

ENVIRONMENTAL CHARACTERISTICS: -20°F. to 140°F. temperature operating range. Maximum shock is 60 g. Vibration operating range of 5 g. from 20 to 300 cps. Positive hermetic seal. **WEIGHT:** 13.5 ounces complete with mounting bracket and electrical connector.



FREE GYRO

Type No. 14108-1-A

Overall Size—3⅜" x 5⅝"

MOTOR: 26 volts, 400 cps, 3 phase with rated speed of 22,000 rpm and a rotor moment of inertia of 1260 gram-cm².

DRIFT RATE: Will not exceed 1° per minute when subjected to Scorsby test at amplitude of ± 15° and rate of approximately 6 cpm (corrected for earth's rotation).

PICKOFF: Autosyn type with peak value of 20 volts. Initial slope of output voltage curve about null position is 0.35 volts per degree ± ten per cent. Phase shift is less than 20 degrees. Residual voltage is less than 50 mv.

WARM-UP TIME: Within two minutes.

OPERATING LIFE: Rated at 500 hours. **ENVIRONMENTAL CHARACTERISTICS:** Maximum operating temperature 195°F. and a minimum of -20°F. Maximum allowable shock is 60 g. Maximum operating vibration of 7 g. (from 10 to 500 cps). Maximum excursion not to exceed 0.5 inches. Positive hermetic seal.

WEIGHT: Approximately 4.2 lbs. **CAGING AND UNCAGING:** Can be caged remotely by applying 26 volts, 400 cps single phase and 28 volts DC power. Will cage from any position of gimbal within 30 seconds with gyro rotor at full speed. Application of 28 volts will uncage within 0.1 seconds.



HERMETICALLY SEALED

ROLL GYRO

TRANSMITTER

Type XD 790412

| | |
|---------------------------------|---|
| Power requirements | 45 volts, 3 phase, 800 cps |
| Gyro speed | 22000 RPM |
| Gyro moment | 3300 gram cm ² |
| Acceleration time | 7 minutes @ 45 volts |
| | 15 minutes @ 75 volts |
| Weight | 6.0 pounds |
| Size | 4 7/8" dia.—5 5/64" long |
| Drift | below 0.5°/minute |
| Precession under 3RPS | below 1.2°/minute |
| Caging time | 1 minute (28 volts D.C.) |
| Pickoff excitation | 6 volts, 5000 cps 1Φ and 26v 400 cps 1Φ |
| Pickoff output | 60 mv. degree |

COMPLETE FREEDOM ON 2 AXIS

TWO AXIS-GRAVITY ERECTED

VERTICAL GYRO

TRANSMITTER

Type No. 14104-1

Diam.—6 1/8" Height—6 3/4"

Weight—6 1/4 lbs.

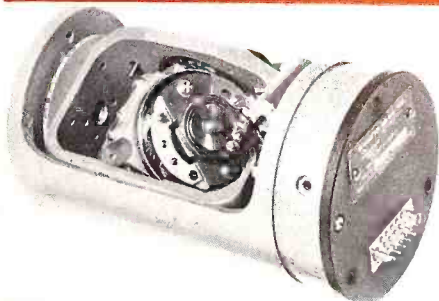
Designed for use as a remote vertical reference where vertical stabilization is required. The instrument is essentially an electrically driven, vertical-seeking gyro with separate Autosyn transmitter pickoffs on the pitch and bank axes. Sealed in an aluminum case against environmental conditions.

- Operating temperature range: -55°C to +70°C.
- Operational limits: 360° in roll and pitch with controlled tumbling of the pitch axis at near 90°.
- Erection device: A two-ball erection system maintains the gyro in a vertical position to within ¼° of vertical position with respect to the earth.
- Caging: From any position at full rotor speed in less than 45 seconds.



VERTICAL GYRO TRANSMITTER

FOR RADAR AND AUTO PILOT CONTROL



TYPE 14110-1-A

FEATURES: Includes quick erecting mechanism which makes the remote unit ready for operation within 3 minutes. • Two ball erection system. • Non-tumbling stops. • Inclined axis (1 degree) to minimize turn error.

Power Requirement . . . 115 v, 1 phase, 400 cps Starting . . . 19 w .9 P.F. Running . . . 13 w .85 P.F.

Gyro Speed . . . 22000 RPM

Gyro Moment . . . 600 gram cm²

Erection rate (normal) . . . 3°/minute

Autosyn excitation . . . 26 v, 400 cps

Weight . . . 2 3/4 lbs.

Size . . . 3 1/8 diameter x 5 1/6 long

ECLIPSE-PIONEER DIVISION

TETERBORO, NEW JERSEY



service

*the
fourth
dimension
of
business*

RESEARCH

ENGINEERING

MANUFACTURING

ere, at the Scintilla Division of Bendix, the word SERVICE is much more than the name of a department. It is a vitally important part of our over-all operations. Together with Research, Engineering and Manufacturing—Service might well be termed the fourth dimension of our business.

To implement this policy of following through to see that every customer gets the full performance built into each product, the Scintilla Division has a worldwide service organization backed up by factory-trained service men strategically located to meet service emergencies.

Service data, covering installation, operation and repairs as well as adequate distribution of parts, makes up a complete service program.

Just another reason why the name Bendix has become "The Most Trusted Name in Ignition."

**SCINTILLA
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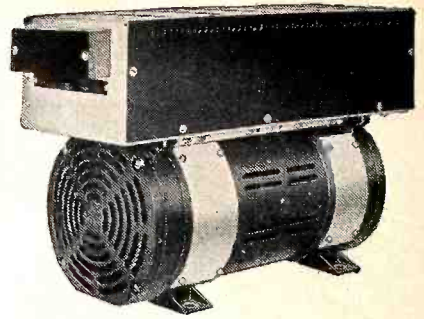
SIDNEY, NEW YORK

Bendix

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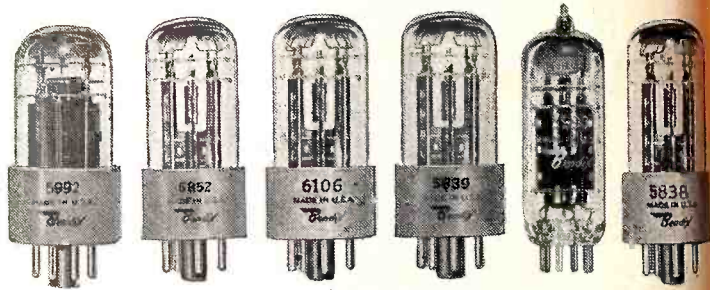
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For the most
complete line of
**AIRCRAFT
INVERTERS**



The Red Bank Division of Bendix Aviation Corporation is the logical place to find your answer to aircraft inverter needs—and for three significant reasons. First, we offer the widest range of inverters. Second, we design and build each inverter as a complete, unified mechanism. Third, we are equipped to design and produce inverters for all kinds of special-purpose applications . . . and, in fact, are now engaged in developing inverters up to 5000 VA and for high temperature, high altitude applications.

For
"RELIABLE"
**ELECTRON
TUBES**



With electronic controls taking over more and more operational functions in aircraft, it's becoming increasingly important that the electron tubes used be dependable under conditions of high altitude, continuous vibration, varying voltages and frequent shock. Because of their advanced design and construction . . . born of never-ceasing research and special production skills . . . Bendix Red Bank Regular and Special Purpose Reliable Electron Tubes have the dependability necessary to meet severe operating conditions.

For complete details on our aircraft inverters or electron tubes . . . or on our dynamotors, voltage regulators, fractional D.C. motors or A.C. and D.C. generators . . . write

Bendix
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EATONTOWN, NEW JERSEY

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Depend on

Bendix
Red Bank

Some bright spots in the Sales Picture!

There are literally *hundreds* of ways in which **DRAKE** Socket Assemblies and Signal Lights can help an appliance sell itself!

The evident promises they give of greater *safety*, more *economy*, higher *efficiency* in use can tip the prospective buyer's decision *your way* . . . the fulfillment of those promises when the appliance is put to work in the home or store helps build the satisfaction which brings a customer back again for *your brand*.

Almost endless possibilities for practical application, both for warning signals and for illumination, can only be barely suggested by the examples illustrated:

- A . . BEEHIVE JEWEL LIGHT ASSEMBLY, for many applications . . Lamp replaceable from front of panel.
- B . . GERMICIDAL, with ultra-violet lamp for purifying and deodorizing.
- C . . JEWEL LIGHTS, with wired leads, for use where signal lights must be practically infallible . . Terminals can't short.
- D . . SWITCH SOCKETS, for concealed illumination at working areas.
- E . . INDICATOR BATTERY, with neon lamps and necessary resistance, for use in limited space.
- F . . SHIELDED LIGHT SOURCE.
- G . . REFLECTOR SWITCH TYPE ASSEMBLY, for concentrated illumination on work areas.
- H . . LAMP BANK, consisting of two series groups in parallel.

It costs so little to get the extra sales punch and performance advantages precision-made, *use-proven* **DRAKE** Socket and Signal Light Assemblies can give your unit. Write Dept. EB, and tell us what type of appliance you have in mind. Our broad experience often suggests low-cost possibilities which you may have overlooked.



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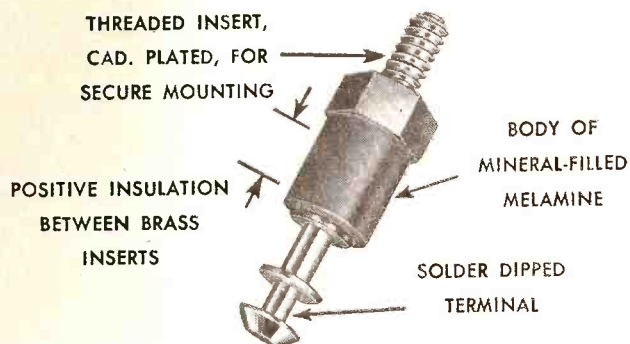
SOCKET & JEWEL LIGHT ASSEMBLIES

WHITSO

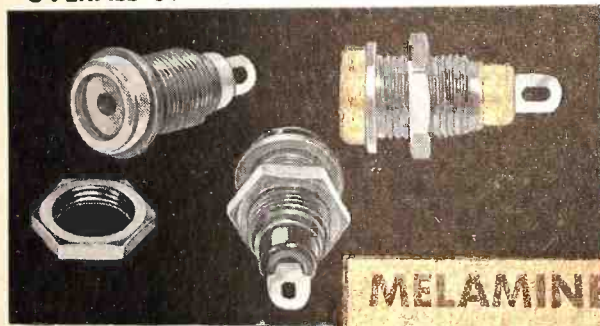
STAND-OFF TERMINALS

PRODUCTS HERE PRESENTED ARE REPRESENTATIVE OF A LARGE VARIETY OF TERMINALS.

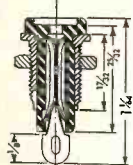
CATALOGUE ON REQUEST.



OVERALL STURDY CONSTRUCTION



MELAMINE JACKS



Material Key:

- MELAMINE MOLDED PLASTIC
- BRASS, CAD. DICHROMATE PLATED
- BRASS, NICKEL PLATED

The design of the #J-1 series jack represents an optimum combination of electro-mechanical elements. A BRASS THREADED BUSHING is molded as an integral unit with the MELAMINE BODY. Melamine material possesses excellent mechanical and electrical properties, and, further, offers a natural resistance to fungus. The BERYLLIUM COPPER SPRING CONTACT is heat treated and silver plated. Terminal lug is solder dipped.

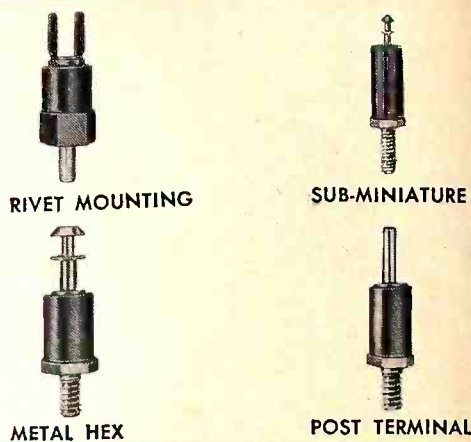
Red, black, yellow, blue and white bodies available for color coding.

WHITSO, INC.

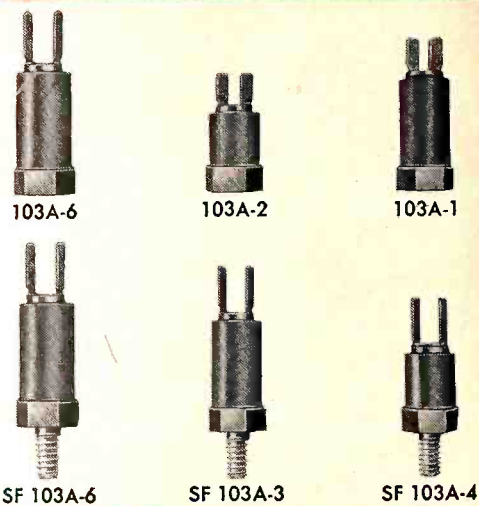
9328 Byron Street, Schiller Park, Illinois

(Chicago Suburb)

SPECIAL TYPES



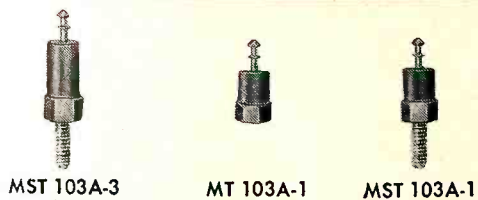
FORK TERMINAL



TURRET TERMINAL



SUB-MINIATURES



BLACK POINTER KNOB



K105

- SATIN FINISH
- APPROVED FOR MILITARY USE



Westinghouse

MODERN EQUIPMENT FOR MAINTENANCE-FREE ELECTRONICS USE



FG Audio Amplifiers • Surge Comparison Testers
High Voltage Rectifiers • Portable Balancers
Micarta • Transformer Cores • Transformers
Transistors • Magnetic Amplifiers • Instruments
Selenium Rectifiers • Capacitors • Magnetic Metals
and Alloys • Pushbuttons • Relays • Indicating Lamps
Switches • Electronic Tubes

FG AUDIO AMPLIFIER

FG AUDIO AMPLIFIER

The Type FG 5/10 KW audio amplifier consists of a push-pull power amplifier stage driven by a high fidelity driver amplifier. The power stage contains either two or four triodes (WL-5736) depending upon whether 5- or 10-kilowatts output is desired. Supply for the final stage uses selenium rectifiers. Power supply may be 3 phase, 50 or 60 cycle, 220, 230, 240 or 440, 460, 480 volts. Output 5 or 10 KW into a resistive load over a frequency range of 30-10,000 cps. Used for powering laboratory testing equipment under controlled conditions; powering supersonic transducers; supplying power at audio frequencies and for exploring high frequency vibration phenomena. The amplifier is entirely self-contained and is completely protected against overload or incorrect operation by air breakers. There are no exposed voltages outside the enclosure. Interlocks automatically remove high voltages when either of the side doors are opened, or front panels are removed. See D.B. 85-950 for full information.

OPERATIONAL CHARACTERISTICS

Response: Uniform ± 1.5 db, 30-10,000 cps with resistance load.
Distortion: RMS harmonic distortion 5% or less, 50-10,000 cps.
Hum and Noise Level: 45 db or more below full output.
Audio Input Level: 10 milliwatts maximum.
Input Impedance: 150 or 600 ohms.
Output Voltages as specified: Arranged for 6 voltages in arithmetical progression.
For example: 120-240-360-480-600-720-volts.
Power Supply: 220, 230, 240 or 440, 460, 480 volts 3-phase, 50 or 60 cycles.
Permissible Voltage Deviation: $\pm 5\%$, including regulation and variation.
Permissible Voltage Unbalance: $\pm 2\%$ average of three phases.
Regulation: When output voltage regulation is required, the amplifiers can be modified on special order, to provide regulation not over 10% at any frequency in the range of 60-3,000 cycles into resistance loads. Regulation is defined as $\frac{V_1 - V_2}{V_2} \times 100$, where V_1 = output voltage at no load, V_2 = output voltage at full load.

YOU CAN BE SURE... IF IT'S

Westinghouse

P.O. BOX 868, PITTSBURGH 30, PA.



PORTABLE BALANCERS



TYPE HQ PORTABLE BALANCER

Static and dynamic unbalance are usually present in rotating parts after fabrication. Undesirable vibration and noise inherent in mass produced rotors can be eliminated by balancing dynamically with production type balancing machine tools. However, where conditions are such that balancing a rotor in its own bearings is necessary, a portable balancer is indicated.

In the Type HQ portable balancer, relatively simple, accurate and reliable means are provided, by a wattmeter and sine-wave alternator, for determining the amount of unbalance, and the angular location and magnitude of the correction weights.

The balancer consists of an indicating

wattmeter, with necessary interconnection, switching and control devices, assembled in a carrying case; one or more velocity type pickups; and either a sine-wave alternator for hand held models or a keyed type sine-wave generator for mounted models. The alternator or generator, and pickup assemblies are supplied in a separate carrying case. Seismic mountings for pickups are also available. The apparatus may be used normally in a speed range of 600 to 6000 r.p.m. The range may be extended downwardly to 200 r.p.m. by means of an auxiliary low speed seismic mounting. For applications above 600 r.p.m., high speed seismic mountings are available. Request descriptive Bulletin 85-920 for complete details.

SURGE COMPARISON TESTERS



MOBILE



PORTABLE

This Westinghouse surge comparison tester simultaneously tests turn-to-turn, phase-to-phase and coil-to-ground insulation; one equipment for most testing needs. With every test set-up, high frequency and high potential qualitative tests of resistance, impedance, and turn balance are made—results are obtained by a single scope observation. High turn-to-turn voltages are applied without excessive winding-to-ground stress. Non-destructive testing is assured on even

fractional h-p motors; however, destructive fault location is possible in many cases.

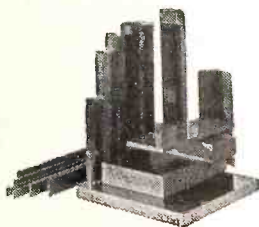
Surge Potential: 10 kv Peak; Negative to Ground.

Power Input: 115-125 volts, 60 cycle, 7 amperes in Portable Model

16 amperes in Mobile Model

Request Descriptive Bulletin 85-960 for complete information.

MICARTA



LAMINATED SHEETS AND SHAPES



MOLDED PIECES



MICARTA 444

MICARTA SHEETS AND SHAPES

Twenty grades of sheets, most of which are available in black or tan. Fillers include paper, cotton, asbestos and glass. The most commonly used by communication engineers is Micarta tan (254) and black (464), both of which are paper base plastic. Either color supplied in 36" x 36" sheets, 1/32" to 2" thick.

MOLDED MICARTA

For large production quantities of simple or complicated shapes. Material placed in the mold may be in one of four forms: (a) wood flour and plastic, (b) impregnated cloth or paper in laminated form, (c) impregnated cloth or paper chopped

MICARTA "444"

This form of Micarta offers a practical and economical means of obtaining molded forms or shapes with low-cost equipment and dies. Examples of the shapes are shown at left. A tan or green product, processed in flat sheets of vari-

Micarta 259 is made of melamine resin in a base of glass cloth. It is white, fire-resistant and very strong. Standard Micarta shapes include angles, channels, zees, rods and tubes. All are produced in six or more grades, in various dimensions.

into small pieces, or (d) a combination thereof. Grades using sheets and chopped pieces make the strongest parts; those containing wood flour are useful for intricate shapes,

ous thicknesses, from cotton cloth impregnated with a phenolic resin binder. Micarta "444" is a practical material for post forming many parts ordinarily made of drawn sheet steel.

For complete details on Micarta, request Bulletin B-5878

YOU CAN BE SURE...IF IT'S

Westinghouse

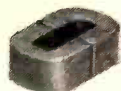
P.O. BOX 868, PITTSBURGH 30, PA.

TRANSFORMER CORES

Hipersil® Type C Cores



1 MIL



2 MIL



4 MIL



5 MIL



12 MIL

The Hipersil Type C core was originally developed by Westinghouse to use oriented silicon steel to full advantage. Since its introduction 14 years ago continual developments have been made in the product to insure better performance. Along with the great improve-

1 MIL—For pulse transformer applications $\frac{1}{4}\mu$ sec. and below and for IF transformers these cores give the ad-

2 MIL—For pulse transformer applications down to $\frac{1}{4}\mu$ sec. these cores

4 MIL—For 100 cycle transformers where the cores are worked at high inductions (these cores are tested at 17.6 Kg. prior to shipment) these

5 MIL—For 400 cycle applications, these cores have been standard for

12 MIL—For 60 cycle applications, 12 mil cores (formerly called 29 gauge) furnish the best transformer core for 60 cycle shipboard and land-based military applications as well as industrial. These cores effect economy of assembly as well as the advantages of small size and weight.

ments in the magnetic materials themselves toward lower core loss and higher permeability, have been improvements in construction such as a lower loss etched butt joint and the more recent grooved core construction for greater stability in transformer operation.

vantage of low-cost assembly as well as high performance. 1 Mil cores . . . Available in same size as 2 Mil.

have been standard for the past 9 years.

cores with extra low exciting current, give the smallest possible 400 cycle transformers.

airborne electronic applications for the past 8 years.

Further Descriptive Information is available under the following:

1 Mil—D.B. 44-035—Sec. 3

2 Mil—D.B. 44-035—Sec. 3

4 Mil—D.B. 44-035—Pgs. 25 & 26

5 Mil—D.B. 44-035—Sec. 2

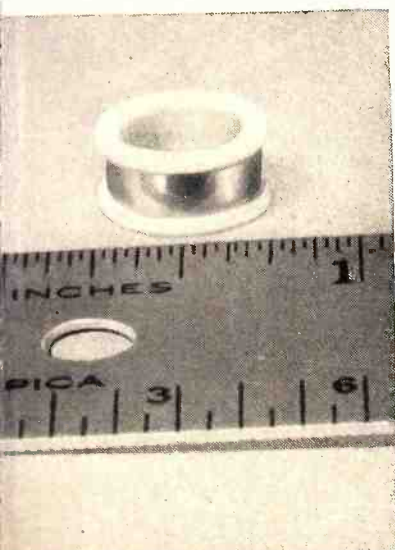
12 Mil—D.B. 44-035—Sec. 1

Hiperthin Cores

HYPERTHIN CORES—Toroidal cores of ultra-thin high permeability magnetic material wound over ceramic spools for computer static storage elements and high frequency pulse applications.

These cores are available in various types of materials such as HIPER-

SIL® (3% silicon iron), HIPER-NIK® (50% iron-nickel), ORTHO-NIK (50% iron-nickel, rectangular hysteresis loop) and 4-79 Permalloy, all in thicknesses of 1 mil, $\frac{1}{2}$ mil, $\frac{1}{4}$ mil and $\frac{1}{8}$ mil. Standard spool sizes are shown and number of turns of magnetic material can be varied to suit application.



| I.D. SPOOL | I.D. CORE | O.D. SPOOL | STRIP WIDTH |
|----------------|-----------------|-----------------|---------------|
| $\frac{3}{16}$ | $\frac{1}{4}$ | $\frac{5}{16}$ | $\frac{1}{8}$ |
| $\frac{3}{16}$ | $\frac{1}{4}$ | $\frac{3}{8}$ | $\frac{1}{4}$ |
| $\frac{1}{4}$ | $\frac{5}{16}$ | $\frac{3}{8}$ | $\frac{1}{8}$ |
| $\frac{3}{8}$ | $\frac{7}{16}$ | $\frac{1}{2}$ | $\frac{1}{8}$ |
| $\frac{1}{2}$ | $\frac{9}{16}$ | $\frac{21}{32}$ | $\frac{1}{8}$ |
| $\frac{3}{4}$ | $\frac{13}{16}$ | $\frac{29}{32}$ | $\frac{1}{8}$ |
| 1 | $1\frac{1}{4}$ | $1\frac{1}{2}$ | $\frac{1}{4}$ |



PULSE TRANSFORMERS

hermetically sealed

Oil-filled output pulse transformers for peak voltage ratings 7 Kv and higher, and pulse widths from 1/4 to 10 micro-

seconds are available in standard ratings and are also designed to customer specifications.



4P43



4P54



4P37

| CATALOG NUMBER | PULSE WIDTH MICROSECONDS | REPETITION RATE PULSES PER SECOND | PULSE KV INPUT/OUTPUT | IMPEDANCE INPUT/OUTPUT | BIFILAR AMPS HEATER CURRENT |
|----------------|--------------------------|-----------------------------------|-----------------------|------------------------|-----------------------------|
| 4P59 | 0.5 | 2000 | 2.5/12 | 50/1100 | 1.0 |
| 4P37 | 0.5-5 | 200 | 3.3/15 | 50/1000 | .25* |
| 4P100 | 0.25 | 4000 | 3.5/14 | 50/1000 | 1.0 |
| 4P43 | 1-2.5 | 2000-400 | 5.5/22 | 50/800 | 2.5 |
| 4P148 | .5 | 2500 | 3.5/28.5 | 15/960 | 1.25 |
| 4P147 | .5 | 2500 | 4.75/28.5 | 25/960 | 1.25 |
| 4P86 | .5 | 2500 | 6.56/28.5 | 50/960 | 1.25 |
| 4P79 | 1.0 | 400 | 5.3/26.5 | 25/625 | 3.0 |
| 8P3 | 1.8 | 400 | 6.86/35 | 33/848 | 1.72* |
| 4P54 | 1-4 | 1200-300 | 6.26/30 | 25/650 | 2.0 |
| 4P71 | 1-4 | 600-150 | 6.1/31 | 25/625 | 2.4 |

*Design includes a filament transformer mounted in the H.V. bushing to transform 115 volt supply and bifilar amp to magnetron heater requirements.

Low Power: Designed for use in low power, low voltage pulse circuits. Four general types are: (1) Blocking oscillator or regenerative drive, (2) Pulse trig-

ger or current transformer, (3) Low power pulse output transformer, and (4) Coupling transformers. See Catalog Section 44-250.

CHARGING CHOKES

hermetically sealed



Used between D-C power supply and Pulse-forming network in high power pulse modulators. Types, based on circuit operation, are resonant, hold-off diode, and linear.

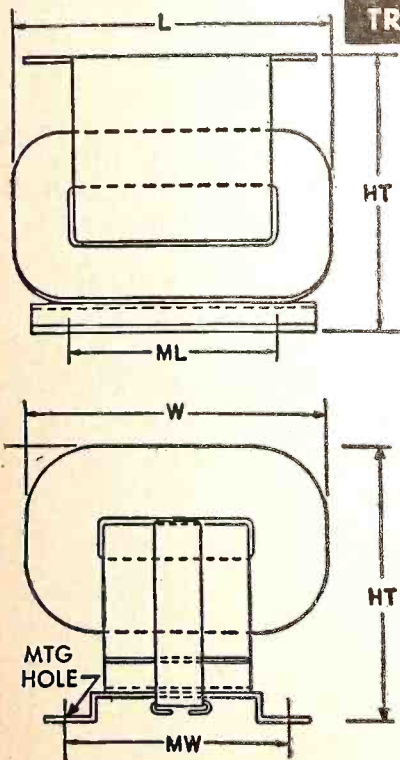
| Catalog Number | DC Supply KV | Network KV | Inductance Henries | Average Current MA | Repetition Rate Pulses Per Second |
|----------------|--------------|------------|--------------------|--------------------|-----------------------------------|
| 4Y22 | 5.5 | 11 | 27 | 122 | 400 |
| 4Y10 | 9 | 18 | 22 | 180 | 600 |
| 8Y3 | 9 | 18 | 10 | 315 | 340 |
| 4Y13 | 12.5 | 25 | 18 | 650 | 300/1200 |

TRANSFORMERS

Fosterite® treated

filament • plate • power • filter choke

Standard transformer sizes, single phase, designed for operation at 380-420 cycles, in 85°C ambient, with 50°C rise and up to 3000 volts rms dielectric test.



| Size No.* | OVERALL DIMENSIONS | | | MOUNTING DIMENSIONS | | | Total Wt (Lbs) |
|-----------|--------------------|---------|---------|---------------------|---------|------|----------------|
| | L | W | Height | ML | MW | Hole | |
| 3011 | 1 1/2 | 1 13/32 | 1 1/16 | — | 1 1/8 | .141 | 1/4 |
| 3021 | 1 3/8 | 1 1/2 | 1 13/16 | — | 1 1/8 | .141 | 3/16 |
| 3032 | 2 | 1 3/4 | 2 | — | 1 1/4 | 5/32 | 3/8 |
| 3043 | 2 | 1 5/16 | 2 1/8 | — | 1 3/16 | 5/32 | 1/2 |
| 3054 | 2 5/16 | 2 | 2 5/16 | 1 11/16 | 1 7/16 | 5/32 | 5/8 |
| 3064 | 2 7/16 | 2 1/8 | 2 1/2 | 1 11/16 | 1 7/16 | 5/32 | 1 1/16 |
| 3075 | 2 1/2 | 2 1/2 | 2 5/8 | 2 1/8 | 1 3/4 | 5/32 | 1 1/8 |
| 3085 | 2 11/16 | 2 3/8 | 2 3/4 | 2 1/8 | 1 3/4 | 5/32 | 1 3/8 |
| 3096 | 2 13/16 | 2 5/8 | 2 13/16 | 2 1/8 | 1 3/4 | 5/32 | 1 5/8 |
| 3107 | 2 13/16 | 2 3/4 | 2 13/16 | 2 1/4 | 1 5/8 | 3/16 | 1 1/2 |
| 3117 | 3 1/8 | 2 15/16 | 3 3/16 | 2 5/8 | 2 1/8 | 3/16 | 2 1/2 |
| 3128 | 3 5/8 | 3 1/8 | 3 1/2 | 3 | 2 7/16 | 1/4 | 3 1/2 |
| 3138 | 3 3/8 | 3 7/16 | 3 5/8 | 3 | 2 7/16 | 1/4 | 4 1/4 |
| 3149 | 4 1/8 | 3 11/16 | 4 1/8 | 3 1/16 | 2 11/16 | 1/4 | 5 |

*Individual transformer performance requirements will determine the size.

YOU CAN BE SURE...IF IT'S

Westinghouse

P.O. BOX 868, PITTSBURGH 30, PA.



MODERN EQUIPMENT FOR MAINTENANCE-FREE ELECTRONICS USE

Fosterite treated transformers utilize Type C Hipersil® cores in a one loop design to achieve a standard design transformer that will fit most applications with minor adaptations. The Fosterite coating applied to these units gives the best protection available for uncased transformers against humidity, immersion and temperature extremes. In addition to standard communications and radar applications, these transformers are being used extensively in other air-borne equipment.

Low Power Pulse Transformers — These pulse transformers are designed for use in low

power, low voltage pulse circuits. The four general types are: (1) Blocking Oscillator or regenerative drive, (2) Pulse Trigger or current transformer, (3) Low Power Pulse output transformer, and (4) Coupling Transformers.

Charging Reactors—Charging reactors are used between the D-C power supply and Pulse-forming network in low voltage pulse circuits. Depending on circuit constants and repetition rates, they operate as resonant, hold-off diode, or linear types.

| POWER TRANSFORMERS | | | | | | | |
|--|--------|---------------------|------|-------------------|------|-------------------|----------------|
| 125/117/108 Volts Primary, 380 to 1600 Cycles, Single Phase, 50° C Rise, 80° C Ambient | | | | | | | |
| ELECTROSTATIC SHIELD | | | | FOSTERITE TREATED | | | |
| PLATE SUPPLY A-C VOLTS | D-C MA | RECTIFIER FILAMENTS | | OTHER WINDINGS | | CATALOG NUMBER | SIZE NUMBER |
| | | VOLTS | AMPS | VOLTS | AMPS | | |
| 205-0-205 | 25 | 6.3CT | 1 | 6.3/5* | 2 | 7K53 | 3054 |
| 230-0-230 | 40 | 6.3CT | 2 | 6.3/5* | 2 | 7K54 | 3064 |
| 295-0-295 | 63 | 6.3CT | 2 | 5 | 2 | 7K55 | 3096 |
| 350-0-350 | 100 | 6.3CT | 3.5 | 5 | 3 | 7K56 | 3075 |
| 400-0-400 | 160 | 6.3CT | 4.5 | 5 | 3 | 7K57 | 3107 |
| 535-0-535 | 250 | 6.3CT | 6 | 5 | 6 | 7K58 | 3128 |
| 550-0-550 | 400 | 6.3CT | 8 | 5 | 6 | 7K59 | 3149 |

*CT on 5 V.

| PLATE TRANSFORMERS | | | | | |
|--|-----------------------------|--------|----------------------|-------------------|----------------|
| 125/117/108 Volts Primary, 380 to 1600 Cycles, Single Phase, 50° C Rise, 80° C Ambient | | | | | |
| ELECTROSTATIC SHIELD | | | FOSTERITE TREATED | | |
| PLATE SUPPLY AC VOLTS | APPROX. OUTPUT D-C VOLTS | D-C MA | TYPE FILTER INPUT | CATALOG NUMBER | SIZE NUMBER |
| 350-0-350 | 350 | 100 | Capacitor | 7J60 | 3054 |
| 400-0-400 | 400 | 160 | Capacitor | 7J61 | 3075 |
| 430-390-0-390-430 | 440/400 | 250 | Capacitor | 7J62 | 3107 |
| 435-0-435 | 315 | 100 | Choke | 7J64 | 3054 |
| 520-435-0-435-520 | 400/315 | 160 | Choke | 7J65 | 3075 |
| 535-0-535 | 400 | 250 | Choke | 7J66 | 3096 |
| 550-0-550 | 420 | 400 | Choke | 7J67 | 3117 |
| 620-0-620 | 500 | 250 | Choke | 7J68 | 3107 |
| 870-0-870 | 750 | 250 | Choke | 7J69 | 3117 |
| 1150-0-1150 | 1000 | 250 | Choke | 7J70 | 3138 |

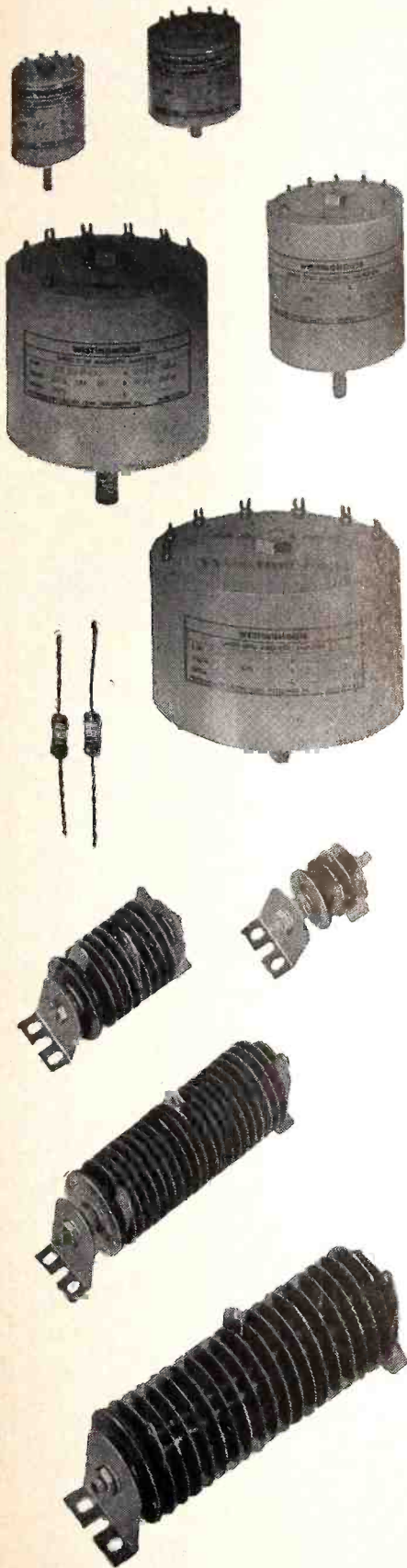
| FILTER CHOKES | | | | | | | |
|---|-------------|-------------------------|------------------------------|------|------------------------|-------------------|----------------|
| 760 to 3200 Cycles 50° C Rise 85° C Ambient Fosterite Treated | | | | | | | |
| HENRIES AT RATED D-C | D-C AMPS | D-C RESIST. 85° C | RIPPLE VOLTAGE 760 CYCLES | | RMS TEST VOLTAGE | CATALOG NUMBER | SIZE NUMBER |
| | | | MAX. | MIN. | | | |
| 3.15 | .040 | 312 | 117 | 25 | 2000 | 7 x 56 | 3032 |
| 2.5 | .063 | 238 | 140 | 30 | 2000 | 7 x 57 | 3032 |
| 2.0 | .100 | 175 | 165 | 35 | 2000 | 7 x 58 | 3043 |
| 1.6 | .160 | 115 | 176 | 35 | 2000 | 7 x 59 | 3054 |
| 1.25 | .250 | 80 | 188 | 40 | 2000 | 7 x 60 | 3075 |
| 1.00 | .400 | 53 | 202 | 45 | 2000 | 7 x 61 | 3096 |
| 1.25 | .250 | 150 | 475 | 70 | 3500 | 7 x 63 | 3054 |

| FILAMENT TRANSFORMERS | | | | | | | |
|---|------------------|--------------------|------------|------------------------------|--------------|-------------------|----------------|
| 50° C Rise, 80° C Ambient, 380 to 1600 Cycles, Single Phase, All Secondaries center-tapped, Electrostatic Shield, Maximum Regulation 15% at 100% P.f. | | | | | | | |
| VA | PRIMARY VOLTS | SECONDARY VOLTS | AMPERES | DIELECTRIC TEST VOLTS RMS | | CATALOG NUMBER | SIZE NUMBER |
| | | | | PRIMARY | SECONDARY | | |
| 7½ | 125/117/108 | 2½ | 3 | 1500 | 1500 | 7H89 | 3011 |
| 12½ | 125/117/108 | 2½ | 5 | 1500 | 5000 | 7H90 | 3021 |
| 25 | 125/117/108 | 2½ | 10 | 1500 | 7500 | 7H91 | 3032 |
| 37½ | 125/117/108 | 2½ | 15 | 1500 | 7500 | 7H92 | 3043 |
| 10 | 125/117/108 | 5 | 2 | 1500 | 1500 | 7H93 | 3011 |
| 15 | 125/117/108 | 5 | 3 | 1500 | 1500 | 7H94 | 3021 |
| 30 | 125/117/108 | 5 | 3 | 1500 | 2000 | 7H95 | 3032 |
| 40.2 | 125/117/108 | 5 6.3 | 3 4 | 1500 | 1500 1500 | 7H96 | 3043 |
| 67½ | 125/117/108 | 5.2 | 13 | 1500 | 1500 | 7H97 | 3054 |
| 1.89 | 125/117/108 | 6.3 | 0.3 | 1500 | 1500 | 7H98 | 3011 |
| 3.78 | 125/117/108 | 6.3 | 0.3 | 1500 | 1500 | 7H99 | 3011 |
| 7.56 | 125/117/108 | 6.3 6.3 | 0.6 0.6 | 1500 | 2000 2000 | 7H100 | 3011 |
| 25.2 | 125/117/108 | 6.3 | 4 | 1500 | 1500 | 7H101 | 3032 |
| 37.8 | 125/117/108 | 6.3 | 6 | 1500 | 1500 | 7H102 | 3043 |
| 63 | 125/117/108 | 6.3 | 10 | 1500 | 1500 | 7H103 | 3054 |
| 9.4 | 125/117/108 | 7.5 | 1.25 | 1500 | 2000 | 7H104 | 3011 |
| 18.8 | 125/117/108 | 7.5 | 2.5 | 1500 | 2000 | 7H105 | 3021 |
| 60 | 125/117/108 | 10 | 6 | 1500 | 1500 | 7H106 | 3054 |

WESTINGHOUSE ELECTRIC CORPORATION, P. O. BOX 868, PITTSBURGH 30, PA.



MAGNETIC AMPLIFIERS MAGAMP



MAGAMPS, Westinghouse magnetic amplifiers, of either the self-saturating type or simple saturable reactor type, can be designed for a wide range of specific applications. They can be either designed to operate from control input powers as low as milli-microwatts or designed to deliver output powers of several kilowatts. They can be constructed to operated from any a-c supply voltage, either single or poly-phase, ranging from a few volts to several hundred volts, and at frequencies ranging from the lowest power frequency to the megacycle range.

MAGAMPS have been applied in servo systems as complex as aircraft autopilots, in the control of motors from the smallest fractional horsepower size to the largest steel mill drive, in the regulation of gen-

rator voltages from the miniature aircraft unit to the central station generator. They have been used to amplify the minute outputs of thermocouples, photocells, ionization chambers, and strain gauges. Other applications have included arc welding controls, ignitron firing controls, paper mill reel control, automatic battery chargers, and isolation metering of d-c voltages and currents.

MAGAMPS are available in the 3700 series under five general numbers, as shown in the table below. They may also be engineered for specific applications. This service is available through the Materials Division, Westinghouse, East Pittsburgh. For complete descriptive information, request Technical Data 52-600.

OPERATING CHARACTERISTICS OF 3700 SERIES MAGNETIC AMPLIFIERS

| Amplifier Type Number | 3704 | 3708 | 3712 | 3716 | 3720 |
|----------------------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|
| Type of Circuit | Doubler | Doubler | Doubler | Doubler | Doubler |
| Nominal Power Output (1) | 0.04w. | 0.3w. | 7.0w. | 40w. | 180w. |
| D-C Ampere-Turns for control (2) | 0.35 | 0.60 | 2.0 | 3.3 | 5.5 |
| Supply Voltage: Volts | 6.3 | 12.6 | 30 | 115 | 230 |
| Freq. | 60 | 60 | 60 | 60 | 60 |
| Phase | 1 | 1 | 1 | 1 | 1 |
| Max. Figure of Merit, $M_u(3)$ | 170 | 310 | 410 | 1000 | 1200 |
| M_u for 3 cy. Response (3) | 80 | 130 | 150 | 200 | ... |
| Time Delay: (4) Constant k_1 | 2.6×10^{-3} | 3.7×10^{-3} | 6.8×10^{-3} | 7.5×10^{-3} | 8.5×10^{-3} |
| Inherent Delay Cons. k_2 | 1.5 | 1.6 | 1.9 | 2.4 | 3 |
| Output Current: (5) Rated | 0.150a. | 0.24a. | 0.60a. | 0.60a. | 1.1a. |
| Max. Power Output | 0.016a. | 0.603a. | 0.50a. | 0.96a. | 3.3a. |
| Load Resistance: Rated | ... | ... | 20 | 130 | 175 |
| Max. Power Output | 200 | 100 | 28 | 60 | 35 |
| Max. Power Gain | 200 | 100 | 40 | 175 | 250 |
| Rectifiers: Self-Sat. | 12G11KE1C 2 req'd | 21F12KA1A | 23F14KA1B | 23F18KA1B | 24F18KA1A |
| Recommended Complementary | 12G11KE1C 4 req'd | 21F41KA1D | 23F41KA1D | 24F44KA1D | 24F112KA1D 2 req'd |
| Weight of Reactor Assem. | 0.13 lbs. | 0.20 lbs. | 0.85 lbs. | 2.5 lbs. | 7.0 lbs. |
| Size of Assem: Dia. | 1 1/4" | 1 1/2" | 2 1/4" | 3 1/4" | 4 |
| Height | 1 1/2" | 1 1/2" | 2 1/4" | 2 3/4" | 2 1/2" x 2 units |

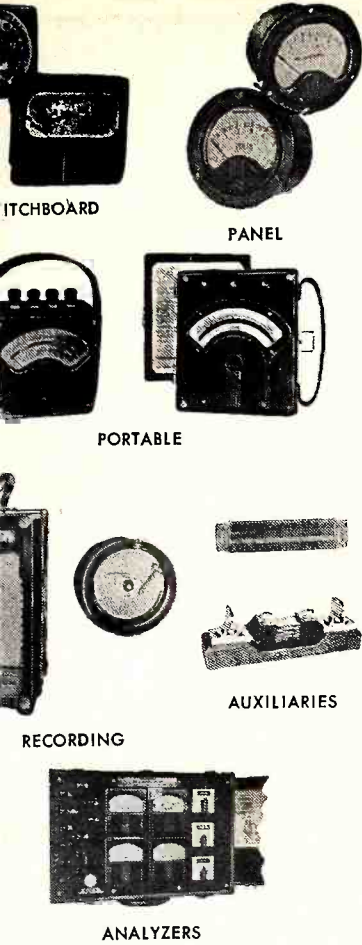
1. Power output at top of linear region of control curve.
 2. Control ampere-turns from cutoff to top of linear region of control curve.
 3. The figure of merit, M_u , is the ratio of power gain to time delay for 63% response. Power gain is the ratio of the change in output power for a change in input power at the optimum value of load resistance. The time delay is expressed in cycles of supply frequency (60 cycles).
 4. Time delay is given by equation of the form $T = k_1 \frac{N^2}{R} + k_2$ cycles of supply frequency where $\frac{N^2}{R}$ equals $\left(\frac{N^2}{R} \text{ for control circuit A} \right) \text{ plus } \left(\frac{N^2}{R} \text{ for control circuit B} \right) \text{ plus } \left(\frac{N^2}{R} \text{ for control circuit C} \right)$.
 5. RMS value given if output is A-C, average value given if output is D-C.
- For further information, request T.D. 52-600.

YOU CAN BE SURE...IF IT'S

Westinghouse

P.O. BOX 868, PITTSBURGH 30, PA.

THE MOST COMPLETE LINE IN THE INDUSTRY



Westinghouse instruments are designed, manufactured and approved under the most severe National Standards to meet exacting engineering requirements. The completeness of the lines of Westinghouse instruments gives the builder and the ultimate user the widest choice of matched instruments for any application.

The general points to consider when selecting instruments are: 1. Accuracy desired; 2. Scale range; 3. Single or multiple scale; 4. Size; 5. Appearance.

With literally hundreds of types available—for measuring all electrical quantities, temperature, position and time—Westinghouse brings you the results of over 65 years' experience in designing and manufacturing better instruments for better performance. We built our first instruments in 1888 and have samples to prove it.

Westinghouse representatives and specialized instrument sales engineers are available all over the country to help you make the proper selections.

SWITCHBOARD As the name implies, these instruments are standard equipment on switchboards in power and switching stations, aboard ships, and in the factory. They also are generally applied to control boards and test boards in laboratories and on production lines and to large radio transmitters because they provide maximum accuracy and readability for this type of service. For complete explanation of types of A-C or D-C Switchboard Instruments available, request Catalog Section 43-200.

PANEL Westinghouse Panel Instruments are available for measuring direct current, alternating current, audio frequency, radio fre-

quency, decibels and elapsed time. Available in sizes of 2½, 3½ and 4½ inches, in surface or flush mounting styles and in round or rectangular design. Catalog Section 43-300 is available free on request.

PORTABLE Because of their broad scope of operation, portable instruments are required in a wide variety of ranges, sizes and accuracies. Each type has many different applications . . . but each application can best be served with a particular instrument. The portable instruments shown below represent only a small portion of the varieties available. To aid your selection of the best instrument for your particular application, request Catalog Section 43-100.

RECORDING Westinghouse Recording Instruments are available in switchboard, portable and wall mounting styles in direct current and alternating current types and with round or strip charts. The Recorders are furnished with a broad line of movements to meet all electrical measuring requirements. For complete data ask for Catalog Sections 43-400 and 43-415.

AUXILIARIES These include self-contained units for extending the application of instruments into the measurement of speed and for the measurement of high values of a-c and d-c current and voltage. The general auxiliaries Westinghouse features are Tachometer Generators, Portable Transformers, External Resistors and Shunts in a wide selection of ratings. Request Catalog Section 43-800 for complete details, ratings and descriptive data.

TYPE P-5 LINE (Accuracy ½ %)

The Type P-5 series of Westinghouse instruments is designed to withstand severe portable service and still maintain the highest degree of accuracy over long periods of time. A combination of high-grade mirrored dials and knife-edge pointers eliminates parallax and

assures accurate reading. Scale length is 5 inches and divisions are arranged to aid quick reading. Maximum versatility is achieved with multi-range scale, some of which incorporate seven ranges. Pre-aged Moldarta* case does not warp or deteriorate.

*Trademark

FULL SCALE RANGE OF STANDARD RATINGS

TYPES PA-5 AND PY-5 FOR ALTERNATING CURRENT

| | |
|---------------|---------------------|
| Ammeters | 0-.5 to 0-200 |
| Milliammeters | 0-10 to 0-750 |
| Volt-Ammeters | 0-75 to 0-750 volts |
| | 0-1 to 0-25 amps |
| Voltmeters | 0-3 to 0-750 |
| Wattmeters | 0-20 to 0-30,000 |

TYPE PX-5 FOR DIRECT CURRENT

| | |
|-----------------|--------------------|
| Ammeters | 0-.05 to 0-50 |
| Milliammeters | 0-.03 to 3,000 |
| Microammeters | 0-10 to 0-750 |
| Volt-Ammeters | 0-3 to 0-150 volts |
| | 0-.03 to 0-30 amps |
| Millivoltmeters | 0-2 to 0-2,000 |
| Voltmeters | 0-1 to 0-1500 |

TYPE P-4 LINE (Accuracy ¾ %)

Type P-4 line is designed for operating convenience.

Lightweight: a-c instruments weigh only 2 lbs; d-c instruments 3 to 4 lbs.

Moldarta Case: is non-warping, weather-resisting. 4½" x 4½" x 2".

FULL SCALE RANGE OF STANDARD RATINGS

| TYPE PY-4 FOR ALTERNATING CURRENT | | AMMETERS | 0-1 TO 0-50 | |
|---|-----------------|-----------------|-----------------|-----------------------|
| | | MILLIAMMETERS | 0-5 TO 0-750 | |
| | | VOLTMETERS | 0-1 TO 0-750 | |
| TYPE PX-4 FOR DIRECT CURRENT (Also Radio-frequency and Rectifier Types) | Ammeters | 0-.25 to 0-300 | Voltmeters | 0-1 to 0-750 |
| | Radio frequency | 0-.5 to 0-20 | Rectifier type | 0-.5 to 0-150 |
| | Milliammeters | 0-1 to 0-3,000 | Millivoltmeters | 0-2 to 0-100 |
| | Radio frequency | 0-75 to 0-800 | Volt-Ammeters | 0-1.5 to 0-150 volts |
| | Rectifier type | 0-1.5 to 0-20 | | 0-.15 to 0-60 amperes |
| | Microammeters | 0-25 to 0-1,000 | | |
| | Rectifier type | 0-500 | | |

(For Complete Ordering Information, See Catalog Section 43-100)



INSTRUMENTS

PORTABLE INSTRUMENTS



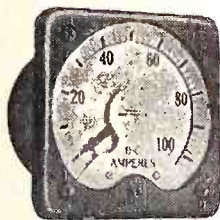
P-14 VOLT-AMMETER



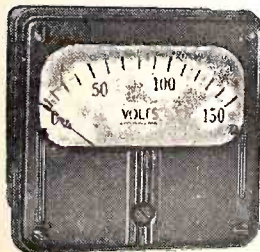
P-14 HINGED COVER



P-12 VOLTMETER



K-24 AMMETER



K-25 VOLTMETER

TYPE P-14 LINE (Accuracy 1%)

The Type P-14 portable instrument includes features of larger portables, including magnetic shielding, plus added advantages of extremely light weight and smaller overall dimensions. Its accuracy, versatility and low cost make it ideal for field and radio testing. Up to 4 voltage or

current ranges available with multi-range scales. Combinations such as 3 current and voltage ranges in the same instrument make this an extremely versatile instrument. Measuring only 5 1/4" x 4 1/4" x 2 1/2"; both hinged cover and open-faced models are pocket size.

FULL SCALE RANGE OF STANDARD RATINGS

TYPE PA-14 FOR ALTERNATING CURRENT

| | |
|---------------|----------------|
| Voltmeters | 0-1.5 to 0-750 |
| Ammeters | 0-.5 to 0-50 |
| Milliammeters | 0-5 to 0-500 |

TYPE PX-14 FOR DIRECT CURRENT

| | |
|-----------------|-----------------|
| Voltmeters | 0-.75 to 0-800 |
| Millivoltmeters | 0-10 to 0-5,000 |
| Ammeters | 0-.5 to 0-50 |
| Milliammeters | 0-1 to 0-2,000 |
| Microammeters | 0-20 to 0-5,000 |

Also available in rectifier and thermocouple types.

(For Complete Ordering Information, See Catalog Section 43-100)

TYPE P-12 LINE (Accuracy 2%)

The Type P-12 line includes single and multiple range ratings for complete D-C and A-C current and voltage measurements. It meets all requirements, including shielding, insulation, etc. required for 2% portable instruments in A.S.A. C39.1. Provides the same high degree of reliability,

overload capacity and range coverage contained in larger types.

LIGHTWEIGHT: A-C instruments weigh from 1 to 1 1/2 lbs. D-C instruments from 1 1/2 to 2 lbs.

POCKET SIZE: A-C—4 1/4" x 3 1/4" x 2 5/16" D-C—4 1/4" x 3 1/4" x 1 3/4".

FULL SCALE RANGE OF STANDARD RATINGS

TYPE PA-12 FOR ALTERNATING CURRENT

| |
|--|
| Self Contained Current—From 5 milliamperes to 50 amperes |
| Self Contained Voltage—From 1.5 volts to 300 volts. Also available in rectifier types. |

TYPE PX-12 FOR DIRECT CURRENT

| |
|---|
| Self Contained Current—From 20 microamperes to 50 amperes |
| Self Contained Voltage—From 10 millivolts to 800 volts |

(For Complete Ordering Information, See Catalog Section 43-100)

SWITCHBOARD INSTRUMENTS

24-LINE (Accuracy 1%)

4 1/2" Class—Circular Scale, Rectangular Front—Round-body Case for Flush Mounting. Because of its extra-long scale, the 24-Line instrument combines high readability with minimum panel space require-

ments, particularly useful where panel area is at a premium. The pointer travel gives a scale length more than twice as long as other types which require the same panel space.

25-LINE (Accuracy 1%)

6" Class—Rectangular Case—Flush or Projection Mounting—Optional Internal Illumination. Westinghouse 25-Line instruments meet the requirements of many special installations. Simplicity of design,

uniform appearance, interchangeability and availability of movements for any measurements, make this instrument especially suited for modernization as well as for new installations.

FULL SCALE RANGE OF STANDARD RATINGS—24 and 25 LINES

DIRECT CURRENT

| |
|---|
| Ammeters—0-1 to 0-50 (self-contained) |
| Ammeters for use with shunts—0-50 or 0-100 millivolts |
| Voltmeters—0-2 to 0-800 (self-contained) |
| Milliammeters—0-1 to 0-500 |
| Wattmeters—120 or 240 volts, 0-50 or 0-100 millivolts for external shunts. (25 line only) |

ALTERNATING CURRENT

| |
|--|
| Ammeters—(24 line)—0-1 to 0-20 (self-contained) |
| (25 line)—0-1 to 0-50 (self-contained) |
| Ammeters for use with transformers—0.5 |
| Voltmeters (24 line)—0-150 to 0-600 (self-contained) |
| (25 line)—0-15 to 0-800 (self-contained) |
| Voltmeters for use with transformers—150 |
| Wattmeters for use with transformers—5 amperes—120 volts |
| Frequency meters—(24 line)—120 volts, 60 cycles |
| (25 line)—120 volts, 25 or 60 cycles |

(For Complete Ordering Information, See Catalog Section 43-200)

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Westinghouse

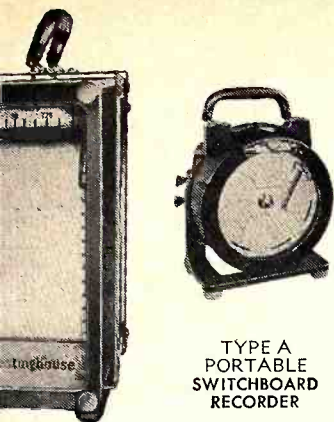
P.O. BOX 868, PITTSBURGH 30, PA.

RECORDING INSTRUMENTS

TYPE G-40 DIRECT ACTING STRIP CHART RECORDER (Accuracy 1%)

Perfection of detail in chart drive, chart roll, chart threading and inking system, makes Type G-40 Recorders easier to operate and has removed many causes of lost records. Available for switchboard or portable applications.

Chart has double perforations for positive traction or driving drum. Accurate synchronous motor clock, furnishes drive power for chart. Chart speeds of $\frac{3}{4}$ ", $1\frac{1}{2}$ ", 3" or 6" per hour or per minute.



TYPE A
PORTABLE
SWITCHBOARD
RECORDER

G-40 PORTABLE RECORDER

TYPE A ROUND CHART RECORDER (Accuracy 2%)

A low first-cost, low-maintenance recording instrument for a variety of applications where chart records of 2% accuracy are adequate for their purpose. Extra-sturdy construction makes this a particularly convenient instrument for field service jobs. Portable, switchboard

mounting, wall mounting or detachable socket-mounting cases are available. Scale length is 2 inches, but chart has suppressed zero scale with divisions comparable in size and readability to those of much longer scales.

PANEL INSTRUMENTS

33-LINE (Accuracy 2%) — 2½" Class

Scale Lengths, 1.5" to 1.8". Four different flush mounting types of cases are available: the Military Standard; the round, wide-flange instrument; the round, narrow-flange type;

the rectangular type. Projection mounted instruments also are available in round case. Cases are interchangeable.

35-LINE (Accuracy 2%) — 3½" Class

Scale Lengths, 2.06" to 2.4". Available as a complete line in five types of cases and mounting covering Military, Laboratory, industry and radio applications. The ratings cover the

broadest field consistent with prevailing requirements for instruments of this class. Cases are interchangeable without adapters

37-LINE (Accuracy 2%) — 4½" Class

Scale Lengths, 2.8" to 3.2". The largest of the miniature panel instruments. The self-contained ratings cover the broadest possible field for this class of instruments. Higher

ratings may be obtained by using external resistors, shunts or transformers. Five types of cases are interchangeable throughout the line.

FULL SCALE RANGE OF STANDARD RATINGS — TYPES 33-35-37

| | | | |
|----------------------------|---------------|------------------------------|-----------------|
| DIRECT CURRENT | | Milliammeters | |
| Ammeters | 0-1 to 0-50 | (For freq. of 15 to 500 cps) | 0-5 to 0-500 |
| Milliammeters | 0-1 to 0-800 | Rectifier | 0-1 to 0-10 |
| Microammeters | 0-20 to 0-800 | Radio Frequency | 0-10 to 0-800 |
| Voltmeters | 0-1 to 0-800 | Microammeters | |
| Millivoltmeters | 0-10 to 0-500 | Rectifier | 0-100 to 0-500 |
| ALTERNATING CURRENT | | Voltmeters | |
| Ammeters | | (For freq. of 25 to 125 cps) | 0-1.5 to 0-800 |
| (For frequencies of | | Rectifier | 0-3 to 0-300 |
| 15 to 500 cps) | 0-1 to 0-50 | DB Meters | |
| Radio Frequency | 0-1 to 0-20 | Rectifier | Standard Scales |



N-33
FLUSH
MOUNTING



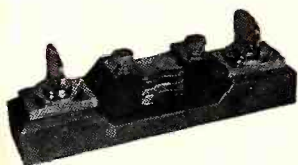
N-35
FLUSH
MOUNTING



N-37
FLUSH
MOUNTING



TUBULAR RESISTOR



PORTABLE SHUNT



CURRENT TRANSFORMER

AUXILIARY EQUIPMENT

SECTIONAL TUBULAR RESISTORS FOR D-C INSTRUMENTS:

The sectional construction of these resistors permits a wide range of accurate measurements of high voltages with one milliamper instrument. Resistance values $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ or 1 meg-

ohm are standard, and combinations of these may be easily and quickly put together to form any complete unit. Designed for panel mounting or portable use.

TYPE G AND GG SHUNTS FOR D-C MEASUREMENT:

Type G and GG shunts provide a complete line for use with indicating or recording instruments for measuring direct currents beyond the range of self-contained instruments.

Portable and switchboard types are available in 50 and 100 millivolt sizes with many different current ratings.

PORTABLE POTENTIAL AND CURRENT TRANSFORMERS:

For measuring electrical quantities greater than the self-contained ranges for which the instruments are rated, these portable poten-

tial and current transformers offer a convenient and accurate means of increasing the usefulness of an instrument.



SELENIUM RECTIFIERS MAGAMP

Westinghouse MAGAMP Selenium Rectifiers have three classifications according to reverse leakage current. The upper limits for Classes A, B and C are 0.3, 0.4 and 0.5 milliamperes per square inch respectively, at 15 volts 400 cycles per second. Table below lists the sizes that are available, giving the active area for each size, the rated half-wave forward current, the maximum limit for forward voltage drop, and the maximum leakage currents at 15 volts, 400 cycles for Classes A, B, and C rectifiers.

Although leakage limits are given here for 400 cycles per second, Westinghouse MAGAMP Selenium Recti-

fiers are equally suitable for 60 cycle applications. The 60 cycle leakage current is approximately one-half the 400 cycle leakage current at any given voltage at room temperature.

Westinghouse Type K cells are tested individually and retested after assembly and sealing or treatment with a protective coating. Unless otherwise specified, the insulation of all rectifier assemblies is given a 60 cycle one minute withstand test, at twice the terminal voltage rating plus 1000 volts, between cell terminals and mounting brackets or case. Request Technical Data 52-650 for complete information.

CURRENT RATINGS AND ELECTRICAL LIMITS

| CELL NUMBER | CELL SIZE INCHES | ACTIVE AREA SQUARE INCHES | ELECTRICAL CHARACTERISTICS—UPPER LIMITS | | | | | | | |
|-------------|------------------|---------------------------|---|------------|---------------|------------------------------|---|--|----------------------|----------------------|
| | | | Rated Forward Current ³ Milliamperes Half-Wave | | | FORWARD CURRENT MILLIAMPERES | Forward Voltage Drop ² Per Cell Half-Wave at Forward Current Shown VOLTS | Reverse Leakage in Milliamperes Half-Wave at 15 RMS Volts, 400 Cycles ² | | |
| | | | 1-7 CELLS | 8-9 CELLS | 10-12 CELLS | | | CLASS A | CLASS ¹ B | CLASS ¹ C |
| 11 | 1/8 Dia. | 0.012 | 7.5 | 6 | 5 | 7.5 | 1.5 | .... | .... | .007 |
| 12 | 1/4 Dia. | 0.05 | 30 | 25 | 20 | 30 | 1.5 | .... | .... | .028 |
| | | | 1-8 CELLS | 9-20 CELLS | OVER 20 CELLS | | | | | |
| *21 | 1 x 1 | 0.5 | 125 | 95 | 80 | 80 | .75 | .15 | .20 | .25 |
| *22 | 1.2 x 1.2 | 0.8 | 155 | 145 | 125 | 125 | .75 | .24 | .32 | .40 |
| *23 | 1.5 x 1.5 | 1.5 | 300 | 280 | 240 | 240 | .75 | .45 | .60 | .75 |
| *24 | 2 x 2 | 3.0 | 600 | 560 | 480 | 480 | .75 | .90 | 1.2 | 1.50 |
| *25 | 3 x 3 | 7.0 | 1400 | 1300 | 1120 | 1120 | .75 | 2.25 | 3.0 | 3.75 |

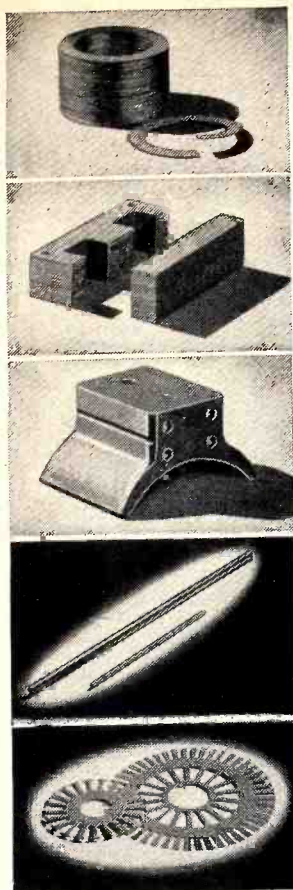
1. The manufacturer reserves the right to substitute rectifiers of a higher class when necessary to expedite orders unless "no substitution" is specified. The milliamperes limits shown determine the class designation.
 2. Leakage values at 60 cycles are approximately one-half the leakage values at 400 cycles at room temperatures.
 3. Applies to both 60 and 400 cycles at ambients up to 75°C.
 *Can be supplied in any desired cell combination for full-wave and bridge circuits.

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P.O. BOX 868, PITTSBURGH 30, PA.

MAGNETIC METALS AND ALLOYS



These metals offer a wide variety of permeability characteristics, low hysteresis losses and high purity. Where their characteristics are particularly suited to the requirements of the application, these alloys are superior to other magnetic materials and will improve performance.

Hipernik® — An alloy of iron and nickel with small amounts of manganese and silicon added. It has high initial and maximum permeability and low hysteresis loss. It has a wide range of applications — sensitive relays, a-c meters, magnetic shields, audio transformers, instrument transformers, reactors, etc.

Hiperco® — An iron-cobalt alloy containing $\frac{1}{3}$ cobalt, $\frac{2}{3}$ iron and 1 to 2% of another element to increase the electrical resistivity. Used primarily for aircraft equipment where size and weight saved is a vital factor. Transformers, generators, motors and high speed aerial cameras are some of the uses.

Hipernik V® — A 50% iron-nickel grain oriented alloy. Supplied in torodial coils of .002" and .005" lamination thickness. Both material and core are carefully processed under laboratory control to assure uniform characteristics.

Conpernik® — An iron-nickel alloy of the same chemical composition as Hipernik, but of different electromagnetic characteristics produced by a special annealing process. It is most applicable where a component having high ratio of reactance to resistance (high Q) is required. Also used in choke coils and other components having a high d-c component of current.

Other Alloys that serve a wide range of functions are Kovar®, Puron*, Cupaloy*, K42B®, Refactaloy® and Discaloy®. These are used for electrodes, contacts, for scaling glass and metal, for tube lead-in wires, and for high strength at elevated temperatures.
*Trademark

INDICATING LAMPS — SWITCHES

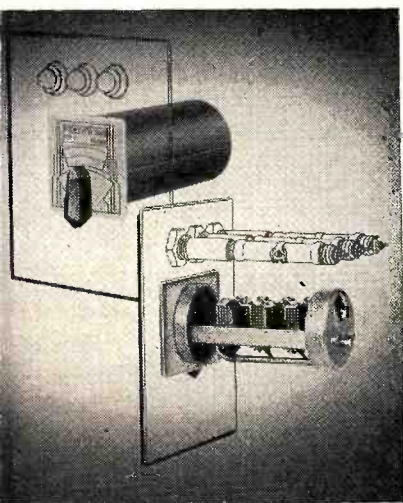


Rectangular Minalite® is a medium sized low-drain indicating lamp designed for extreme angular visibility and to provide the utmost in sturdiness, compactness, and appearance. Its design matches modern rectangular switchboard devices, such as instruments, relays and control switches. It is intended for general indicating or signal purposes on switchboards, control desks, etc.



Round Minalite® is a compact, medium-drain indicating lamp developed especially for miniature steel switchboards, providing the maximum illumination in the smallest possible space. Since some rigidity was sacrificed to obtain the long slender construction, which permits close center spacing between adjacent lamps, it is intended only for such applications where the wire size is not larger than No. 18.

Complete information on component parts, hardware, receptacles and resistors available are contained in Catalog Section 37-200, which will be sent free on request.



The Westinghouse Minatrol® Switch is a compact control switch of smaller dimensions than the conventional Type W control switch, designed particularly for use on miniature switchboards. It is available in forms to suit the varied requirements of control switch applications, and will handle the full control voltage without interposing relays. Its flexibility of application is practically the equivalent of the Type W switch.

Construction — The Minatrol is a rotary-type switch with the same design features which have made other rotary-type control switches outstanding in performance. The switch handles 125 or 250-volt control circuits directly, using toggle switches with quick-make and quick-break contacts mounted in unit-construction frame. It occupies only about one-fourth of the switchboard space required by the conventional switch and has a pleasing appearance, unmarred by the mounting screws.

Performance — The current-carrying capacity and interrupting ability of the Minatrol is ample to handle the usual control circuit without the use of auxiliary interposing relays or intermediate control voltages. The switches are rated at six amperes continuous and can interrupt a non-inductive load of three amperes at 250 volts and six amperes at 125 volts d-c. The switch will interrupt highly inductive currents up to five amperes at 125 volts d-c or up to one ampere at 250 volts d-c. On a-c, values can be at least doubled at 250 volts maximum.

Classification — The Minatrol control switches are of two types:

1. Type C, for stay-put and spring return with fixed handles.
2. Type S, for stay-put with removable key handles.

Two standard lengths are available, one to accommodate a maximum of four switch units, and the other a maximum of eight switch units. A special twelve-switch unit length is available on order. Request Catalog Section 37-175 for complete information.



MODERN EQUIPMENT FOR MAINTENANCE-FREE ELECTRONICS USE

CIRCUIT BREAKERS AB De-ion®

The sturdy moldarta breaker cases form complete self-enclosures, protecting workers and preventing tampering. Standard construction features are the De-ion arc quenchers, quick-make and quick-break mechanisms, and thermal-magnetic trip elements. Request Price List 29-060.

AB DE-ION CIRCUIT BREAKERS comprise a complete line of fuseless protective devices for distribution, power, lighting and electronic circuits. They are used in individual mountings, built-in applications, separate enclosures, switchboards and panelboards.

FEATURES OF AB DE-ION CIRCUIT BREAKERS

| | Quicklag Quicklag-p 1, 2 Pole | P-1** 1, 2 Pole | E 1, 2, 3 Pole | F 2, 3, 4 Pole | G 2, 3, 4 Pole | J 2, 3 Pole | K 2, 3, 4 Pole | L 2, 3, 4 Pole |
|---|-------------------------------|------------------|--|-------------------|----------------|-------------|----------------|----------------|
| RATINGS | | | | | | | | |
| Ampere Ratings (U.L. Listed) | 10 50 120 | *10 50 120 | 15 100 120 277† | 15 100 | 40 100 | 70 225 | 70 225 | 125 600 |
| A-C Voltage Ratings | 120/240 | 120/240 | 240 240 | 600 | 600 | 600 | 600 | 600 |
| D-C Voltage Rating | | 32 | 125 125/250 125/250 | 250 | 250 | 250 | 250 | 250 |
| Underwriters' Laboratories Interrupting Ratings—Amps. | 5,000 | | 5,000 10,000† | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| Interrupting Ratings Amps. A.C.—Based on NEMA Test Procedures | 5,000 | 5,000 | 5,000 10,000† | 600 VAC 15,000 | 15,000 | 15,000 | 25,000 | 25,000 |
| | | | 240 VAC | 20,000 | 20,000 | 25,000 | 30,000 | 40,000 |
| SPECIAL FEATURES (Partial List) | | | | | | | | |
| Inst. Magnetic Trip Only | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Non-Automatic | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Shunt Trip | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Undervoltage Trip | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Auxiliary Switch | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Alarm Switch | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mechanical Interlock | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Reverse Current | | | | | | | ✓ | ✓ |
| Moisture-Fungus Treatment | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Complete Electrical Operation | | | | | | | ✓ | ✓ |
| Enclosure Handle Mechanism | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| *Not U.L. Listed | | | †Single Pole 15 and 20 amp. ratings for 277/480 V A-C circuits | | | | | |
| | | | **Thermal only | | | | | |



E TYPE
100 AMP.



F TYPE
100 AMP.



K TYPE
225 AMP.



J TYPE
225 AMP.



L TYPE
600 AMP.

CONTROL DEVICES



TYPE OT
OIL TITE
CONTROL STATION
1 to 12 Unit Sizes
Available



OPEN
CONTACTOR



TYPE N
CONTROL RELAY

PUSHBUTTONS are available in a complete line of Standard, Heavy Duty, and Oil-Tite* units to meet the requirements of manufacturers of electronics equipment. The pushbuttons and selector switch units are rated for continuous current of 10 amperes—see Maximum Interrupting Capacity tabular example at right. For complete information as to types, sizes, interrupting capacities, etc.; request free Descriptive Bulletin 15-000.

CONTACTORS of the famous Westinghouse Life-Linecontactor® design are available in four general classes: Reversing Mounted Life-Linecontactors • Size 00 Multi-Pole Relay • Mounted Life-Linecontactors* • Unmounted Contactors. In addition, they may be modified with built-in pushbuttons, selector switches, control transformers or special combinations of modifications to

RELAYS built for heavy-duty service on industrial electronic equipment are offered in both a-c and d-c. Among the types available are: Thermal Overload • Magnetic Overload • Time Limit • Thermostatic • Auxiliaries • Mechanical • Multi pole • Shunt Coil • Vibrating.

*Trademark

Maximum Interrupting Capacity—Amperes OIL-TITE UNITS

| VOLTAGE A-C AND D-C | 2 AND 3* POINT | 4 POINT | SELECTOR SWITCH |
|---------------------|----------------|---------|-----------------|
| 110-125 a-c | 60 | 60 | 60 |
| 220-250 a-c | 30 | 30 | 30 |
| 440-480 a-c | 15 | 15 | 15 |
| 550-600 a-c | 12 | 12 | 12 |
| 115-125 d-c | 2.2 | 2.2 | 2.2 |
| 230-250 d-c | 1.1 | 1.1 | 0.55 |
| 550-600 d-c | 0.4 | 0.4 | 0.2 |

*Type HD unit only.

suit the user. NEMA enclosures run from Type I, IA, III, IV, V, VII, and IX for Class II, Groups E, F and G for hazardous locations such as explosive dusts. Standard pole combinations are available for 5 to 2,500 amperes, 600 volts maximum, a-c or d-c. Oil-immersed contactors operate up to 5,000 volts at 200 amperes.

In addition, complete control panels for special applications can be built to order. Write for Price Lists and Dimension Sheets 15-825 and 15-827 for expanded information on types, sizes and ratings.

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P.O. BOX 868, PITTSBURGH 30, PA.

application data...

Sheldon LIGHT-WEIGHT THERMAL DELAY RELAYS



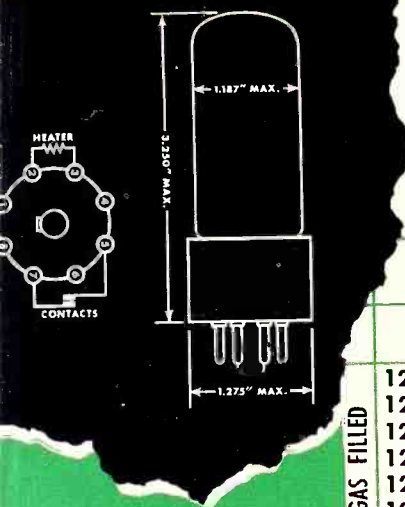
are ideal for many industrial, aeronautical, mobile, marine and electronic applications where dependable, quiet, maintenance-free delay control of an electrical circuit is desired. Although currently available in 6.3V., 26.5V. and 117V. A.C./D.C. gas filled or vacuum, with time delays of 5 seconds to 300 seconds at 25°C the Sheldon Thermal Delay Relays can be adapted to any control requirement not covered by existing types.

Sheldon Thermal Delay Relays have been used for many years by leading manufacturers (and users) in civilian and defense products where dependability and high quality are important requirements.

general specifications

- **HEATER INPUT:** 5 watts (approx.) at 6.3 V., 26.5 V. and 117 V. A.C./D.C.
- **CONTACT RATING:** For relays with delay periods up to 75 seconds, 3 Amps at 150 volts D.C. or 250 volts A.C. For relays with delays of 105 seconds or more, contact rating is 3 Amps at 450 V. A.C./D.C.
- **CONTACTS:** Silver; Single Pole, Single Throw, either normally open or normally closed.
- **DELAY PERIODS:** From 5 seconds to 5 minutes, Factory pre-set (See listing on reverse side.)
- **AMBIENT TEMPERATURES:** For a range of temperatures from -60°C to $+80^{\circ}\text{C}$, there is a slight variation in timing from the room temperature timing.
- **BULB:** Standard T9 Radio Receiving Type Bulb.
- **BASE:** Standard Radio Receiving Type Intermediate 8-PIN Octal Base. Heater terminates in pins 2 and 3; Contacts in pins 5 and 7.

these types are immediately available



| | TYPE NUMBER—HEATER VOLTAGES | | | | | | OPERATING TIME* | | Contact Rating |
|------------|-----------------------------|-----------------|---------------|-----------------|---------------|-----------------|-----------------|-------------------------|----------------|
| | 117 VOLTS | | 26.5 VOLTS | | 6.3 VOLTS | | Nominal Seconds | Tolerance \pm Seconds | |
| | Normally OPEN | Normally CLOSED | Normally OPEN | Normally CLOSED | Normally OPEN | Normally CLOSED | | | |
| GAS FILLED | 120-05 | 120-C5 | 26-05 | 26-C5 | 6-05 | 6-C5 | 5 | 1 | 3 Amp. |
| | 120-010 | 120-C10 | 26-010 | 26-C10 | 6-010 | 6-C10 | 10 | 2 | 150 V. |
| | 120-020 | 120-C20 | 26-020 | 26-C20 | 6-020 | 6-C20 | 20 | 3 | dc |
| | 120-030 | 120-C30 | 26-030 | 26-C30 | 6-030 | 6-C30 | 30 | 5 | or |
| | 120-040 | 120-C40 | 26-040 | 26-C40 | 6-040 | 6-C40 | 40 | 7 | 250 V. |
| | 120-060 | 120-C60 | 26-060 | 26-C60 | 6-060 | 6-C60 | 60 | 9 | ac |
| | 120-075 | 120-C75 | 26-075 | 26-C75 | 6-075 | 6-C75 | 75 | 12 | |
| VACUUM | 120-0105 | 120-C105 | 26-0105 | 26-C105 | 6-0105 | 6-C105 | 105 | 16 | 3 Amp. |
| | 120-0120 | 120-C120 | 26-0120 | 26-C120 | 6-0120 | 6-C120 | 120 | 18 | 450 V. |
| | 120-0150 | 120-C150 | 26-0150 | 26-C150 | 6-0150 | 6-C150 | 150 | 23 | ac |
| | 120-0180 | 120-C180 | 26-0180 | 26-C180 | 6-0180 | 6-C180 | 180 | 27 | or |
| | 120-0210 | 120-C210 | 26-0210 | 26-C210 | 6-0210 | 6-C210 | 210 | 32 | dc |
| | 120-0300 | 120-C300 | 26-0300 | 26-C300 | 6-0300 | 6-C300 | 300 | 45 ^o | |

CONTACTS—silver, normally open or normally closed.

BASE—intermediate octal, bakelite on 117 and 6.3 volt relays, fungus and salt-spray resistant micanol on 26.5 volt types.

*At nominal voltage and 25°C.

Sheldon ELECTRIC CO. — Division of Allied Electric Products, Inc.

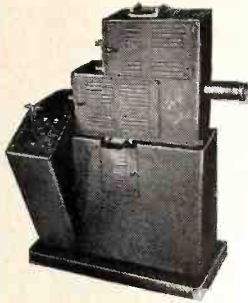
90 COIT STREET • IRVINGTON, 11, N. J. • Branch Offices & Warehouses: CHICAGO 7, ILL. • LOS ANGELES 26, CALIF.
MANUFACTURERS OF SHELDON HI-PO RECEIVING TUBES, TV PICTURE TUBES AND RECTIFIER BULBS

Gray

RESEARCH

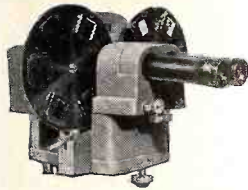
Precision Professional Equipment

FOR TELEVISION and BROADCAST STATIONS
ACCEPTED and USED by ALL MAJOR NETWORKS
FOR RELIABILITY • VERSATILITY • PERFORMANCE



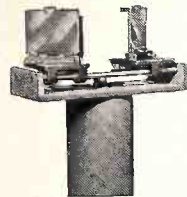
TELOP I... TELEVISION OPTICAL PROJECTOR

Telop I is one-man operated, economical and reliable. It projects low-cost, easily produced "commercials" for increased profits. The Telop completely eliminates keystone; any two photographs, glass lantern slides, or opaque cards can be projected, also small objects, with superposition, lap dissolves or fadeout. Metal slides holding either five or eight 4"x5" cards may be used for projection.



3A... TELEJECTOR

Compact, portable unit for automatic, remote control of standard 2" x 2" transparencies. Provides uninterrupted continuity with studio effects of fading, lapping and superposition. Slide turrets can be changed instantly.



60A FOUR-WAY FILM MULTIPLEXER

A precision arrangement of mirrors for operation of pairs of projectors simultaneously in a single TV camera or individually into two separate cameras. Also available as a 62A two-way moving mirror multiplexer (illustrated) or a 61A two-way fixed mirror multiplexer.



35A MANUAL CONTROL BOX

Gray's Control Box is especially designed for use with the Telector. Control Box laps, fades, superpositions and permits remote changing of slides.

TELOP II... PROJECTOR

For smaller TV stations... one man operated... will project any combination of slides, transparencies, opaque cards or photographs. Eliminates costly film strips and live talent, yet achieves clear sharp pictures with superposition, lap dissolves and fade-out effects. Small initial investment assures greater profits because of low production and operating cost.



55A FILM CAMERA TURRET

One camera can serve up to 8 projectors with Gray camera turret. Mounted on heavy, welded steel frame, the turret revolves 360 degrees on heavy duty ball bearings with positive placement. Requires minimum space.



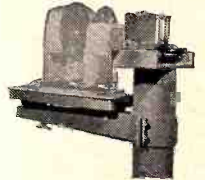
13A LIGHT BOX

This attachment will back-light 3/4" x 4" transparencies and make them part of a "commercial" along with opaque cards or other copy. The box mounts directly behind the slide holder groove in the optical channel opening of the Telop.



63A TELEJECTOR SHELF

The Gray Telector shelf is of steel construction. Strong, sturdy, it is easy to attach to Multiplexer stand. Telector mounts on shelf.



11B VERTICAL SCROLL DRIVE

The Vertical Scroll Drive will televise rollstock and broadcast running commentary or "commercials"—with or without sound accompaniment. Attaches to the optical openings of the Telop.

12A HORIZONTAL TAPE DRIVE

Horizontal Tape permits televising of 8 mm. news ticker tape. Tape can be projected on any part of screen—top, bottom or middle and superposed on copy televised from another Telop optical opening.

15R REVERSE CLOCK

Designed for time spots and announcements. Clock face is small enough to permit superposition of commercial or other copy. Also available in 15A direct reading model.

106SP TRANSCRIPTION ARM

106SP Transcription Arm meets the strict requirements of modern, highly compliant pick-up cartridges. 3 Cartridge slides furnished, enable GE 1-mil, 2 1/2 mil, or 3 mil cartridges or Pickering cartridges to be instantly installed. Fairchild cartridge slides also available.

108B VISCOUS-DAMPED TONE ARM

Radically new suspension development on the viscous damping principle for perfect tracking of records and elimination of tone arm resonances. For all records—33 1/3, 45, and 78 RPM. Solves all record reproducing problems.

602B EQUALIZER

The new 602B Equalizer provides balanced output, permitting operation of the Equalizer into either a balanced or unbalanced line. A convenient control allows instant switching from conventional records to micro-groove.

GRAY

RESEARCH

and Development Co., Inc., Hilliard St., Manchester, Conn.

Division of the GRAY Mfg. Co. Originators of the Gray Telephone Pay Station, Gray Audograph and the Gray PhonAudograph.

Gray, as a special service to its many TV customers, now has available a custom-made test pattern with individual call letters for TV stations.



SETS THE STANDARD FOR

precision potentiometers

LOOK TO TIC for the most complete line of advanced PRECISION POTENTIOMETER designs for every application. TIC engineering means outstanding potentiometer performance in your system. The extreme variety of standard models available guarantees the optimum specifications and dimensions, whatever your potentiometer requirement in computers, control systems, and precision instrumentation.

potentiometers are available in miniature and sub-miniature sizes. TIC has been especially successful in operation at high amplitudes. All designs feature rugged construction and excellent performance under adverse environmental conditions.

Potentiometers, Type RFT, feature a special design for super-fine trimming in precision instrumentation. Complete resistance represents less than 4% resistance variation. Convenient design permits stacking of Metfilm units for maximum use of limited panel space.

Potentiometers, type M10T, feature high accuracy resulting from servo control of windings. One piece construction of base and housing yields precise, rugged unit. Anodized aluminum cover provides sealed enclosure but does not impede working parts. Spring loaded ball bearings in single bore provide precise, rigid shaft with very low rotational friction. Universal choice of servo or tapped hole mounting.

Standard construction, available in 2 inch and 1 5/8 inch diameters, allows assembly of multi-gang units by user, greatly simplifies construction of "bread-board" units in experimental work. Servicing of large units facilitated by use of unitized potentiometers, period replacement should failure occur during operation.



LINEAR precision potentiometers ranging from 7/8" to 3" in diameter feature high linearity and resolution, together with long life and low noise. Rugged one-piece construction of aluminum base and close mechanical tolerances of mounting surfaces assure realization of electrical accuracy in external system. Standard TIC potentiometers will meet applicable MIL specifications for humidity, salt spray, shock, vibration, and corrosion resistance.

NON-LINEAR functional outputs are available in most standard TIC potentiometers, including sinusoidal, logarithmic, arithmetic, and square laws—and many others. In addition, TIC engineers will design highly accurate non-linear potentiometers based on mathematical data submitted for special applications.

TRANSLATORY potentiometers, Type RVT, are actuated by linear rather than rotary motion of shaft. Wide range of resistance values can be furnished in units with shaft lengths from 1/2 inch to 12 inches. Special design permits inclusion of up to three resistance elements with separate brush arms and take-offs in a single housing.

STANDARDIZED types ST18 and STC18 ball-bearing potentiometers are designed to conform to the latest industry standard potentiometer dimensions. Now high electrical and mechanical precision can be achieved within minimum volume. Type STC18 embodies conventional unitized construction. Also available with plug-in type mounting as type RVBC 1 5/8".

CUSTOMER SERVICE
ENVIRONMENTAL TESTING

POTENTIOMETER TEST EQUIPMENT
RESEARCH

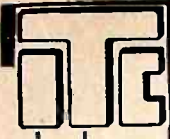
TECHNICAL LITERATURE
CUSTOM DESIGN

TECHNICAL LITERATURE
PROTOTYPE MODELS

TECHNOLOGY INSTRUMENT CORP.

West Coast Facility: 731 N. LaBrea Ave. Hollywood, Calif. WHITNEY 0108

Standard TIC Precision and Trimmer Potentiometers



| TYPE | DESCRIPTION | CASE DIAM. (in) | RESISTANCE | | | INDEPENDENT LINEARITY | | WINDING ANGLE | | Nonlinear Windings Available | Conservative Power Rating (watts at 25°) | Wgt. (oz) Single Cup | MOUNTINGS AVAILABLE | | |
|---------------|---------------------------|-----------------|--------------|-----------|---------|-----------------------|---------|---------------|---------|------------------------------|--|----------------------|---------------------|-------------|--------------|
| | | | Range (ohms) | Tolerance | | Std | Special | Angle | Toler. | | | | Servo | Tapped Hole | Thrd Bushing |
| | | | | Std | Special | | | | | | | | | | |
| RVP3 | High Precision | 3 | 100 to 200K | ±5% | ±1% | ±0.2% | ±0.1% | 320° | ±3° | ✓ | 6 | 7 | ✓ | ✓ | |
| RV3 and RVLL3 | Molded-Bakelite | 3 | 100 to 200K | ±5% | ±1% | ±1.0% | ±0.25% | 315° | ±3° | ✓ | 8 | 4 | | ✓ | |
| RV2 | General-purpose | 2 | 100 to 100K | ±5% | ±1% | ±0.5% | ±0.2% | 320° | ±3° | ✓ | 4 | 3 | ✓ | ✓ | |
| RVC2 | Unitized | 2 | 100 to 100K | ±5% | ±1% | ±0.5% | ±1.5% | 320° | ±3° | ✓ | 4 | 3 | ✓ | ✓ | |
| RVBC2 | Ball-bearing Unitized | 2 | 100 to 100K | ±5% | ±1% | ±0.5% | ±0.2% | 320° | ±3° | ✓ | 4 | 3 | ✓ | ✓ | |
| ST18* | Ball-Bearing Standardized | 1 3/4 | 100 to 100 K | ±5% | ±1% | ±0.5% | ±0.2% | 320° | ±2° | ✓ | 3 | 3 | ✓ | | |
| RVBC1 1/2 | Unitized plug-in | 1 1/2 | 100 to 100 K | ±5% | ±1% | ±0.5% | ±0.25% | 320° | ±3° | ✓ | 3 | 2 1/4 | ✓ | ✓ | |
| RV1 1/2 | Intermediate | 1 1/2 | 100 to 100 K | ±5% | ±1% | ±0.5% | ±0.25% | 320° | ±3° | ✓ | 3 | 2 1/4 | ✓ | ✓ | |
| RVP1 | Miniature | 1 | 100 to 50 K | ±5% | ±2% | ±1.0% | ±0.5% | 320° | ±5° | | 2 | 1/2 | ✓ | | |
| RVP 7/8 | Sub-miniature | 7/8 | 100 to 25 K | ±5% | ±2% | ±2.0% | ±0.7% | 320° | Nominal | | 2 | 3/4 | | | ✓ |
| RVH1 | High Temperature | 1 | 100 to 5 K | ±5% | ±2% | ±5% | | 320° | Nominal | | 2 | 1/2 | | | ✓ |
| RV 7/8 | Miniature | 7/8 | 100 to 25 K | ±5% | ±2% | ±5% | | 320° | Nominal | | 2 | 1/2 | | | ✓ |
| RV 1/2 | Sub-miniature | 1/2 | 50 to 15 K | ±10% | ±5% | ±5% | | 300° | Nominal | | 1.5 | 1/4 | | | ✓ |

PRECISION POTENTIOMETERS

TRIMMERS

ELECTRICAL
 Coin-silver overtravels: 10° nominal at each end of winding.
 Taps: Available at desired points.
 Rated temperature coefficient of resistance wire: 0.002% per °C.
 Ambient temperature range: -55°C to +80°C (to +145°C for RVH1).
 Equivalent noise resistance: 140 ohms, maximum.
 Dielectric strength: 1000V DC breakdown test, 1-sec duration.
 except RV3, RVLL3 (2000V DC)

MECHANICAL
 Housing: Precision-machined aluminum with corrosion-resistant Alumilite finish (except Bakelite RV3, RVLL3 and stainless-steel RV 1/2).
 Mechanical rotation: 360° continuous; limit stops available.
 Starting torque: Less than 1 oz-in (1 1/2 oz-in for RV3, RVLL3, 1/2 oz. in for ST18, STC18).
 Life: 1 million operations at 60 rpm, or less.

STANDARD TIC NON LINEAR PRECISION POTENTIOMETERS

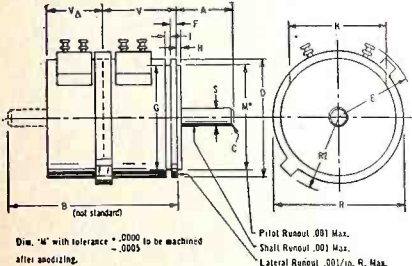
| TYPE | DESCRIPTION | CASE DIAM. | WINDING RESISTANCE | | INDEPENDENT CONFORMITY | Function Angle | Conservative Power Rating (watts at 25°) | Weight (oz) | MOUNTING | |
|--------------|---------------------------------|------------|--------------------|--------|-------------------------|----------------|--|-------------|-----------|----------------|
| | | | Total | Toler. | | | | | Servo | Tapped Hole |
| RVP3-S59 | Sine-Cosine | 3 | 20K | ±5% | ±0.5% peak-to-peak | 360° | 4 | 7 | RVP3-S156 | ✓ |
| RVP3-S200 | Double-sided square-law | 3 | 25K | ±5% | ±0.25% of total V | 360° | 3 | 7 | ✓ | (RVP3-S121) |
| RVP3-S208 | 50 db Logarithmic (Exponential) | 3 | 15K | ±5% | ±2% constant fractional | 320° | 1.5 | 7 | ✓ | (RVP3-S204) |
| RVP3-S373 | Sine function | 2 | 9.5K | ±10% | ±2% peak-to-peak | 360° | 2.5 | 3 | ✓ | (RV2-S336) |
| RV2-S417 | 20 db Logarithmic (Exponential) | 2 | 3.6K | ±5% | ±1% of total V | 281° | 2.5 | 3 | ✓ | (RV2-S412) |
| RV1 1/2-S247 | Single-sided square-law | 1 1/2 | 10K | ±5% | ±0.5% of total V | 350° | 2.5 | 2 1/4 | ✓ | (RV1 1/2-S245) |

GENERAL SPECIFICATIONS

Electrical
 Rated temperature coefficient of resistance wire: 0.002% per °C.
 Ambient temperature range: -55°C to +80°C.
 Equivalent noise resistance: 140 ohms, maximum.
 Dielectric strength: 1000V DC breakdown test, 5-sec duration.

Mechanical
 Housing: Precise-machined aluminum with corrosion-resistant Alumilite finish.
 Mechanical rotation: 360° continuous.
 Starting torque: Less than 1 oz-in.
 Life: 500,000 complete revolutions at 60 rpm, or less.

MECHANICAL DIMENSIONS, SERVO-MOUNT POTENTIOMETERS



| TYPE | DIMENSIONS | | | | | | | | | | | | | | |
|-----------|------------|---------|-----------|-------|-------|-------|-------|-------|-------|-------|-----------------|-------|-------|----------------|-------|
| | A | B | C | D | E | F | G | H | I | K | M | R | R2 | S | V |
| RVP 7/8 | 1 or spec | as spec | 1/4 x 45° | .875 | 5/8 | .062 | .750 | .062 | .062 | 1/2 | .7812* .7807 | 1 1/4 | .531 | .1250 .1247 | .505 |
| RVP 1 | 1 or spec | as spec | 1/2 x 45° | 1.062 | 3/4 | .062 | .968 | .062 | .062 | 3/4 | .9688* .9683 | 1 1/4 | .625 | .1250 .1247 | .599 |
| RV 1 1/2 | 1 or spec | as spec | 1/2 x 45° | 1.656 | 1 1/2 | .093 | 1.463 | .062 | .078 | 1 3/4 | 1.468 1.467 | 1 1/2 | 1 1/2 | .2500 .2495 | 1.035 |
| RV 2 | 1 or spec | as spec | 1/2 x 45° | 2.000 | 1 3/8 | .093 | 1.870 | .062 | .078 | 1 3/4 | 1.875 1.874 | 2 1/4 | 1.187 | .2500 .2495 | 1.193 |
| RVP 3 | 1 or spec | as spec | 1/2 x 45° | 3.000 | 1 7/8 | .093 | 2.870 | .062 | .125 | 2 | 2.875 2.874 | 3 1/4 | 1.700 | .2500 .2495 | 1.223 |
| TOLERANCE | ±1/32 | ±.010 | | ±.005 | max | ±.005 | ±.005 | ±.005 | ±.005 | max | * | max | max | | max |

STANDARD TIC TRANSLATORY POTENTIOMETERS

| TYPE | DESCRIPTION | STROKE (and winding) LENGTH (in) | CONSERVATIVE POWER RATING (watts) | WEIGHT (oz) | RESISTANCE | | INDEPENDENT LINEARITY (% of max) | NON-LINEAR WINDINGS AVAILABLE | MULTIPLE WINDINGS | MOUNTING | TYPE |
|------|-------------|----------------------------------|-----------------------------------|-------------|---------------------|-----------|----------------------------------|-------------------------------|--|---------------------------------------|------|
| | | | | | Range (ohms/in) | Tolerance | | | | | |
| RVT | Translatory | 2 1/2 | 2.5 | 6 | 100 Ω/in to 25 K/in | ±5% | ±1% | ✓ | Up to 3 independent windings in same housing | Threaded bushing and rear-end bracket | RVT |
| | | 5 | 5 | 10 | | | | | | | |
| | | 8 | 6 | 13 | | | | | | | |
| | | 12 | 8 | 20 | | | | | | | |

GENERAL SPECIFICATIONS

Electrical
 Coin-silver overtravels: 1/2" nominal at each end of winding.
 Taps: Available at desired points.
 Rated temperature coefficient of resistance wire: 0.002% per °C
 Ambient temperature range: -55°C to +80°C
 Dielectric strength: 1000V DC breakdown test, 5-sec duration

Mechanical
 Housing: Precision-machined aluminum with corrosion-resistant Alumilite finish.
 Mechanical stroke: Determined by limit stops.
 Life: 1 million operations at 1" per sec, or less.
 Depth Behind Panel: Stroke Length Plus 1 1/8 inches
 Cross section of Housing 1 1/4" x 1 1/4"

TECHNOLOGY INSTRUMENT CORP.

533 Main St., Acton, Mass. Colonial 3-7711 West Coast Eng'g. Facility, 731 No. LaBrea Ave., Hollywood, Calif., Whitney 0108

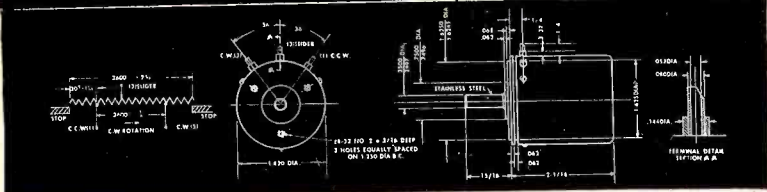


ADVANCED PERFORMANCE MULTITURN POTENTIOMETERS

ervo potentiometer Type M10T servo-corrected for .025% accuracy at low cost. Winding may be corrected for resistive loads of up to twenty times the potentiometer total resistance. Extraordinary mechanical precision and high electrical accuracy combine with a new method of servo-controlled winding of the resistance element to produce a new concept in multiturn precision potentiometers.

Electrical Specifications

Resistance Range: 1000 ohms to 10,000 ohms $\pm 5\%$.
Independent Linearity: 0.05% standard, 0.025% or better, special.
Effective Electrical Angle: $3600^\circ + 1^\circ - 0^\circ$.
Power Rating: 5 watts at 40°C derated to zero at 80°C .
Leakage Resistance: Terminals to shaft 50 megohms minimum at 500 volts DC.
Voltage Breakdown: All terminals shall withstand 1000 volts (rms) AC to shaft.
Ambient Temperature Range: -55°C to $+80^\circ\text{C}$.
End Coil Resistance: .025% of total resistance (maximum).
Equivalent Noise Resistance: 100 ohms maximum.
Temperature Coefficient of Resistance Wire: .00002 per $^\circ\text{C}$.



Mechanical Specifications

Base and Bearings: One piece machined aluminum base houses spring-loaded ball bearings in a single through bore.
Mounting: Universal type offers choice of servo or tapped hole mounting.
Mechanical Rotation: $3660^\circ \pm 2.5^\circ$ limited by rugged lead screw stops which withstand 100 inch pounds applied torque.
Maximum Starting Torque: 1.3 inch ounces at 20°C .
Terminals: Gold-flash, blind solder pot.
Enclosure: Corrosion-resistant stainless steel cover, bonded to base to exclude dirt, moisture, and corrosive atmosphere. Provides no support to working parts.
Weight: 5 ounces nominal.

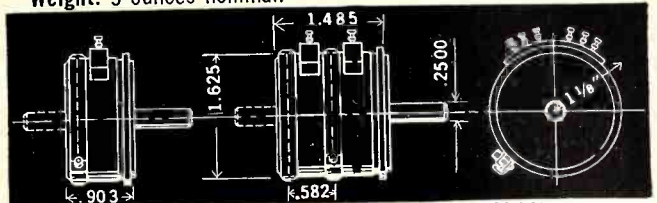
STANDARDIZED BALL BEARING PRECISION POTENTIOMETERS

Types ST18 and STC18 feature compactness, ball bearings for low friction, and high electrical accuracy. Linear and non-linear windings are available. Servo-mount dimensions conform to latest industry standards. Type STC18 is electrically identical to Type ST18. Unitized construction to permit rapid assembly and dis-assembly of ganged units by user. Also available with plug-in type mounting using type RVBC1-5/8.

Electrical Specifications: (Types ST18 and STC18)

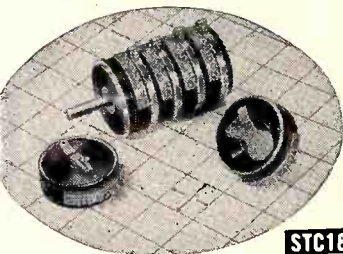
Resistance Range: 100 ohms to 100 K ohms $\pm 5\%$ standard, $\pm 1\%$ special.
Independent Linearity: 0.5% of total resistance standard, to 0.2% of total resistance special.
Winding Angle: $320^\circ \pm 2^\circ$ standard. $\pm 0.5^\circ$ special. Non-standard winding angles available.
Power Rating: 3 watts at 25°C derated to zero at 80°C .
Ambient Temperature Range: -55°C to $+80^\circ\text{C}$.
Temperature Coefficient of Resistance Wire: .00002 per $^\circ\text{C}$.
Taps: Available at specified locations on the resistance winding.
Equivalent Noise Resistance: 140 ohms maximum.
Voltage Breakdown: 1000 volts DC all terminals to shaft.

Type
ST18

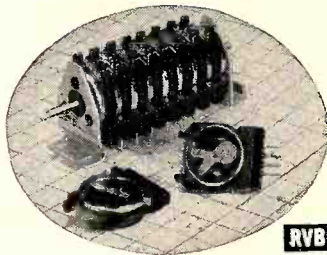


Mechanical Specifications: (Types ST18 and STC18)

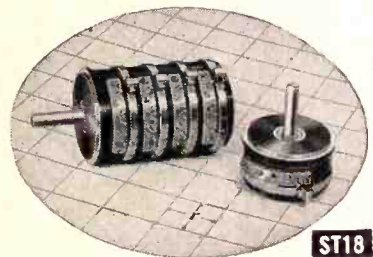
Housing: One-piece machined aluminum base with black aluminum, corrosion-resistant finish.
Bearings: Two ball bearings for low rotational friction.
Mechanical Rotation: 360° continuous or limited by stops if specified.
Maximum Starting Torque: 0.5 ounce inches per section.
Ganging:
Type ST18 units may be ganged on a straight through shaft, using one-piece stainless steel clamp rings which permit precise phasing of ganged units.
Type STC18 features unitized construction allowing user to assemble multi-gang units with ease. Spring-loaded drive-arm joints sliders of successive sections, limiting backlash to 0.06" per ganged section.
Weight: 3 oz. for single section, 1 oz. per additional section.



STC18



RVBC1-5/8



ST18

POTENTIOMETER TEST EQUIPMENT

For the measurement of potentiometer noise, linearity, and non-linear conformity.

Write for complete specifications.

Type 394-A PONO GOMETER® (Potentiometer Noise Tester)
 A precision potentiometer noise tester designed for laboratory production control in the manufacture of single or multiturn potentiometers. Monitoring the transient contact noise resistance appearing between the wiper and resistance element, both audible and visual indications are given when threshold level is exceeded.

Range: Equivalent Noise Resistance threshold level adjustable from 10 to 5000 ohms. Lower levels can be set up by means of accessory equipment.
Wiper Exciting Current: Constant 1 milliampere. For other values accessory current sources can be set up.



TIC PRECISION POTENTIOMETER HANDBOOK AND CATALOG

A truly authoritative reference on the theory, design, performance, and application of precision potentiometers. Handbook includes detailed and illustrated engineering description of

- Potentiometer terminology
- Circuits for optimum potentiometer adjustment
- Non-linear loading techniques
- Causes of resolution and residual noise
- Potentiometer design and construction procedures

and many other pertinent subjects. Catalog section, included under same cover as handbook, lists complete specifications on standard TIC potentiometers and test equipment. Loose-leaf format permits the accumulation of technical information on new developments in potentiometer design and new TIC models as they are introduced. Price: \$2.00 per copy, (including subscription to future material.)

TECHNOLOGY INSTRUMENT CORP.

533 Main St., Acton, Mass. COLonial 3-7711

West Coast Eng'g. Facility, 731 No. LaBrea Ave., Hollywood, Calif., WHitney 0108

INSTRUMENTATION

PHASE MEASUREMENT

Type 320-AB
Phase Meter
PROVEN PERFORMANCE
EASE OF READING
SIMPLICITY OF OPERATION

For direct 0-360° Phase angle measurements. Used in conjunction with Audio Facilities, Ultrasonics, Servo-mechanisms, Geophysics, Vibration, Acoustics, Aerial Navigation, Electric Power Transformation, Signalling, and mechanical applications of Torque Measurement, Dynamic Balancing and Printing Register.



PHASE ANGLE RANGE

0-360° without ambiguity

Type 322-A
Precision Phase Meter
HIGH PRECISION
EXTREME ACCURACY
VERSATILITY

Phase measurements from 0-360° without ambiguity. Highly stable and sensitive circuitry plus precision meter scales provide utmost accuracy of measurements, even with most complex wave-forms. Used in similar applications to type 320-AB where extreme precision is required.



0-360° without ambiguity

Type 324-A
Video Phase Meter
WIDE FREQUENCY RANGE
HIGH ACCURACY
DIRECT READINGS

For rapid and accurate measurement of Phase Angle through the Video Range. Used in Phase Equalizing Networks, Single Sideband Video Translation, Reactance Tube Modulators, Phase Shift Oscillators, Chromaticity Sub-Carriers TV, Neutralization Circuits, Broadband Negative Feedback Circuits, Polyphase Selectivity Methods, Antenna Array Phasing, and Phase Delay Line Measurement.



0-360° without ambiguity

Type 704-A
Secondary Phase Standard
EXCELLENT STABILITY
HIGH INPUT IMPEDANCE
NEGLECTIBLE DISTORTION

Precision electronic Phase Shifter. Shifts phase of sinusoidal signal by any angle 0-360° in four 90° ranges. Used for measurement with Phase Shifting Capacitors, Time Base Circuits, Transmission Networks, Multi-phase Voltage Rotation, Phase Detection Circuits, AC Thyatron Control, Feed Back Amplifiers, Servo Systems, Synchros, Resolvers, Power Factor, Gyros, and CRO Sweeps.



0-360° Variable

Type 706-A
Ultra-Sonic Phase Standard
HIGH PRECISION
EXCELLENT STABILITY
SIMPLICITY OF OPERATION

Generates two voltage signals whose phase difference is known to $\pm 0.1^\circ$. Multiple frequency Lissajous pattern is used for precise indication of angles established. Operation is at a single predetermined frequency specified by the user. For precise calibration of radar ranging circuits and phase detectors as well as for phase measurements.



0-360° Variable

Type 7000-A
Primary Phase Standard
LISSAJOUS PRESENTATION
EXTREME ACCURACY
CALIBRATES PRECISELY

Generates two sinusoidal voltages whose phase relationship may be determined with ease to within $\pm 0.05^\circ$ or better. Multiple frequency Lissajous pattern presentation is independent of calibration of precision phase shifter. Used in highly precise calibration of phase sensitive devices and for phase measurements in amplifiers, synchros and resolvers.



0-360° Variable

AMPLIFIERS

Type 500-A
Wide Band Decade Amplifier
WIDE BAND RESPONSE
HIGH STABILIZED GAIN
ZERO PHASE SHIFT

Featuring high input impedance, low output impedance, and compactness, this general purpose laboratory instrument provides 20 volts output over wide frequency range with stabilized gains of 10, 100, and 1000.



FREQUENCY RANGE

5cps—2 mc on gain 1
5cps—1.5mc on gain 10
5cps—1 mc on gain 100

Type 501-A
Compressor Amplifier
WIDE INPUT RANGE
UNIFORM OUTPUT
NEGLECTIBLE DISTORTION

Accepts an input signal of varying amplitude and provides output signal having the same waveform, of nearly constant amplitude. Operation is effective over a large input dynamic range and a wide frequency range with essentially zero distortion.



100cps to 1.0mc for compression

Type 511-A
Power Amplifier
NEGLECTIBLE DISTORTION
HIGH VOLTAGE OUTPUT LEVEL
PHASE SHIFT COMPENSATION

Low distortion, low noise and excellent phase characteristics throughout the frequency range 50cps-50kc. Four outputs available to match various loads (5, 25, 200 or 1200 Ω). Phase compensation circuit permits overall phase shift to be maintained at a constant value with varying gain. Output voltage up to 120 volts into a 1200 Ω load. Operates into loads varying from pure resistance to pure reactance.



50cps to 30kc (down 1 db at 50kc)

OSCILLATOR

Type 410-A
RF Oscillator
EXCELLENT STABILITY
HIGH OUTPUT LEVEL
LOW OUTPUT IMPEDANCE

12 volts available from 100 kc to 10 mc. with minimum distortion. Up to 30 volts obtainable. 1000 cycle modulation provided. Used as a signal source for radio frequency bridges, transfer oscillator for frequency counters, and for general laboratory measurements.



FREQUENCY RANGE

100kc to 10mc in signal

IMPEDANCE MEASUREMENT

Type 310-A
Z-Angle® Meter
EASE OF OPERATION
HIGH ACCURACY
VERSATILITY

Measures impedance directly in polar coordinates as an impedance magnitude in ohms, and phase angle in degrees: Z $\angle\theta$. Used in measurement of impedance, inductance, capacitance, resistance, dissipation factor (D), storage coefficient (Q), and plotting impedance functions. Internal sources of 60 and 400 cycles.



FREQUENCY & IMPEDANCE RANGE

30cps to 2kc 0.5-10
30cps to 20kc 0.5-60
30cps to 40kc 0.5-50

Type 311-A RF
Z-Angle® Meter
EASE OF OPERATION
FREEDOM FROM COMPUTATIONS
RAPIDITY

Companion instrument to Type 310-A Z-Angle Meter, Type 311-A offers same convenient impedance measurements over RF band. For laboratory use and measurement of broadcast antennas and transmission lines.



MAGNITUDE RANGE

Input: 7 to 200 or 1/7 to 1/200
Summing: 1 to 10 \pm

COMPUTER

Type 250-A
Complex Plane Analyser
VERSATILE
EASILY OPERATED
ELIMINATES COMPUTATION

Complex vectors quickly and accurately multiplied and divided. Simplifies network analysis and control system design. Used with vector plots on complex frequency plane to solve root locus problems, antenna array design, plotting propagation patterns, fitter design, frequency response and transient behavior.

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COLonial 3-7711

| ABSOLUTE ACCURACY | INCREMENTAL ACCURACY | METER SCALES | INPUT AMPLITUDE | INPUT IMPEDANCE | RECORDER OUTPUT | DIMENSIONS (In cabinet) | | |
|---|---|-------------------------------------|--|-----------------------------|---|-------------------------|------|------|
| | | | | | | Wide | High | Deep |
| 1% of full scale $\pm 3^\circ$ | $\pm 0.25^\circ$ | 0-360° 0-90° 0-180° 0-360° | 1-170 volts (peak) | 10 meg. shunted by 13uuf. | 0-10ma. (into 500 ohms max.) | 21½" | 8¾" | 10¾" |
| $\pm 1^\circ$ (20 cps to 20kc) | $\pm 0.1^\circ$ (up to 20 kc) | 0-360° 0-30° (any 30° seg.) | 2-30 volts (peak) | 4.7 meg. shunted by 13uuf. | 0-5v. dc (across 10K max.) | 19½" | 14½" | 16½" |
| $\pm 4^\circ$ over entire range | $\pm 0.25^\circ$ over entire range | 0-360° 0-90° (any 0-90° seg.) | 2-300 volts (peak) | 10 meg. shunted by 14uuf. | | 21" | 9¾" | 14⅞" |
| within 2° (where applied frequency within $\pm 0.2\%$ of rated) | $\pm 0.1^\circ$ (where applied frequency within $\pm 0.2\%$ of rated) | | .01-15 volts (rms) | .47 meg. shunted by 13 uuf. | <u>OUTPUT IMPEDANCE</u> approx. 100 ohms | 21½" | 8¾" | 12¾" |
| within 0.1° any dial setting | | | <u>OUTPUT AMPLITUDE</u> Approx. 10 volts (rms) across 5kΩ or more | | approx. 200 ohms | 21" | 9¾" | 14⅞" |
| at least 0.05° multiples of 1° established to 0.02° | | | 10 volts (rms) across 5k (min.) | | approx. 100 ohms. | 19½" | 31½" | 20" |

| OUTPUT VOLTAGE | OUTPUT IMPEDANCE | HARMONIC DISTORTION | PHASE SHIFT | INPUT AMPLITUDE | INPUT IMPEDANCE | HUM AND NOISE (INPUT SHORTED) | Wide | High | Deep |
|---|---|--|--|-------------------------------------|------------------------------|---------------------------------|------|------|------|
| 20 v. max. across 20kΩ load | approx. 200Ω | | 0 \pm 2° 20cps-100kc | | 160 megohms shunted by 7uuf. | 60db below nominal output level |  |  |  | 13¼" | 5" | 9¾" |
| Constant 0.25 v. (± 0.4 db) thru compression range | 1000Ω (max.) for frequencies above 500cps | 1.5% max. (0.5% with 40 volts input) | 0 \pm 2° 100cps-20kc <u>RESPONSE TIME</u> Approx. 0.1 sec | 1.25-50 volts for compression | 10 megohms shunted by 10uuf. | 45db below nominal output level | 9¾" | 5½" | 8" |
| <u>OUTPUT POWER</u> 12.8w (max) 13.0w (max) 15.1w (max) 12.0w (max) | <u>OPTIMUM LOAD</u> 5 ohms 25 ohms 200 ohms 1200 ohms | 1.0% max. (0.5% at 10 w output) | <u>PHASE SHIFT</u> 1.0° \pm 1.5° 50cps-10kc (compensated) | 7 volts (max.) for rated distortion | 100K ohms shunted by 10uuf. | 15mv. (max.) | 15¾" | 8½" | 10¾" |
| <u>MODULATION</u> | <u>OUTPUT IMPEDANCE</u> | <u>OUTPUT VOLTAGE</u> | | | | | | | |
| 1000cps (internal) | approx. 50 ohms | 30 volts max. (12 volts max. for optimum distortion) | | | | | 15⅞" | 8¼" | 12⅞" |
| <u>PHASE ANGLE RANGE</u> | <u>PHASE ANGLE ACCURACY</u> | <u>VOLTAGE APPLIED TO UNKNOWN</u> | <u>INTERNAL OSCILLATOR</u> | | | | | | |
| 0° to $\pm 90^\circ$ Direct Reading | $\pm 2^\circ$ for rated frequency and impedance range | approx. .04 volts | 60 cycle and 400 cycle $\pm 1.0\%$ | | | | 10⅞" | 10" | 14⅞" |
| 0° to $\pm 90^\circ$ | $\pm 4^\circ$ for rated frequency and impedance | 0.32 to 1 volt | | | | | 10⅞" | 10" | 14⅞" |
| <u>ANGULAR RANGES</u> | <u>AVERAGE SUMMING ACCURACY</u> | <u>METER SCALES</u> | | | | | | | |
| Input: 0° to $\pm 357^\circ$ Summing: 0° to $\pm 3600^\circ$ | Approx. 1% in angle and log-magnitude | Angular Scale: 0° to $\pm 360^\circ$ and -360° to 0° Antilog magnitude scale: 1 to 10 and 10 to 1 Log ₁₀ scale: 0 to 1 Direct log-magnitude scale: 1 to 200 | | | | | 10¾" | 12½" | 13¼" |

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CHATHAM

ELECTRONIC TUBES



Hydrogen Thyratrons

— for Pulse Voltage Generation



TYPE VC-1257
Hydrogen filled, zero bias thyatron with hydrogen generator for generation of pulse power up to 40 megawatts.



TYPE 5948/1754
Hydrogen filled, zero bias thyatron with hydrogen reservoir for generation of peak pulse power up to 12.5 megawatts.



TYPE 5949/1907
Hydrogen filled, zero bias thyatron with hydrogen reservoir for generation of peak pulse power up to 6.25 megawatts.



TYPE VC-1258
Zero bias miniature hydrogen thyatron for the generation of peak pulse power up to 10 KW.

ELECTRICAL DATA*

| Type | VC-1258 | 5949/1907 | 5948/1754 |
|---|---------------------|----------------------|---------------------|
| Maximum Peak Forward Anode Potential | 1000 volts | 25000 volts | 25000 volts |
| Maximum Peak Anode Current | 20 amps | 500 amps | 1000 amps |
| Maximum Average Anode Current | 0.05 amps | 0.50 amps | 1.0 amps |
| Maximum Heating Factor (epy x prr x ib) | 1.0x10 ⁸ | 6.25x10 ⁹ | 9.0x10 ⁹ |
| Nominal Filament Power | 12.6 watts | 95 watts | 190 watts |
| Hydrogen Reservoir | No | Yes | Yes |

*More detailed information on electrical and mechanical data will be supplied on request.

● A NEW CONCEPT OF HYDROGEN THYRATRON DESIGN! The tubes illustrated represent a departure from conventional hydrogen thyatron designs and are a result of several years of concentrated development work. They are primarily employed in the generation of peak voltages of peak voltages durations in the order of microseconds.

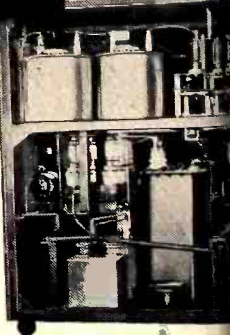
Custom-built Electronic Equipment



20 Megawatt Hydrogen Thyatron Test Equipment built by CHATHAM to customers' specifications.

● CHATHAM specializes in the development, design, and construction of custom-built electronic equipment to exactly meet customers' requirements. Our capable staff of engineers will furnish prompt estimates or, if desired, will call to discuss your problem personally. Call or write today.

Pulse life test equipment built by CHATHAM checks receiver type tubes under pulse conditions.



5 Mega-radar modulator built by CHATHAM to rigid military standards.

ELECTRONICS AND EQUIPMENT

Electronic Tubes

Ruggedized Type Tubes

The following tubes fully conform to JAN specifications and can be supplied promptly, usually direct from stock:

| | |
|---------|-------|
| 5R4WGY | 2D21W |
| 6AL5W | OC3W |
| 6H6WGT | OD3W |
| 25Z6WGT | 2050W |

TYPE 6AS7G TWIN POWER TRIODE

A Twin power triode, intended primarily for voltage regulation. Features triode balance within $\pm 10\%$ at rated plate current, absence of plate current drift and grid current. Heater 6.3 volts, 2.5 amps. Characteristics for each section: Amp. factor 2.0, mutual conductance 7000 micromhos, plate res. 270 ohms, plate dissipation 13 watts.

TYPE 1Z2 RECTIFIER

A small bulb, high voltage, vacuum rectifier. Low cathode heating power and low dielectric losses make tube suitable for radio frequency supply circuits. Filament 1.25 volts, .275 amps. Inverse peak anode voltage, 15000, average plate current 1.5 ma., peak anode current 8.5 ma.

TYPE 6336 TWIN POWER TRIODE

A reliable twin power triode intended primarily for voltage regulation. Features high permeance and plate dissipation. Heater 6.3 volts, 4.75 amps. Characteristics for each section: Amp. factor 2.7, mutual conductance 11000 micromhos, plate resistance 250 ohms, plate dissipation 30 watts.

TYPE 395-A COLD CATHODE GAS TRIODE

Requires no filament supply and is used in many grid controlled rectifier and relay applications. Maximum D.C. anode current—10 ma. Maximum D.C. anode voltage—150 volts

TYPE 4B32 RECTIFIER

A rugged half-wave Xenon filled rectifier. Operates in any position throughout an ambient temperature range of -75°C to $+90^{\circ}\text{C}$. Filament 5 volts, 7.5 amp... Inverse peak anode voltage 10,000 average anode current 1.25 amps.

TYPE 5651 WA VOLTAGE REFERENCE TUBE

A reliable and rugged cold cathode voltage reference tube designed for extreme stability over a wide ambient temperature range. Operating voltage 86 volts, operating current 1.5 to 3.5 ma. Voltage regulation, 2 volts maximum.

TYPE 3B28 RECTIFIER

This rugged half-wave Xenon filled rectifier will operate in any position and throughout an ambient temperature range of -75°C to $+90^{\circ}\text{C}$. Filament 2.5 volts, 5.0 amps... Inverse peak plate voltage 10,000, average anode current .25 amp.



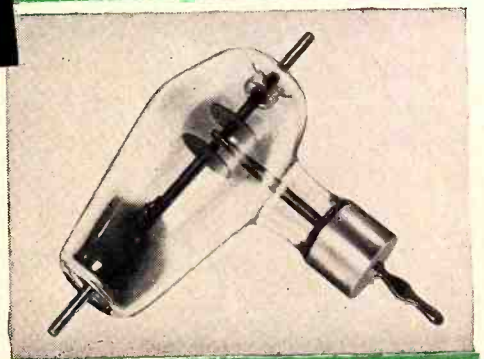
Chatham Vacuum Switches

SPECIFICATIONS

HOLD OFF VOLTAGE: Internal—10,000 volts rms; External* (at 27,000 feet altitude)—10,000 volts rms; External* (at 40,000 feet altitude)—7,500 volts rms.

INTERRUPTING RATING, RESISTIVE LOAD: 1,000 operations life at 10,000 v, ac, rms—10 amp, ac, rms; 1,000,000 operations life at 10,000 v, ac, rms—2 amp, ac, rms; 500,000,000 operations life at 10,000 v, ac, rms—0.1 amp, ac, rms.

NET WEIGHT (approx.).....2 ozs. **MAXIMUM WIDTH (overall)**..... $4\frac{1}{4}$ ins.
MAXIMUM LENGTH (overall)..... $3\frac{3}{8}$ ins. **MAXIMUM THICK. (overall)**..... $1\frac{1}{16}$ ins.
*at 50% humidity



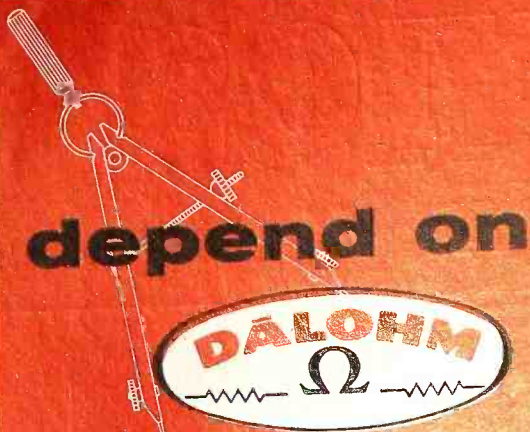
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HIGH VOLTAGE VACUUM FUSES

Can be supplied by Chatham to exact customers' specifications if ordered in adequate quantity. Call or write for full particulars and quotes.

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EXECUTIVE AND GENERAL OFFICES: LIVINGSTON, NEW JERSEY
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*carefully
crafted for
matchless
performance*

depend on



deposited carbon resistors

for accuracy and stability

Dalohm deposited carbon resistors are manufactured under rigid controls to deliver matchless performance and economy in any high-low resistance range.

Pure carbon in crystalline form is bonded to a selected ceramic core, and then sealed against moisture with a special silicone coating having high dielectric strength, excellent thermal conductivity, and high resistance to abrasion.

- From 1 Ohm to 200 Megohms, depending on type.
- Temperature coefficient 150 PPM per degree C for lower resistance ranges up to 500 PPM per degree C for higher ranges.
- 1% accuracy. 2%, 5%, and 10% tolerances also available.

Meet
MIL-R-10509-A
Specifications



DC-2 — 2 Watts DC-1 — 1 Watt DC-1/2 — 1/2 Watt *DC-1/4 — 1/4 Watt *DC-1/8 — 1/8 Watt *DCS 1/2 — 1/2 Watt

SIX WATTAGE RANGES

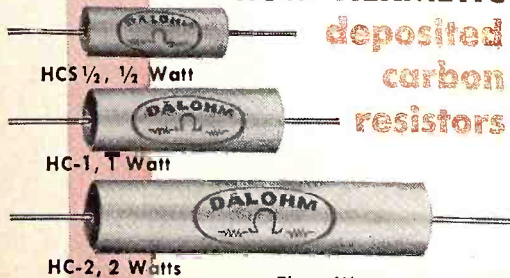
DC-2, 2 Watts DC-1/2, 1/2 Watt DC-1/8, 1/8 Watt*
DC-1, 1 Watt DC-1/4, 1/4 Watt* DCS-1/2, 1/2 Watt*

*For Miniature Installations

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carbon
resistors**

Completely solder sealed in a newly-developed envelope of non-hydroscopic ceramic. Ideally suited for use in UHF equipment where only the optimum of quality may be tolerated. Ruggedized for incorporation into "snap-in" component clips. Production tested for resistance to thermal shock, salt-water immersion and humidity.



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Conform to Applicable JAN and MIL Specifications

Dalohm miniature power resistors—the answer to those tight specifications—are carefully designed and skillfully made for all applications where the equipment must survive the most severe environmental, shock and vibration conditions. Completely welded from terminal to terminal, coated with special silicone material, and impervious to moisture, salt ions, vapor, and gases.

RH TYPES—Silicone sealed in a die-cast, black anodized radiator finned housing and mounts on sub-panel for maximum heat dissipation. Three wattage ranges: RH-25, 25 Watts, RH-50, 50 Watts, RH-250, 250 Watts.



RS TYPES—Silicone sealed offering high dielectric strength, maximum heat dissipation, and maximum resistance to abrasion. Three wattage ranges: RS-2, 2 Watts; RS-5, 5 Watts, RS-10, 10 Watts.

- Temperature coefficient 0.00002/Deg. C
- Ranges from 0.1 Ohm to 55,000 Ohms depending on type
- Tolerances 0.05%, 0.1%, 0.25%, 0.5%, 1%, 3%, 5%.

WWA & WWL

TYPES—For critical applications. Encapsulated for Hermetic sealing. Built to surpass MIL-R-93A.

- Temperature coefficient 0.00002/Deg. C
- Ranges from 0.05 Ohm to 3 Megohms
- Tolerances as low as 0.05%

new ruggedized miniature power resistors

Dalohm "ruggedized" miniature power resistors answer not only the space problem, but the shock problem. They are designed for trouble-free performance under the most exacting and demanding conditions of shock and vibration. Sealed in silicone and housed in black metal tubing. (Suggested mounting clip: Atlas E-E Corp.). Same characteristics as RS Types.



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MYCALEX glass-bonded mica

MOLDABLE

(BY MYCALEX CORPORATION OF AMERICA ONLY)

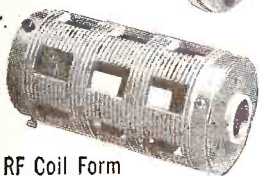
MYCALEX 410X
Switch Housing



MYCALEX 410X
AN Connector
Inserts



MYCALEX 555
Printed Circuit
Fuze Piece

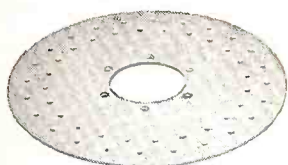
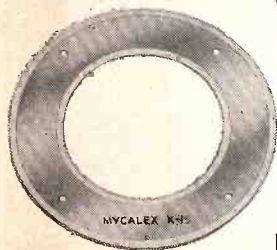


MYCALEX 410 RF Coil Form

MACHINABLE

(BY ANY WELL EQUIPPED SHOP)

MYCALEX K
Capacitor Ring
Silver-paste fired
on both sides



MYCALEX 400
Optically flat surface
14" diameter Disc



Insulator Plate
machined from
MYCALEX 400

MYCALEX glass-bonded mica is the unique CERAMOPLASTIC

MYCALEX glass-bonded mica has ceramic rigidity, plus greater dimensional precision than any plastic or ceramic; MYCALEX glass-bonded mica can be molded and machined like a plastic. Dimensional stability and temperature endurance are superior to any plastic and complex insert inclusions can be tightly molded. Incorporating the best features of both ceramics and plastics plus special ones of its own, MYCALEX glass-bonded mica is a unique ceramoplastic.

PROPERTIES

- Electrically stable; properties are unvarying with age.
- Low electrical loss.
- High dielectric strength.
- High arc resistance — cannot carbonize.
- Can be machined, ground or lapped to as close tolerance as any metal.
- Permanent dimensional stability. Free from warpage, flow or age distortion.
- Unaffected by humidity — zero moisture absorption.
- Impervious to water, oil, organic solvents.
- High temperature endurance.
- High thermal shock resistance.
- Inserts may be included in molded grades.
- Resistant to radiation effects.

NOTE The MYCALEX glass-bonded mica materials, designated below, are all inclusive formulations of and manufactured only by the Mycalex Corporation of America.

THERE ARE DIFFERENT GRADES FOR DIFFERENT PURPOSES

| 410 | 555 | KM Series | 400 | 500 | K Series |
|--|--|--|---|---|--|
| Continuous operating temperature limit 650°F. This grade of MYCALEX glass-bonded mica is moldable with or without inserts. | Continuous operating temperature to 900°F. A new grade of MYCALEX glass-bonded mica having high temperature endurance; moldable with or without inserts. | Moldable, not readily machinable capacitor dielectric of MYCALEX glass-bonded mica, with dielectric constant indicated by KM number such as 10, 20, 30, etc. | Continuous operating temperature limit 700°F. Readily machinable grade of MYCALEX glass-bonded mica. Not moldable, inserts must be cemented in. | A new superior grade of MYCALEX glass-bonded mica for higher continuous temperatures to 1000°F. Readily machinable; not moldable, inserts must be cemented. | Machinable capacitor dielectric of MYCALEX glass-bonded mica, higher dielectric constant indicated by K numbers as 10, 15, 20. |

MYCALEX CORPORATION OF AMERICA

World's largest manufacturer of glass-bonded mica products—Owners of MYCALEX patents and trade-marks

's most nearly perfect INSULATION

Commutator Plates by MYCALEX ELECTRONICS CORPORATION

Under exclusive license of Mycalex Corporation of America



Top view of a MYCALEX 410 commutator made to the exceptionally high standards of manufacture required for the Air Materiel Command and other government projects. Only MYCALEX glass-bonded mica could provide the mechanical, dimensional and electrical properties that such precision products require.

of the same commu-
precision injection-
180 or 108 contacts
in silver slip rings.
inserts will take re-
ring and violent tem-
peratures with no loosening.
Mycalex Electronics Corp.
is able to produce similar
combinations of metal
inserts to your designs.
Write today.



MYCALEX glass-bonded mica CAN CONTRIBUTE TO ELECTRICAL DESIGN

Components of given capacities can be made smaller, more lighter in weight when the high thermal endurance, structural dimensional precision, dimensional stability, and ideal insulating properties of MYCALEX glass-bonded mica are used. Tight inserts eliminate corona and produce tight seals. Elements can be tied into inserts.

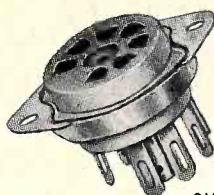
COMPLETE STORY IS YOURS FOR THE ASKING

Mycalex Corporation of America is the world's largest manufacturer of glass-bonded mica products. Our facilities are devoted exclusively to the manufacture of glass-bonded mica and actually exceed those of the rest of the industry. Our extensive research, development and engineering departments are completely integrated with an ultra modern manufacturing plant. These facts are stated to emphasize the engineering service offered, without obligation, to our present and potential customers.



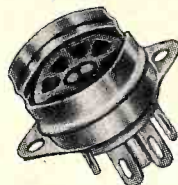
Tube Sockets by MYCALEX TUBE SOCKET CORPORATION

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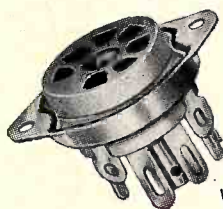


SADDLE TYPE
Bottom Mounting

SHIELD BASE TYPE
Top Mounting

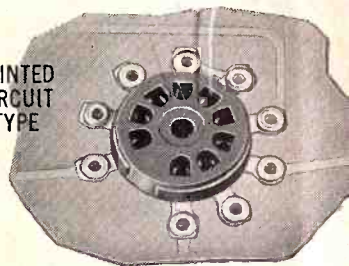


SNAP SADDLE TYPE
Top Mounting



SADDLE TYPE
with Four Ground Lugs
Bottom Mounting

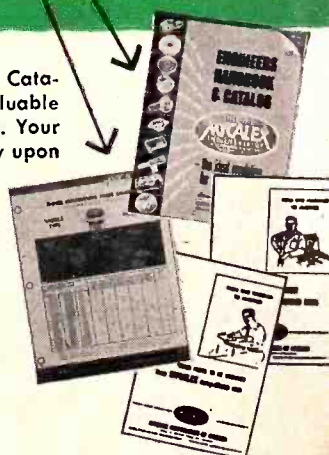
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Our engineers are ready to advise you

If you will send us sketches, blueprints or models of any products in which MYCALEX glass-bonded mica might be used as electrical insulation, our engineers will be glad to make suggestions as to the most economical and effective ways to employ our products in your designs. Address requests to J. H. DuBois, Vice President-Engineering, at Clifton, N. J. address below.

Our Engineers Handbook and Catalog is recommended as a valuable addition to your technical file. Your copy will be sent free promptly upon request. If you want to machine MYCALEX, ask for our informative free booklet "From One Machinist To Another"; also "How to Design Parts to be Machined from MYCALEX glass-bonded mica." A complete file of Data Sheets on MYCALEX Tube Sockets also available.

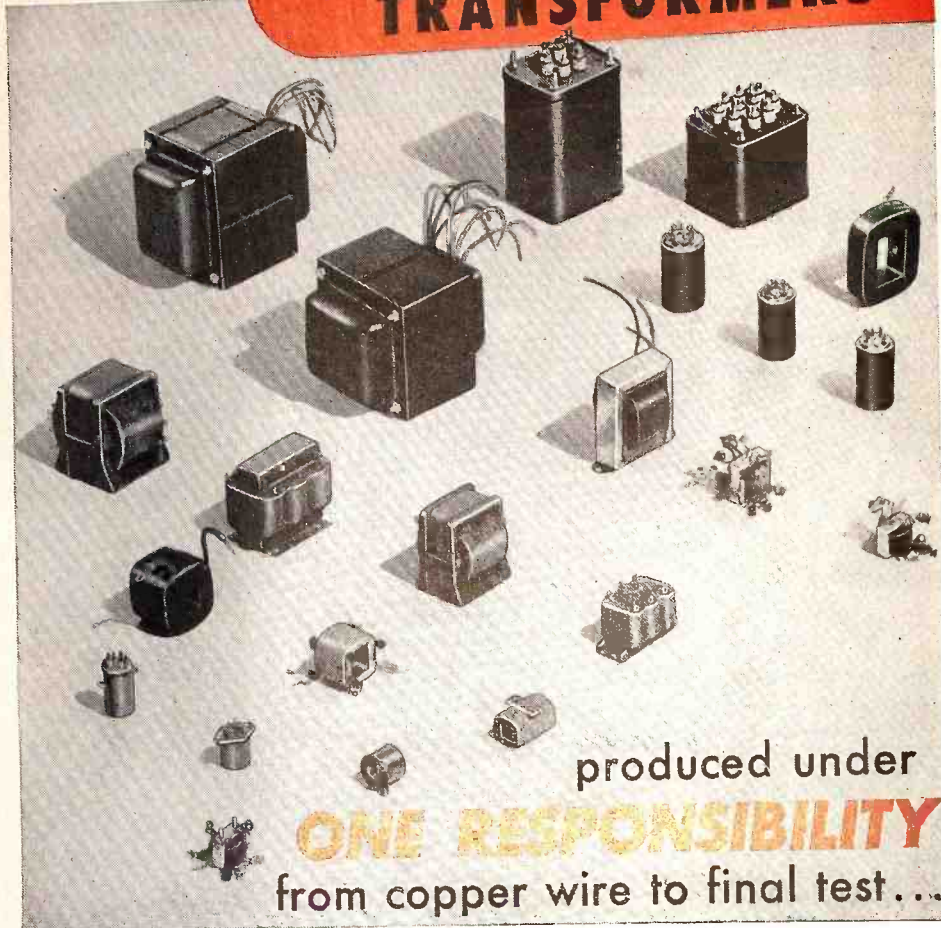


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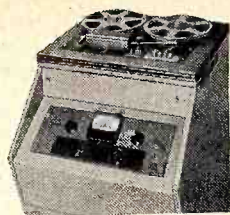
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STUDIO CONSOLE TAPE RECORDER**

Never so much quality, operational ease and value offered at modest price. Embodies the famous Presto R-11 tape mechanism, matching amplifier-power supply in a sturdy, well designed console cabinet. Three motors for accurate drive; 15" and 7½" per sec. speeds. Price: under \$1000.

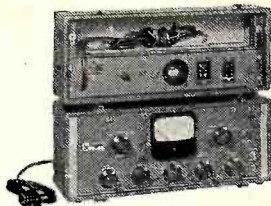


**PRESTO RELIABLE LONG-PLAYING
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Automatically reversible for continuous playback of background music. Frequency response uniform from 50 to 8,000 cps (±2 db). Tape speed: 3¾" per sec. Reels up to 14" dia. (4,800' of tape) with dual track. Mechanism will re-cycle or stop after 8-hours of play.

**PRESTO HIGH-QUALITY
TURNTABLE-DRIVEN
TAPE PLAYBACK
UNIT TL-10**

...unting on any standard
... Equalized output of
... can be fed directly into
... amplifier, such as stand-
... speech input equipment.
... and 15" per sec. when
... 78 rpm. Ideal for low-
... tape playback.



**PRESTO PRECISION FIELD
TAPE AMPLIFIER 900 A-3**

Here is the proper high quality, wide range amplifier to match Presto Tape Transport mechanisms RC-7 and RC-11. Separate power supply eliminates noise. Three microphone input, low distortion. 900-A-1 amplifier identical except for single input transformer.

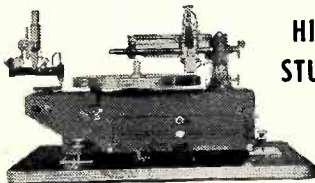


**PRESTO 92-B
RECORDING
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FOR VERTICAL
RACK MOUNTING**

Has low internal output impedance, high degree of feed-back and its response is virtually unaffected by changes in load. Holds distortion to minimum. 60-watt output ample for transient peaks. Push-button selector for recording characteristics. Vertical chassis with removable front panel for instant inspection or servicing.

**PRESTO 90-B
RECORDING
CONSOLE
FOR PORTABLE
OR FIXED USE**

...sed 90-B features a 3-
...ixer, input and output
... several fixed character-
...s variable high and low
...tols, and V.U. meter.
... connectors for double
...est professional standard
...workmanship... over-all
...ual to finest high-fidelity
...ent.



**PRESTO
HIGH-PRECISION
STUDIO CONSOLE
RECORDER
8 D-G**

Unusually flexible in operation and easy to control. Cuts finest instantaneous and master recordings, with choice of seven different feed pitches, plus 250 lpi microgroove in each direction. Direct gear drive at 33⅓ and 76.26 rpm, either speed selected by double-throw switch. Transmission unit is simple, very rugged, and extremely accurate.



**PRESTO 16" TURNTABLE
10-B FOR RADIO STATIONS
AND RECORDING STUDIOS**

An improvement on the long popular model 10-A. Capable of continuous operation by non-technical personnel. Inexpensive and simple to service. Operates at 33⅓, 78 and 45 rpm. With its 3-speed mechanism, the Presto 10-B is an extremely accurate rim-driven table. Available as chassis only or in console cabinet.

**PRESTO PORTABLE,
HIGHLY ACCURATE
PROFESSIONAL-TYPE
RECORDER 6-N**

...quality recorder for port-
...nary operation, whose
...has made it a 15-year
...and abroad. Especially
...professional users. Presto
...lead supplied. Equipped
...overhead mechanism in-
...ing feedscrew. May be
...microgroove recording at



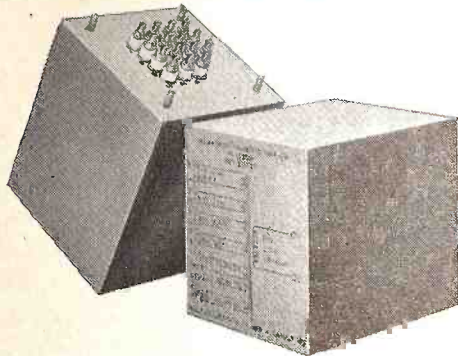
PRESTO RECORDING CORPORATION

PARAMUS, NEW JERSEY

Export Division: 25 Warren Street, New York 7, N. Y.
Canadian Division: Walter P. Downs, Ltd., Dominion Square Bldg., Montreal

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provide performance that exceeds the demand



Hermetically sealed components that perform superbly and lastingly in airborne and ground applications.

Yours for the asking — a well-illustrated brochure describing Milwaukee transformers and production facilities.



YOU can get precisely what you want to meet the most stringent applications from Milwaukee Transformer Company. Every Milwaukee unit is made to exceed the requirements of the demand — be it military or commercial — and well over one thousand different transformers have been designed and built for our clients. Engineering, laboratory and production facilities are always ready to answer your call — whatever the need. Phone, wire or write without obligation.

Milwaukee Transformer Co.
5231 N. Hopkins St., Milwaukee 9, Wis.

Representatives

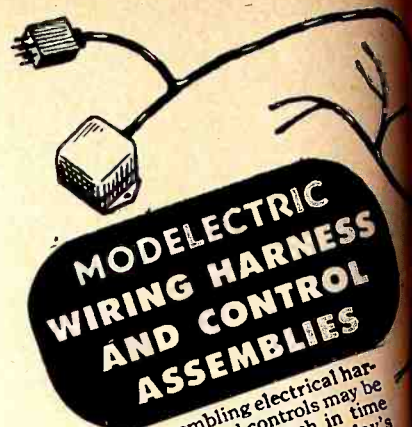
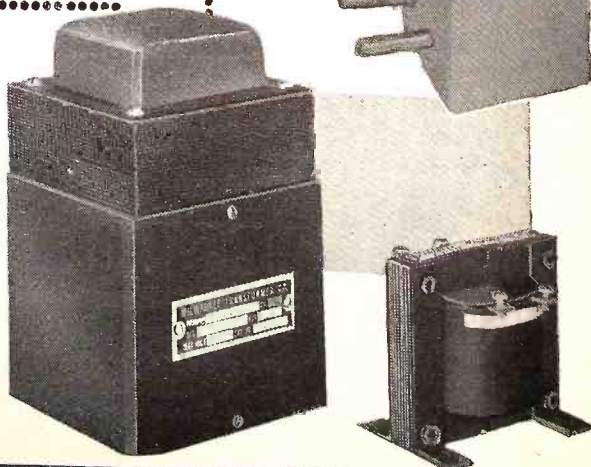
John G. Twist Company
2800 North Milwaukee Avenue
Chicago 18, Illinois
Phone: HUmboldt 9-2550

Robert W. Marshall
6106 Excelsior Blvd.
Minneapolis 16, Minnesota
Phone: MOhawk 9-6444

Harry Appleton Company
136 San Fernando Road
Los Angeles 31, California
Phone: CApitol 1-2171

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MODELECTRIC WIRING HARNESS AND CONTROL ASSEMBLIES

Assembling electrical harnesses and controls may be costing you too much in time and plant space under today's competitive conditions. Then it's time to call on **MODELECTRIC**.

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electronics BUYERS' GUIDE

ABC



C-A-C

TOROIDAL COILS and FILTERS

COMMUNICATION ACCESSORIES COMPANY

Hickman Mills, Missouri



TYPES
 QL206
 QL848
 QL608
 QL073

TYPICAL DIMENSIONS
 15/16 OD
 3/8 H



WEDDING RING SERIES

Excellent Q characteristics compatible with size and weight requirements of portable and airborne equipments. Millions of this series CAC toroids in service.

TYPES
 QL930
 QL395

TYPICAL DIMENSIONS
 1-3/16 OD
 19/32 H



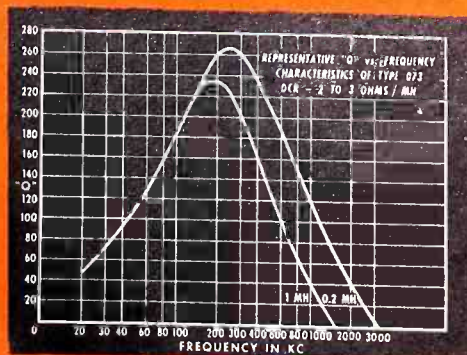
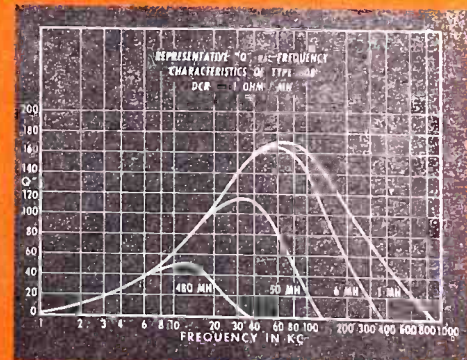
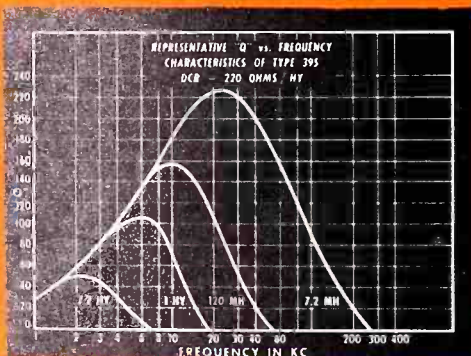
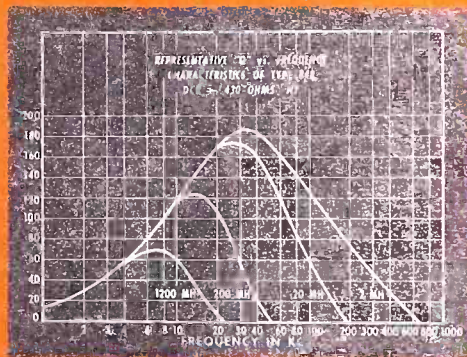
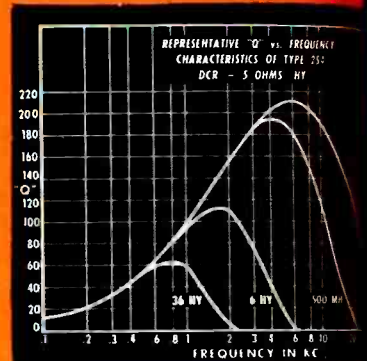
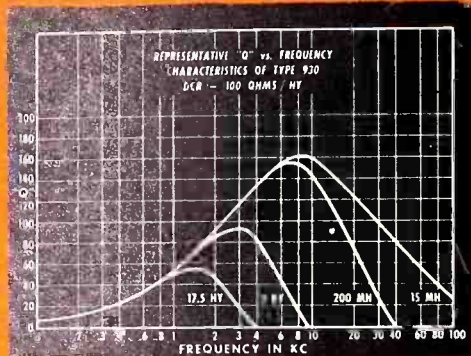
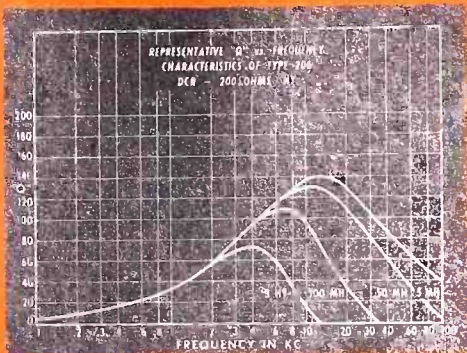
OUR MOST POPULAR SERIES

Providing higher Q—power level—stability with only slight increase in weight and volume.

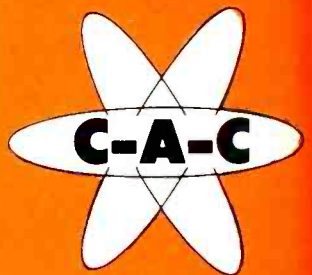
TYPE
 QL254



Exceptional Q below 5 KC. Useful for cal filters, oscillators and tuned transformers in the above range. Provides filtering sharp characteristics and highest Q capabilities.



**TOROID
 UNCAS**



RELY ON

PRECISION • QUALITY • DELIVER

Communication Accessories Company introduced the first miniaturized toroids to the electronic industry in 1948. Promptness of service, quality product, and efficient production has made Communications Accessories Company one of the largest manufacturers of toroids and filters.

In addition to standard types listed herein and shipped from stock, engineers with thousands of custom designs behind them are capable of handling the most exacting requirements. Any conceivable arrangement of closely coupled windings and multiplicity of taps may be supplied. By a wide variation of winding techniques special required characteristics can be obtained. Inductance, distributed capacity, temperature stability and other parameters are controlled with laboratory precision. Recent developments in core materials make possible low dissipation factors up to several hundred KC.

By rigid controls throughout each step of the manufacturing process, the customer is sure to receive only the highest quality component available. Whether the requirement is for one or a million—call on Communication Accessories Company. You will be pleased with the results.



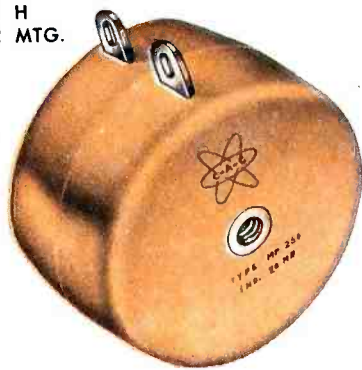
| ES | Q max. | Freq. |
|----|--------|--------|
| 06 | 140 | 14 KC |
| 48 | 185 | 35 KC |
| 08 | 170 | 60 KC |
| 73 | 265 | 250 KC |

SIZE
1-5/16 OD
23/32 H
6-32 MTG.



| TYPES | Q max. | Freq. |
|-------|--------|-------|
| MP930 | 160 | 8 KC |
| MP395 | 225 | 25 KC |

SIZE
2 OD
1 H
8-32 MTG.



| TYPE | Q max. | Freq. |
|-------|--------|-------|
| MP254 | 210 | 6 KC |

TOROIDS — PLASTIC MOLDED

MP (Molded Plastic) units are the result of a long development program. CAC MP toroids have repeatedly passed all tests for MIL-T-27, Grade 1, Class A without exception. Most compact design—may be tapped—mounted by center bushing—absorbs mounting pressures—sturdy silver plated terminals arrangements available up to 5 terminal connections—standard inductance values listed below shipped from stock—special inductances and configurations supplied promptly on request.

MOLDED AND CASED TOROIDS CARRIED IN STOCK

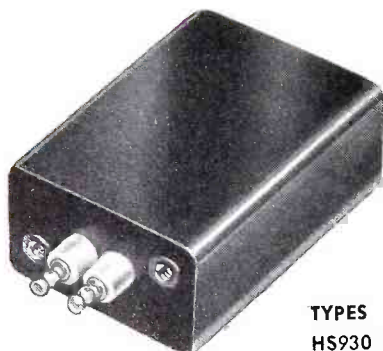
| MP206 | | MP848 | | MP930 | | MP395 | | MP254 | |
|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|
| PART. No. | IND. | PART. No. | IND. | PART. No. | IND. | PART. No. | IND. | PART. No. | IND. |
| MP-206-1 | 2.0 MH | MP-848-1 | 5.0 MH | MP-930-1 | 5.0 MH | MP-395-1 | 20 MH | MP-254-1 | 20 MH |
| MP-206-2 | 2.4 MH | MP-848-2 | 6.0 MH | MP-930-2 | 6.0 MH | MP-395-2 | 24 MH | MP-254-2 | 24 MH |
| MP-206-3 | 3.0 MH | MP-848-3 | 7.2 MH | MP-930-3 | 7.2 MH | MP-395-3 | 30 MH | MP-254-3 | 30 MH |
| MP-206-4 | 3.6 MH | MP-848-4 | 8.6 MH | MP-930-4 | 8.6 MH | MP-395-4 | 36 MH | MP-254-4 | 36 MH |
| MP-206-5 | 4.3 MH | MP-848-5 | 10 MH | MP-930-5 | 10 MH | MP-395-5 | 43 MH | MP-254-5 | 43 MH |
| MP-206-6 | 5.0 MH | MP-848-6 | 12 MH | MP-930-6 | 12 MH | MP-395-6 | 50 MH | MP-254-6 | 50 MH |
| MP-206-7 | 6.0 MH | MP-848-7 | 15 MH | MP-930-7 | 15 MH | MP-395-7 | 60 MH | MP-254-7 | 60 MH |
| MP-206-8 | 7.2 MH | MP-848-8 | 17.5 MH | MP-930-8 | 17.5 MH | MP-395-8 | 72 MH | MP-254-8 | 72 MH |
| MP-206-9 | 8.6 MH | MP-848-9 | 20 MH | MP-930-9 | 20 MH | MP-395-9 | 86 MH | MP-254-9 | 86 MH |
| MP-206-10 | 10 MH | MP-848-10 | 24 MH | MP-930-10 | 24 MH | MP-395-10 | 100 MH | MP-254-10 | 100 MH |
| MP-206-11 | 12 MH | MP-848-11 | 30 MH | MP-930-11 | 30 MH | MP-395-11 | 120 MH | MP-254-11 | 120 MH |
| MP-206-12 | 15 MH | MP-848-12 | 36 MH | MP-930-12 | 36 MH | MP-395-12 | 150 MH | MP-254-12 | 150 MH |
| MP-206-13 | 17.5 MH | MP-848-13 | 43 MH | MP-930-13 | 43 MH | MP-395-13 | 175 MH | MP-254-13 | 175 MH |
| MP-206-14 | 20 MH | MP-848-14 | 50 MH | MP-930-14 | 50 MH | MP-395-14 | 200 MH | MP-254-14 | 200 MH |
| MP-206-15 | 24 MH | MP-848-15 | 60 MH | MP-930-15 | 60 MH | MP-395-15 | 240 MH | MP-254-15 | 240 MH |
| MP-206-16 | 30 MH | MP-848-16 | 72 MH | MP-930-16 | 72 MH | MP-395-16 | 300 MH | MP-254-16 | 300 MH |
| MP-206-17 | 36 MH | MP-206-17 | 86 MH | MP-930-17 | 86 MH | MP-395-17 | 360 MH | MP-254-17 | 360 MH |
| MP-206-18 | 43 MH | MP-848-18 | 100 MH | MP-930-18 | 100 MH | MP-395-18 | 430 MH | MP-254-18 | 430 MH |
| MP-206-19 | 50 MH | MP-848-19 | 120 MH | MP-930-19 | 120 MH | MP-395-19 | 500 MH | MP-254-19 | 500 MH |
| MP-206-20 | 60 MH | MP-848-20 | 150 MH | MP-930-20 | 150 MH | MP-395-20 | 600 MH | MP-254-20 | 600 MH |
| MP-206-21 | 72 MH | MP-848-21 | 175 MH | MP-930-21 | 175 MH | MP-395-21 | 720 MH | MP-254-21 | 720 MH |
| MP-206-22 | 86 MH | MP-848-22 | 200 MH | MP-930-22 | 200 MH | MP-395-22 | 860 MH | MP-254-22 | 860 MH |
| MP-206-23 | 100 MH | MP-848-23 | 240 MH | MP-930-23 | 240 MH | MP-395-23 | 1.00 HY | MP-254-23 | 1.00 HY |
| MP-206-24 | 120 MH | MP-848-24 | 300 MH | MP-930-24 | 300 MH | MP-395-24 | 1.20 HY | MP-254-24 | 1.20 HY |
| MP-206-25 | 150 MH | MP-848-25 | 360 MH | MP-930-25 | 360 MH | MP-395-25 | 1.50 HY | MP-254-25 | 1.50 HY |
| MP-206-26 | 175 MH | MP-848-26 | 430 MH | MP-930-26 | 430 MH | MP-395-26 | 1.75 HY | MP-254-26 | 1.75 HY |
| MP-206-27 | 200 MH | MP-848-27 | 500 MH | MP-930-27 | 500 MH | MP-395-27 | 2.00 HY | MP-254-27 | 2.00 HY |
| MP-206-28 | 240 MH | MP-848-28 | 600 MH | MP-930-28 | 600 MH | | 2.40 HY | MP-254-28 | 2.40 HY |
| MP-206-29 | 300 MH | MP-848-29 | 720 MH | MP-930-29 | 720 MH | | 3.00 HY | MP-254-29 | 3.00 HY |
| MP-206-30 | 360 MH | MP-848-30 | 860 MH | MP-930-30 | 860 MH | | 3.60 HY | MP-254-30 | 3.60 HY |
| MP-206-31 | 430 MH | MP-848-31 | 1.00 HY | MP-930-31 | 1.00 HY | | 4.30 HY | MP-254-31 | 4.30 HY |
| MP-206-32 | 500 MH | MP-848-32 | 1.20 HY | MP-930-32 | 1.20 HY | | 5.00 HY | MP-254-32 | 5.00 HY |
| MP-206-33 | | | 1.50 HY | MP-930-33 | 1.50 HY | | 6.00 HY | MP-254-33 | 6.00 HY |
| MP-206-34 | | | 1.75 HY | MP-930-34 | 1.75 HY | | 7.20 HY | MP-254-34 | 7.20 HY |
| MP-206-35 | | | 2.00 HY | MP-930-35 | 2.00 HY | | 8.60 HY | MP-254-35 | 8.60 HY |
| MP-206-36 | | | 2.40 HY | MP-930-36 | 2.40 HY | | 10.0 HY | MP-254-36 | 10.0 HY |
| MP-206-37 | | | 3.00 HY | MP-930-37 | 3.00 HY | | 12.0 HY | MP-254-37 | 12.0 HY |
| | | | 3.60 HY | MP-930-38 | 3.60 HY | | 15.0 HY | MP-254-38 | 15.0 HY |
| | | | 4.30 HY | MP-930-39 | 4.30 HY | | 17.5 HY | MP-254-39 | 17.5 HY |
| | | | 5.00 HY | MP-930-40 | 5.00 HY | | 20.0 HY | MP-254-40 | 20.0 HY |
| | | | 6.00 HY | MP-930-41 | 6.00 HY | | 24.0 HY | MP-254-41 | 24.0 HY |
| | | | 7.20 HY | MP-930-42 | 7.20 HY | | 30.0 HY | MP-254-42 | 30.0 HY |
| | | | 8.6 HY | MP-930-43 | 8.6 HY | | 36.0 HY | MP-254-43 | 36.0 HY |
| | | | 10.0 HY | MP-930-44 | 10.0 HY | | | | |
| | | | 12.0 HY | MP-930-45 | 12.0 HY | | | | |
| | | | 15.0 HY | MP-930-46 | 15.0 HY | | | | |
| | | | 17.5 HY | MP-930-47 | 17.5 HY | | | | |

IN ORDERING...

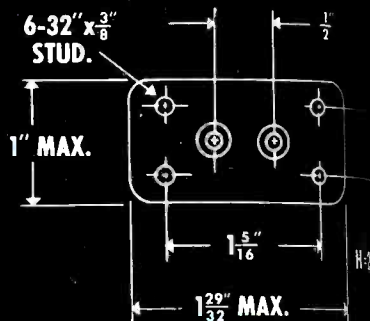
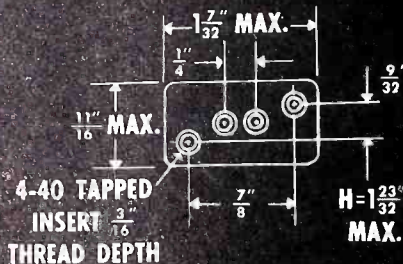
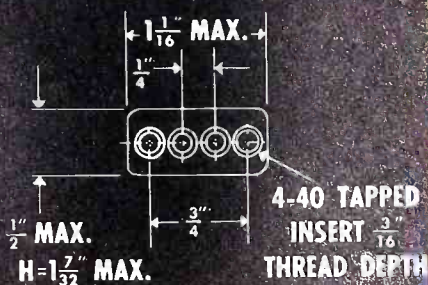
Add suffix "A" to above numbers for clear bushing
Add suffix "B" to above numbers for tapped bushings
Replace "MP" prefix with "HS" for metal encased toroids
(see back page for description).



TYPES
HS206
HS848
HS608
HS073



TYPES
HS930
HS395



Hermetically Sealed

CASED TOROIDS

CAC "HS" series provides metal enclosed, hermetically sealed units complying with MIL-T-27 specifications—mounting area minimized—extremely low hum pickup due to high permeability cases—terminals of proven design using teflon assure a permanent seal at temperature extremes—rugged construction—convenient mounting facilities—to insure stability, cores are thermo-cycled prior to encasement—standard inductances are maintained in stock for rapid delivery—order standard inductance values by replacing prefix "MP" of molded series with "HS".



LIST OF REPRESENTATIVES:

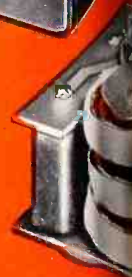
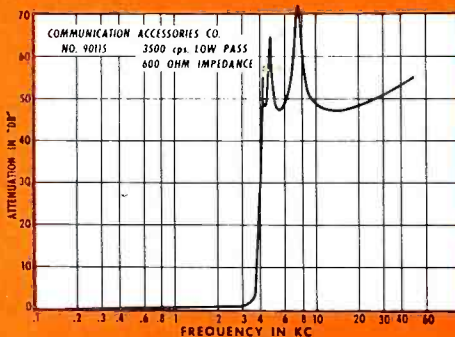
- NEW YORK**—Harold Gray Associates—Lackawanna 4-4258
286 Fifth Avenue, New York City, N. Y.
- PHILADELPHIA**—Charles R. Hile Co.—Elgin 6-2266
Hillview Road, Box 14, Paoli, Pa.
- BALTIMORE**—Charles R. Hile—Boulevard 1202J
(L. G. Korman) 5006 Kenwood, Baltimore 6, Md.
- CHICAGO**—Gassner & Clark Co.—Rogers Park 4-6121
6349 N. Clark, Chicago, Ill.
- KANSAS CITY**—E. W. McGrade Co.—Delmar 9242
6315 Brookside Plaza, Kansas City, Mo.
- LOS ANGELES**—Samuel O. Jewett—State 9-1214
13537 Addison St., Sherman Oaks, Calif.
- HAMBURG**—Cooper-Morgan, Inc.—Emerson 3405
P. O. Box 152, Hamburg, N. Y.
- SYRACUSE**—Naylor Electric Co.—2-3894
State Tower Bldg., Room 317, Syracuse 2, N. Y.
- MERIDEN**—Henry Lavin Associates—7-4555
(Henry Lavin) P. O. Box 196, Meriden, Conn.
- NEEDHAM**—Henry Lavin Associates—3-3446
(Robert V. Curtin) 82 Curve St., Needham, Mass.
- CLEVELAND**—Ernie Kohler Associates—Olympic 1-1242
8905 Lake Ave., Cleveland 2, Ohio

Miniaturized

Hermetically Sealed

FILTERS

All types of filters—toroidal inductors and special capacitors for maximum stability, sharpness, and attenuation—advanced design and printed circuit techniques make possible high degree of miniaturization—hermetically sealed construction.



MAGNETIC AMPLIFIERS

Designed and Produced to Fit YOUR Application

Toroidal construction and quality materials provide: high gain per stage—fast, stable response—long, maintenance-free life—extreme ruggedness.

Designs to allow: multiple, electrically isolated input and output windings—line frequencies 60 cycles, 400 cycles and higher—operating temperatures—55° C to +100° C—hermetic sealing to military specifications.

Printed in U.S.A.





Goat manufactures a line of tube shields for 7 & 9 Pin Tubes in the miniature field and split wraparound and seamless for various Loktal Tubes. For complete specifications write for our Catalog E52.

MINIATURE TUBE SHIELDS
Series G1700

PLAIN

G1702 is a plain shield for a 7 pin miniature with .812 I.D. used with our G1710 and G1770 Base Clips.

G1705 is a plain shield for a 9 pin miniature with .850 I.D. and used with our G1780 Base Clip. (Above used with wafer type sockets.)

FLUTED

G1700 - The fluted tube is furnished for 7 pin only and is used where tight fit on the tube is necessary.

LANCED

G1702-2 is a lanced shield for 7 pin miniatures.

G1709 is a lanced shield for 9 pin miniatures.

These shields are used where tight fit on the tube is required and allows for expansion.

BEADED

Beaded shields for the 7 and 9 Pin Miniatures are used with Saddle Socket type only which includes our G1707 for 7 pin and G1706 for 9 pin and covers various lengths of tubes.



STANDARD TUBE SHIELDS

G1332 Series

SEAMLESS

G1332 Series - seamless and fluted for GT/G, G and Loktal tubes in numerous variations. Complete specifications are listed in our E52 Catalog.

WRAPAROUND—LOKTAL

G1222 Series are wrap-around shields manufactured in four sizes to fit various tube types—Rings G691-1 and 2 are used on wraparound shield under high vibration conditions.

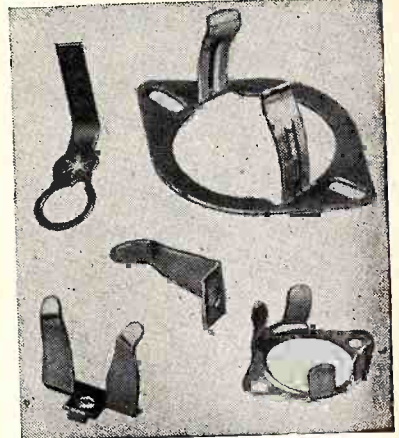
WRAP-AROUND—MINIATURE

G3560 is a wrap-around shield for effective shielding at low cost.

All GOAT miniature tube shields are produced from coated, cold-rolled steel stock. The particular finish—whether zinc, cadmium or electrolytic tin plate—varies, depending on availability of materials.

TUBE CLIPS

Miniature and Standard

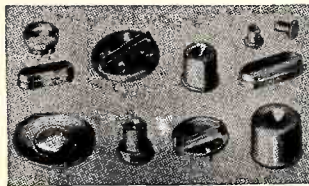


GOAT base and ground clips are manufactured to exacting specifications to assure positive electrical grounding of the tube and tube shield. Like the tube shields, GOAT clips are classified for miniature and standard tube use. The miniature clips are of the prong base clip type, the spring steel prongs affording a firm grip on the shield yet permitting deliberate removal as often as necessary. The standard clips include this type as well as ordinary prong clips, tube ground clips and dual-purpose base ground clips.

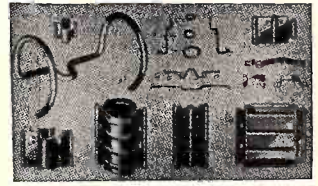
PRECISION METAL STAMPINGS



DRAWN PARTS



DRAWN & SHAPED PARTS



FORMED PARTS



BLANKED DRAWN & FORMED PARTS



STAMPED PART—IN QUANTITY

GOAT

HAS MEANT ACCURACY SINCE 1893

Send Us Blueprints & Specifications

THE FRED GOAT CO., INC.

308 Dean Street

Brooklyn 17, N.Y.

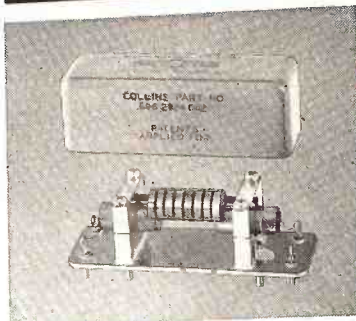
Established 1893

RADIO-ELECTRONIC by COLLINS

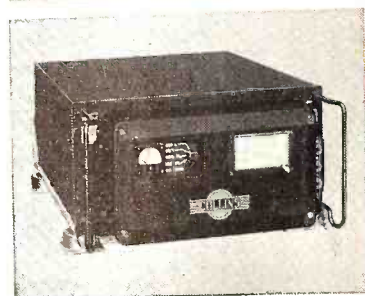
• broadcasting • amateur • aviation



300J 250 Watt
Broadcast Transmitter



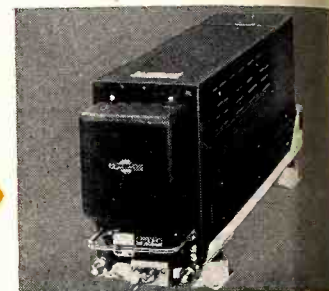
Collins
Mechanical
Filter



75A-3
Amateur
Receiver



618S
144-Channel
HF
Transceiver



51X
360-Channel
VHF
Communication
Receiver

BROADCAST TRANSMITTERS

| | | |
|------|-------|-------------------|
| AM | ..... | 250/100 watts |
| 300J | ..... | 1000/500 watts |
| 20V | ..... | 5000/1000 watts |
| 21E | ..... | 10,000/5000 watts |
| 21M | ..... |  |

SPEECH EQUIPMENT AND ACCESSORIES

Collins complete line for AM and FM broadcasting is listed in the Collins Speech Equipment Catalog. It pictures and describes a wide variety of high quality speech input consoles, remote equipment, rack mounted audio units, test and control apparatus, transducers, power supplies, meter and jack panels, terminal boards, cabinets — everything needed in building a new station or modernizing an old one. Collins Speech Equipment Catalog should be kept in the files of all broadcast engineers as a standard reference work. Your nearest Collins office will be glad to supply a copy to your station upon request.

INDUSTRIAL COMPONENTS

Autotune, a Collins patented automatic rotary positioning device used for accurate remote control of communication receivers and transmitters by means of adjustable positions. It can also be used for the control of many types of industrial equipment.

Autopositioner, a mechanism which will set a shaft accurately to any one of several fixed positions by remote control. It is fast and quiet and is built for long service.

Hysteresis Motors, 370A Series motors designed primarily for operation from vacuum tubes. Have split windings for operation directly from the plate circuits of two push-pull direct-coupled amplifiers driven 90 degrees out of phase. High starting torque . . . absolute synchronous rotation.

Mechanical Filter gives a close approach to the ideal rectangular selectivity curve by using resonant mechanical elements, rather than tuned electrical circuits. Many operating frequencies and band widths are available. When used in a receiver's IF strip, the carrier and one sideband of an AM signal can be accepted while the other sideband is rejected. 3 kc bandwidth filter is ideal for AM or SSB.

AMATEUR EQUIPMENT

75A-3 Receiver incorporates the Collins Mechanical Filter — a new concept in receiver performance. Either 3 kc or 800 cycle bandwidth selected by a front-panel switch. AM signals can be tuned to accept the carrier and either one of the sidebands at will while the other sideband is rejected. Ideal for reception of single sideband signals. It is an extremely stable double conversion superheterodyne receiver, covering the 160, 80, 40, 20, 15, 11 and 10 meter bands. Permeability tuned; crystal controlled h-f oscillator; dial calibrated directly in frequency; extremely sensitive with great tuning accuracy and high signal to noise ratio; 50 db image rejection on all bands; automatic noise limiter; amplified, delayed AVC with quick recovery; miniature tubes.

Price including 3 kc mechanical filter, less speaker \$530.00
10" speaker in matching cabinet 20.00
35C-2 Low Pass Filter inserted in well shielded transmission line from 32V-1, 2, or 3, provides approximately 75 db attenuation of harmonic emissions at the television frequencies. Price \$40.00

AVIATION EQUIPMENT

618S 144-Channel HF Transceiver, 100 watt power output on 144 crystal controlled channels. Automatically tuned elements insure maximum flexibility and high power output.

180L-2 Antenna Tuning Unit, automatically matches 618S output to aircraft antenna. Can be used with any transmitter having an output impedance adjustable to 52 ohms and 50 to 150 watts power output.

51R-3 VHF Navigation Receiver, fulfills navigation and communication receiving requirements of all types of military, commercial and private aircraft using the 108 to 136 megacycle band.

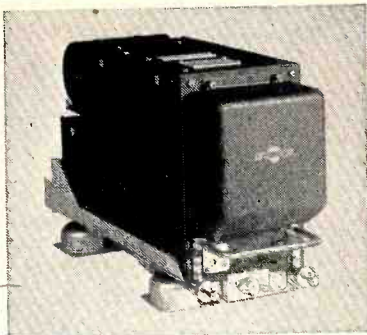
17L-3 180-Channel VHF Airborne Transmitter, frequency range 118.0 to 135.9 megacycles. All 180 channels easily selected on a simple, positive remote control system. Power output conservatively rated at 8 watts.

17L-4 360 Channel VHF Transmitter, 1/2 ATR size to make room for additional equipment. 25 watt power and 360 automatically tuned channels assure instantaneous VHF communications in all high density areas. Maximum stability is maintained through pretuned crystals. Maximum selectivity is assured with 50 kc spacing.

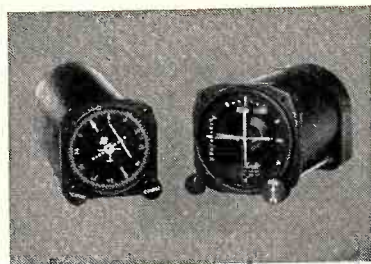
EQUIPMENT

RADIO

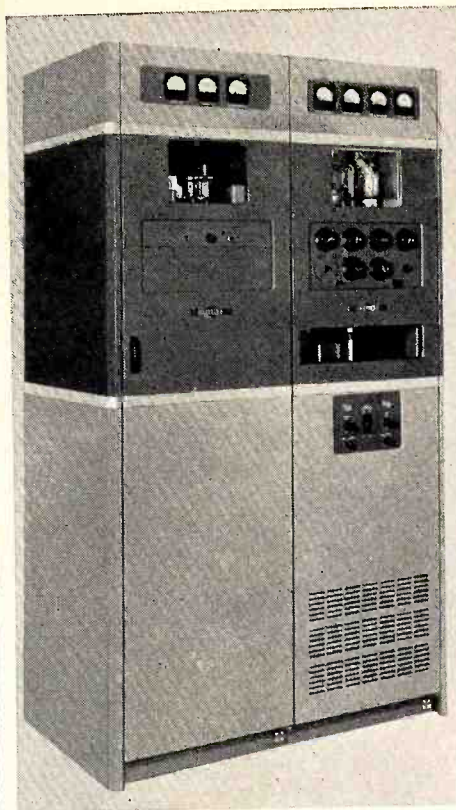
communications



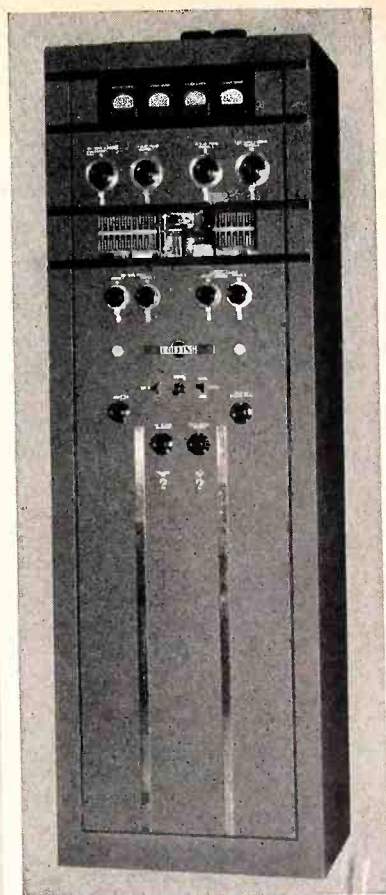
7-2
Slope
Receiver



FD-103
System



430 Series
Communication Transmitter



30K-5 2-Channel
Communication Transmitter

radiation and harmonic interference kept to a minimum. Unit weighs 25 lbs.

360-Channel VHF Airborne Transmitter, full 360 channels in the range of 118.0 -135.9 mc. 50 watt power out with phone emission. Meets ARINC Spec. #520.

360-Channel VHF Airborne Communications Receiver, companion to 17M and 17L-4 Transmitters. Completely new design to meet ARINC Spec. #520 for 45 kc bandwidth. Has the sensitivity, selectivity and spurious response rejection characteristics required for flight and port traffic control.

Marker Beacon Receiver is completely dependable, highly selective and free from spurious response. Operates lights with minimum "twilight" indication.

3 VHF Airborne Omni-range Antenna, for use with 3 navigation receiver. Drag, 2.63 lbs. at 250 m.p.h.

1 VHF Airborne Communication Antenna, for use with Collins VHF two-way communications system.

Airborne Glide Slope Antenna mounts on nose of aircraft, and provides greatly improved pickup and receiver performance.

7-2 Glide Slope Receiver, designed for reception of 150 cps tone modulated glide slope signals on any of twenty channels in the UHF range.

FD-103 Integrated Flight Systems simplifies ILS approaches by presenting precise steering information in conjunction with simplified pictorial type instruments. Instrumentation also simplifies enroute navigation.

FD-101 Navigation System, provides the pilot continuous position information by automatically computed triangulation, using two VOR systems.

For requesting complete technical information on any Collins products please specify equipment type number.

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COLLINS RADIO COMPANY OF CANADA, LTD., 74 Sparks St., Ottawa, Ont.

478C IFS Test Equipment, bench tester for IFS Computer, automatic pilots and other flight director equipments.

479T-2 Signal Generator, a precise ramp-test equipment for airborne VOR localizer and glide slope receivers.

4795-3 Audio Signal Generator is used in precision bench testing of omni-range, localizer and glide slope receivers. Output signals for VOR, localizer, and glide slope audio circuit investigations are provided.

GROUND STATION EQUIPMENT

430 Series Transmitters, choice of 12 different models — 1 or 2 kw, conservatively rated — phone, CW or FSK.

Transmission on any of ten instantly selectable, pre-set channels over entire range from 2 to 30 mc. Common sub-unit construction provides wide variety and low cost.

30K-5 Transmitter, 2 channels, pretuned to any frequency between 2 and 30 mc. 300 w CW. 250 w phone.

32RA-9 Transmitter, 4 channels, pretuned to any frequency between 1.5 and 15 mc. 75 w CW. 50 w phone.

51J-3 Receiver provides continuous coverage from 500 kc to 30 mc, with very high stability and tuning accuracy.

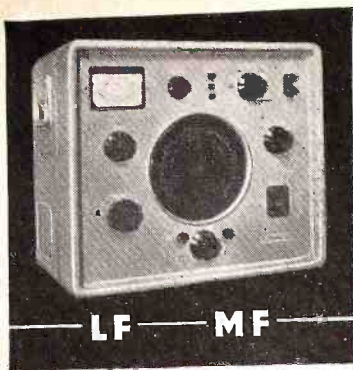
51M-7 VHF Rack Mounting Receiver, single channel, pretuned to any frequency between 118 and 136 mc.

51N-2 Receiver, single channel, for A1, A2 and A3 reception, pretuned to any frequency between 2 and 24 mc. Mechanical filter kits available.

242F VHF Transmitters, rack mounted, providing single frequency operation between 118.0 and 136.0 mcs.

Choice of 200 watts or 50 watts power into 52 ohms.

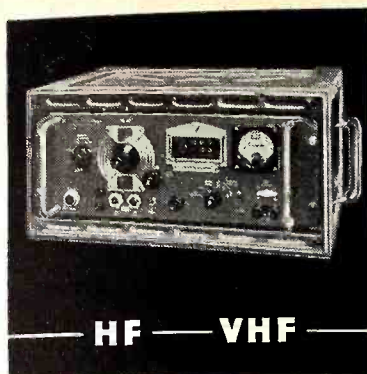




25 cycles to
12 megacycles.

VIDEO OSCILLATOR
Type TF 885A/1

LF — MF



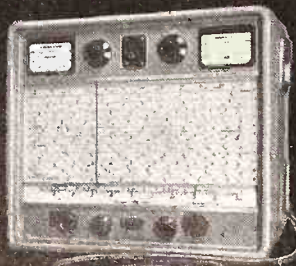
2.5 to 10 megacycles
and 20 to 100 megacycles.

CARRIER DEVIATION METER
Type TF 934

HF — VHF

15 kilocycles to
30 megacycles.

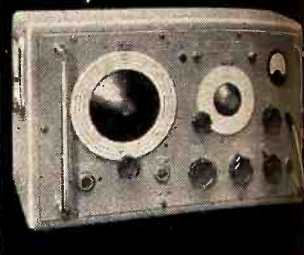
STANDARD SIGNAL GENERATOR
Type TF 867



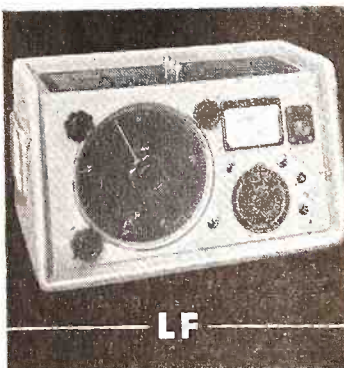
LF — MF — HF

300 to 600 megacycles
or 200 to 400 megacycles
or 450 to 900 megacycles.

SIGNAL GENERATOR
Type TF 762C (series)



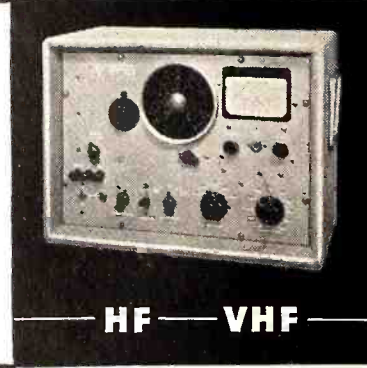
VHF — UHF



1,000 cycles and 10 kc/s
Inductance and Capacitance ;
Resistance at D.C.

UNIVERSAL BRIDGE
Type TF 868/1

LF



2 to
216 megacycles.

FM/AM SIGNAL GENERATOR
Type TF 995A/1

HF — VHF

50 kilocycles to
50 megacycles.

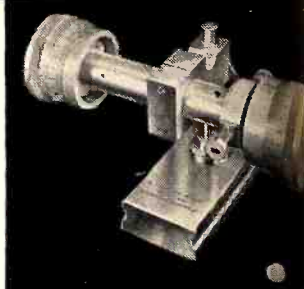
**CIRCUIT
MAGNIFICATION METER**
Type TF 329G



LF — MF — HF

32,000 to
35,500 megacycles.

E.H.F. WAVEMETER
Type TF 1034



EHF

◀ Covering the whole radio spectrum

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**SUPPOSE YOU
DREAMED UP ONE
LIKE THIS?**

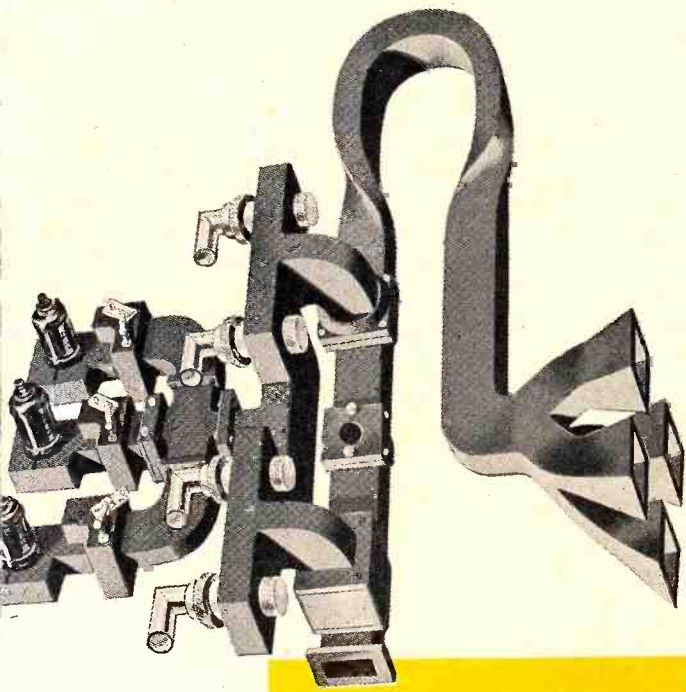
It does happen, you know... an inspired twist, a new application... a microwave component that seems impossible to produce.

Yet, so many fine ideas lie dormant... never leave the design board for want of production know-how, like the microwave assembly below. Luckily, in this case, the illustration is only an artist's conception. But suppose you dreamed it up and it had to be produced, with all its complicated bends, exacting tolerances, specialized finishes.

That's where the many years of unique production experience and the unusual facilities of Budd Stanley could help you in so many ways.

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Langevin

TRANSFORMERS

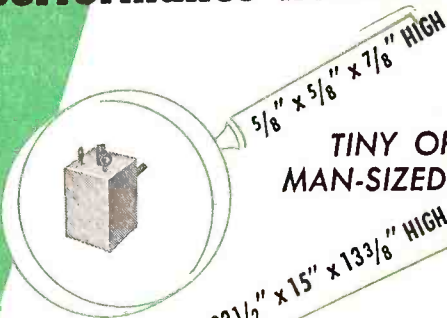
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or your specific performance needs

THREE LANGEVIN TIME-SAVERS

1 Complete MIL-T-27 tests for qualification approval can be made in our own laboratory—often saves weeks on contract completion.

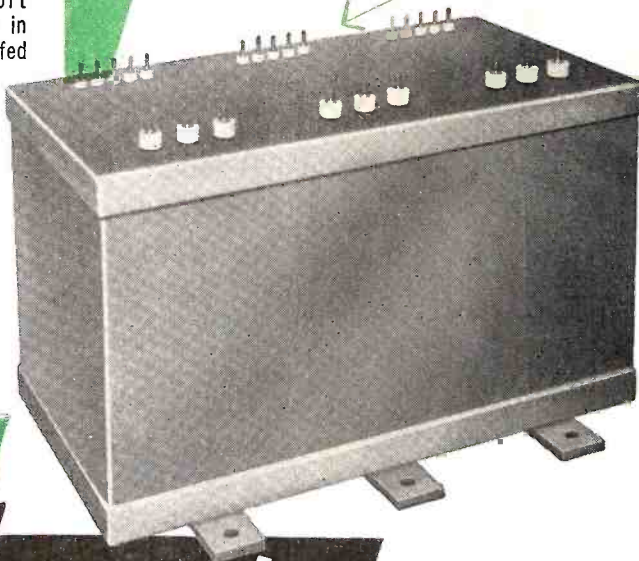
2 Samples and short runs are handled in our model shop, staffed and equipped for high speed, economical service on small quantities.

3 Large stocks of materials prevent delays. Hundreds of types and sizes of wire, core materials, cases, terminals, brackets, etc., always in stock.



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in the
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**SMALLEST HIGH PERFORMANCE
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Langevin

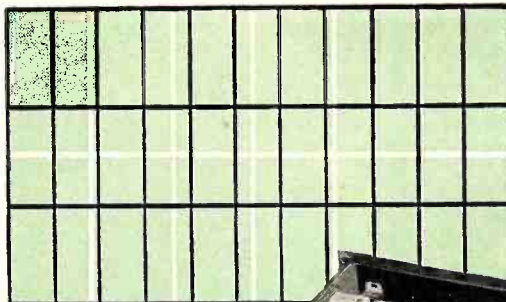
**Model
 5116**



- LENGTH 9"
- WIDTH 1 3/8"
- HEIGHT 3 1/8"

— ideal for inclusion in facilities
 built to meet FCC requirements

Model 5116 is a miniature, plug-in, two stage, low noise, preamplifier or booster amplifier designed for use in radio and TV broadcast systems, recording studios and sound systems. While important space saving has been effected in the design of this amplifier, Langevin sacrificed none of the fine performance and dependability which make the Langevin Model 116-B an industry-wide criterion of excellence. In fact performance characteristics are considerably improved. Included are such quality features as gold-plated plug-in connectors and push-button metering facilities.



**SPACE SAVING
 THAT REALLY COUNTS!**

61% reduction in volume permits mounting of 33 Model 5116 units in the space required by 12 of the very popular Langevin Model 116-B.

Photo below, illustrates the extremely compact racking possible with the new Model 5116. Note complete accessibility and uncongested appearance. Units at extreme right are Langevin 5117 Program/Monitor Amplifiers.



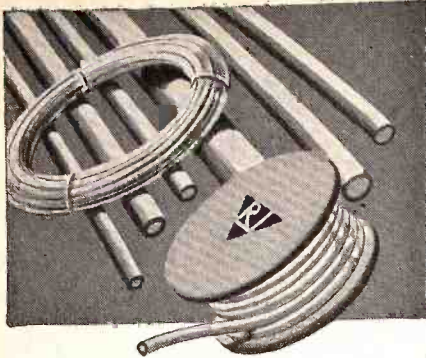
WRITE TODAY—
 for complete data and specifications on the Langevin line of miniature plug-in equipment including program, booster and monitor amplifiers, power supplies, etc. Please address requests on company letterhead.



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- Polyethylene

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- CT-65 Aircraft Grade
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Resinite VINYL LACING CORD

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A word about Government Specifications

Much fine work has been done through Government vinyl specifications in upgrading the general quality of vinyl sleeving. From the previous JAN and USAF Specification sleeving to the highly developed MIL I-631B and MIL-I-7444A materials, RESIN INDUSTRIES has consistently led the field in production for Technical needs. Write for specification data and samples.

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SPECIALISTS IN VINYL SLEEVING AND TUBING FOR THE AIRCRAFT, ELECTRONICS AND MEDICAL FIELDS

STANDARD TIMERS

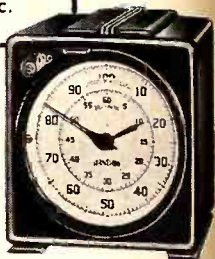
AN ECONOMICAL INVESTMENT IN LONG-LIFE PERFORMANCE AND EXTREME ACCURACY. RUGGED, FOR HEAVY-DUTY SERVICE; FLEXIBLE IN APPLICATION.

| Model | Scale Divisions | Totalizes | Accuracy |
|---------|-----------------|-----------|-------------|
| S-100 | 1/5 sec. | 6000 sec. | ±.1 sec. |
| S-60 | 1/5 sec. | 60 min. | ±.1 sec. |
| SM-60 | 1/100 min. | 60 min. | ±.002 min. |
| S-10 | 1/10 sec. | 1000 sec. | ±.02 sec. |
| S-6 | 1/1000 min. | 10 min. | ±.0002 min. |
| S-1 | 1/100 sec. | 60 sec. | ±.01 sec. |
| MST | 1/1000 sec. | .360 sec. | ±.001 sec. |
| MST-500 | 1/1000 sec. | 30 sec. | ±.002 sec. |

The clutch coil can be connected directly in the plate circuit of electronic tubes. For this use the coil has a resistance of 2000 ohms and requires 50 to 60 milliamperes. When ordering for this purpose, always specify 120V DC clutch coil.



WRITE FOR BULLETIN 198.



The STANDARD ELECTRIC TIME CO.

97 LOGAN STREET • SPRINGFIELD 2, MASS.

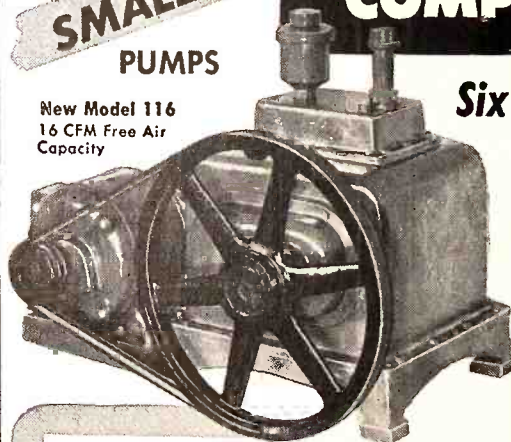
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PIPELINE NETWORK ANALYZERS

LABORATORY PANELS

FOR
FASTER
PUMPING
WITH
SMALLER
PUMPS

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New Model 116
16 CFM Free Air
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Six Ways a Better Pump:

1. SIMPLIFIED CONSTRUCTION
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4. HIGH EFFICIENCY
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Speed production and reduce maintenance with these ready-to-operate, high efficiency vacuum pumps!

International rotary vane pumps are extremely compact and operate unusually quiet. Simplified construction and automatic lubrication assure trouble-free operation, long life and low-cost upkeep. Pump mechanisms are totally oil submerged, preventing atmosphere to vacuum leakage.













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| RADIO AND TELEVISION CABLES | COAXIAL CABLE  | RG 59/U, RG 11/U, RG 8/U and other commercially used types. Black vinyl plastic jacket. |
| | SHIELDED PLASTIC ANTENNA CONDUIT  | Hollow polyethylene tube, shielded with bare or tinned copper or aluminum braid; black vinyl plastic jacket. |
| | TWIN ANTENNA LEAD  | Stranded conductors, 18, 20, or 22 AWG, insulated with low-loss polyethylene. |
| | MULTI-LEAD FOR ANTENNA ROTATORS  | 3, 4, or 5 stranded conductors, 20 AWG, one tinned for polarity; polyethylene insulation. |
| | TUBULAR ANTENNA LEAD  | Twin conductors of stranded copper wire; 300-ohm type, with low-loss tubular plastic insulation. |
| | MICROPHONE CABLE  | <i>Shielded:</i> flexible construction, 1 to 8 individually insulated stranded conductors, tinned copper braid shield, in rubber, neoprene or plastic jacket. <i>Unshielded:</i> 2 to 8 stranded conductors, with rubber or neoprene jacket. Also low-capacitance, polyethylene-insulated, shielded cable. |
| POWER CABLES | TEST LEAD WIRE  | Single stranded conductor, with high-voltage rubber insulation. |
| | HEAVY DUTY CABLE 600-VOLT SERVICE  | 2, 3, or 4 bare stranded conductors, 8 and 6 AWG; paper served, rubber insulated, color coded as per N.E.C.; cabled with soft jute; cotton served; with tough outer sheath of 40% rubber compound. |
| | CHARGING CABLE  | Highly flexible, rope lay stranded conductor, 2 to 10 AWG; tinned, or bare and paper served; jacketed in rubber or neoprene. |
| | PORTABLE CORD 600-VOLT SERVICE  | 2, 3, or 4 bare stranded conductors, 10 to 18 AWG; paper served, insulated with color coded rubber compound; cabled with jute, served with cotton, in tough outer jacket of 40% rubber. |
| | PORTABLE CORD 300-VOLT SERVICE  | Similar to 600-volt cord, except that individual insulation is rated for 300-volt service; cords for stationary service are made with stranded conductor of 30 AWG wires; for portable service, stranded of No. 34 wires. |
| ARC WELDING CABLES | ARC WELDING CABLE  | Tough, extremely flexible cable; rope lay stranded of soft annealed No. 34 copper wires; sizes from 4/0 to 6 AWG; paper served for easy stripping, jacketed in abrasion-proof, high-strength rubber. |

able's complete manufacturing cover every step in wire-making including drawing, winding of insulation to drawing. Write to us for complete technical information on these and other Carol wire and cable products, and for cooperative engineering assistance on your specific cable or cable requirements.

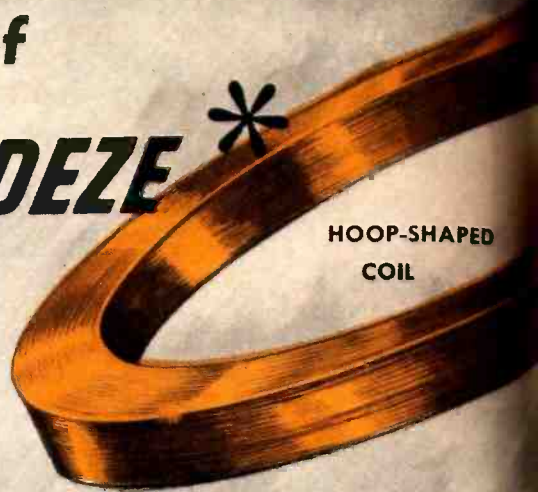


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These successful uses of
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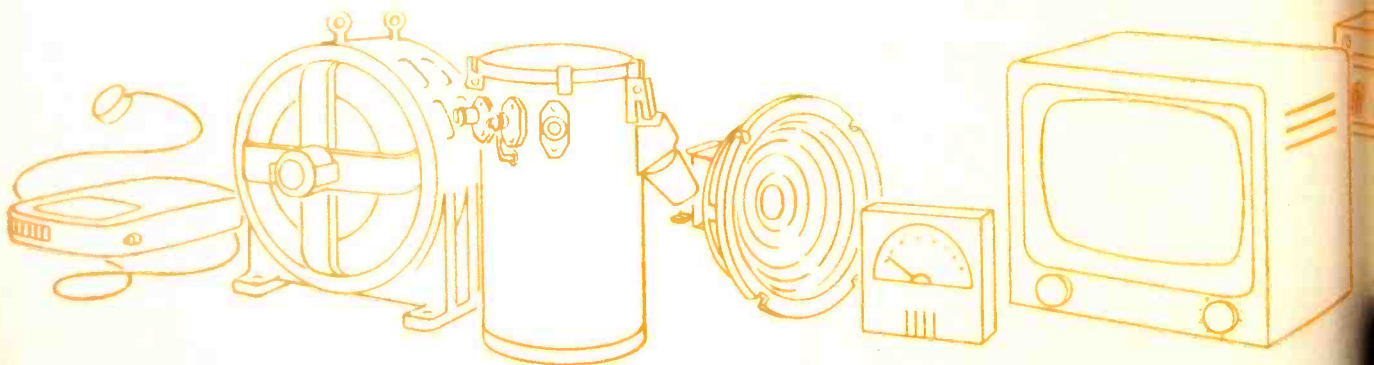
Random-wound, Layer or Paper-section for potentiometers, telephones, brakes and clutches, clocks and timers, hearing aids, instruments, speakers, relays, television, radio and other applications.

TRANSFORMERS

Paper-section, Random-wound, Oil-filled, Air-cooled and High Voltage for distribution, current, X-ray, television, radio and other applications.

MOTORS

Windings for shaded pole, series fields, instruments, induction and others.



First for Lasting Quality—from Mine to Market!



FLY-BACK COIL

PANCAKE COIL

TV YOKE COIL

APPLICATIONS !



Redesigning? BONDEZE may provide one answer to your overall cost reduction program!

BONDEZE is Phelps Dodge magnet wire with a special thermo-plastic film applied over the insulation. It offers a quick, economical means of bonding wires together, turn to turn, through single application of heat or solvents.

BONDEZE offers unusual opportunities for redesign of windings and in many cases influences finished product design with overall savings to the user.

Any time magnet wire is your problem, consult Phelps Dodge for the quickest, easiest answer.

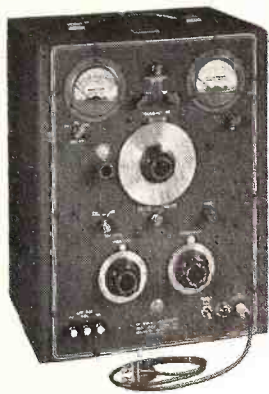
*BONDEZE is a Phelps Dodge Trademark



PHELPS DODGE COPPER PRODUCTS CORPORATION

INCA MANUFACTURING DIVISION
FORT WAYNE, INDIANA

PRECISION ELECTRONIC MEASURING INSTRUMENTS



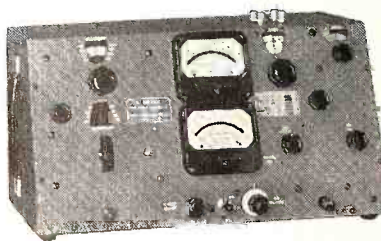
FM-AM SIGNAL GENERATOR
TYPE 202-B



Q-METER
TYPE 190-A



RX METER
TYPE 250-A



Q METER
TYPE 260-A

Signal Generator
Frequency and Amplitude Modulation
For Aircraft Navigation Receivers
For Mobile Communications Receivers

Q Meters

Low, Medium and High Frequency
Very High Frequencies

Univerters

Low, Medium and High Frequency
Impedance Measurements

Write for complete information

| Q METERS | | | | | |
|--|-----------------|--------------------|-----------------------|--------|--------------------|
| Type | Freq. Range | Q Range | Tuning Capacity Range | | Q Accuracy |
| 260-A | 50 kc to 50 mc | 10 to 625 | 30-450 mmf | | 5% to 30 mc |
| 190-A | 20 mc to 260 mc | 5 to 1200 | 7.5 to 100 mmf | | 7% to 100 mc |
| FM-AM SIGNAL GENERATORS | | | | | |
| Type | Freq. Range | Output Range | Modulation | | Application |
| | | | FM | AM | |
| 202-B | 54-216 mc | 0.1 to 200,000 uv | 0-240 kc | 0-50% | General |
| 202-C | 54-216 mc | 0.1 to 200,000 uv | 0-240 kc | 0-50% | Mobile |
| 202-D | 175-250 mc | 0.1 to 200,000 uv | 0-240 kc | 0-100% | Telemetry |
| WIDE BAND IMPEDANCE MEASURING EQUIPMENT — RX Meter | | | | | |
| Type | Freq. Range | R Range | C Range | | L Range |
| 250-A | 0.5 to 250 mc | 15 to 100,000 ohms | 0-20 uuf | | 0.001 uh-100 mh |
| OMNI-RANGE SIGNAL GENERATOR (Crystal Monitored) | | | | | |
| Type | Freq. Range | Output Range | Modulation | | Application |
| 211-A | 88-140 mc | 0.1 to 200,000 uv | 0-100% am | | Omni-Range Rcvrs. |
| GLIDE SLOPE SIGNAL GENERATOR | | | | | |
| Type | Freq. Range | Output Range | Modulation | | Application |
| 232-A | 329-335 mc | 1.0 to 200,000 uv | 0-100% am | | Glide Slope Rcvrs. |
| UNIVERTERS | | | | | |
| Type | Freq. Range | Output Range | Modulation | | Accessory to |
| | | | FM | AM | |
| 207-A | 0.1 to 55 mc | 0.1 to 100,000 uv | 0-240 kc | 0-50% | 202-B and 202-C |
| 207-B | 0.1 to 55 mc | 0.1 to 100,000 uv | 0-240 kc | 0-50% | 202-D |



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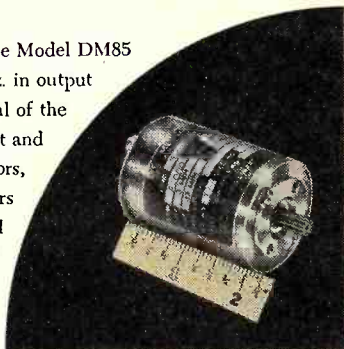
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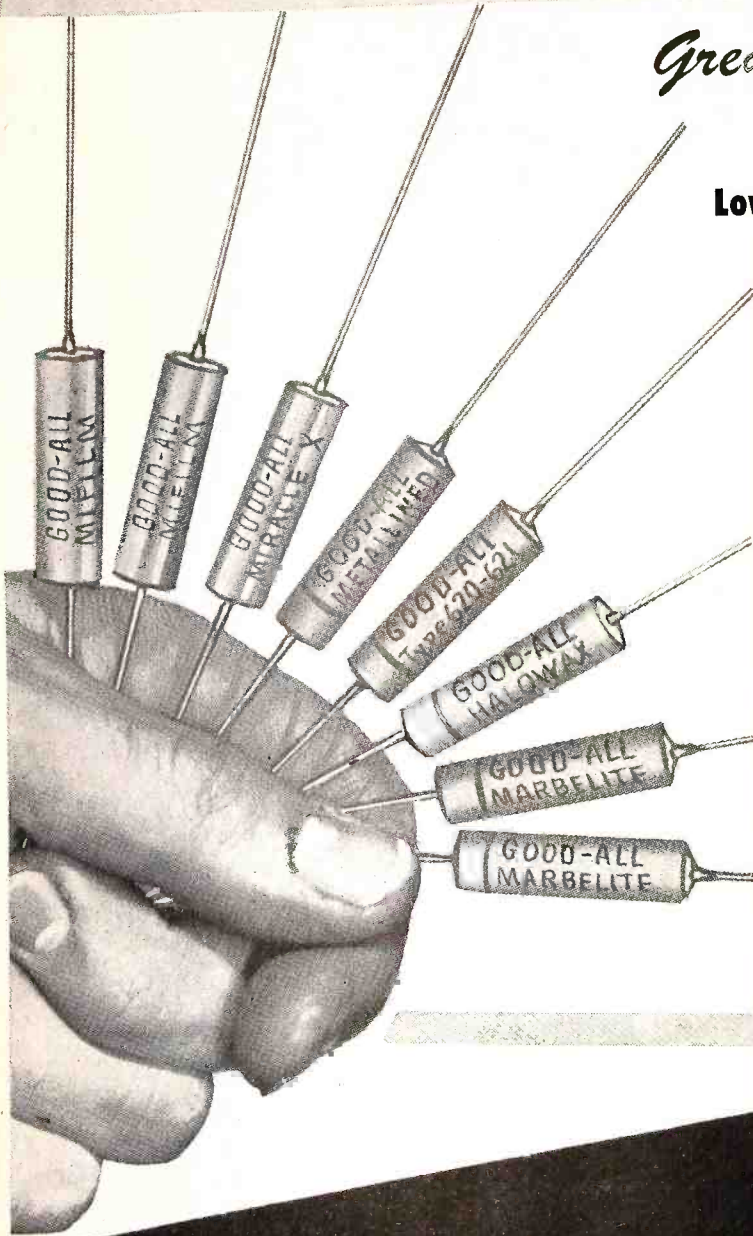
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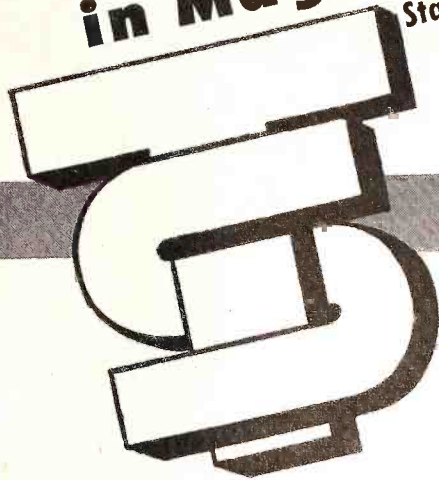
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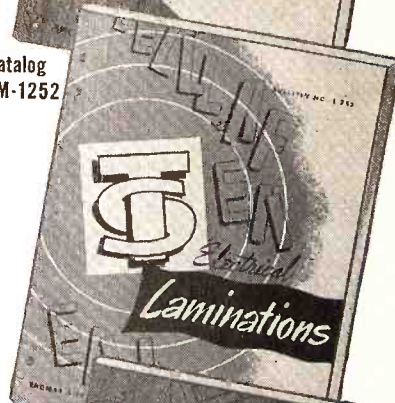
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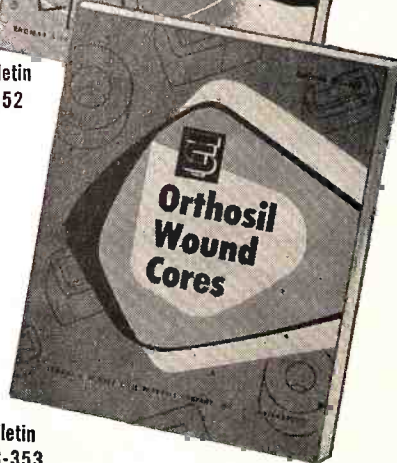
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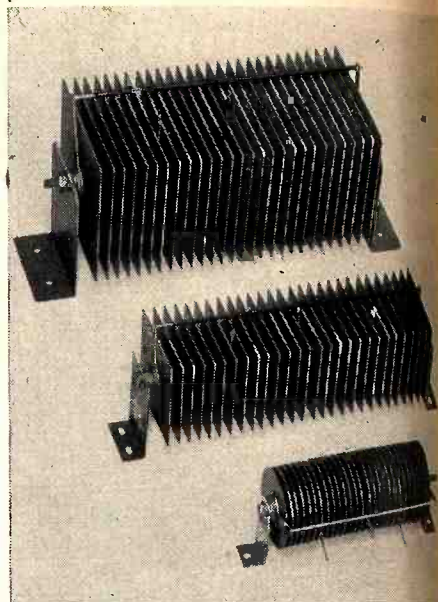
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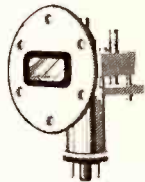
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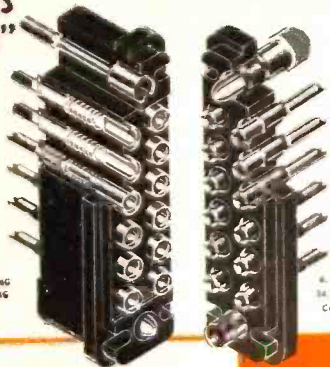
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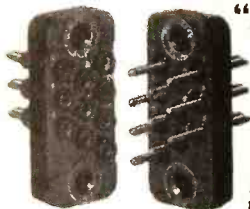
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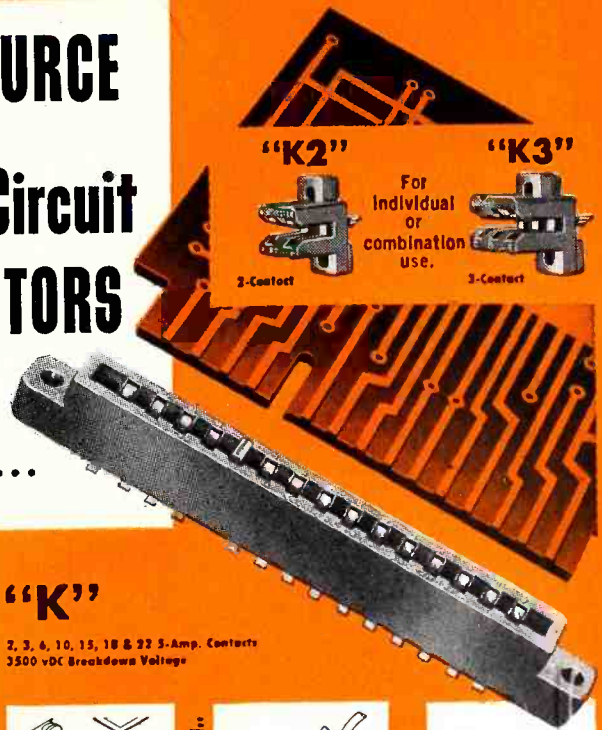
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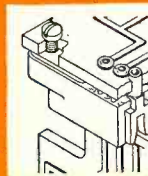
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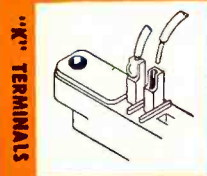
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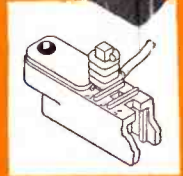
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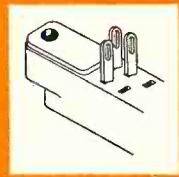
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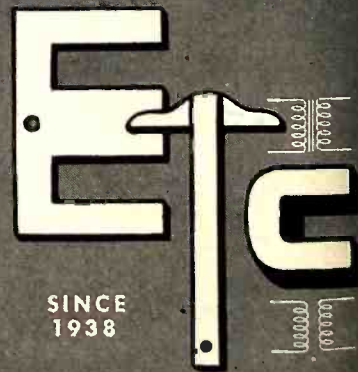
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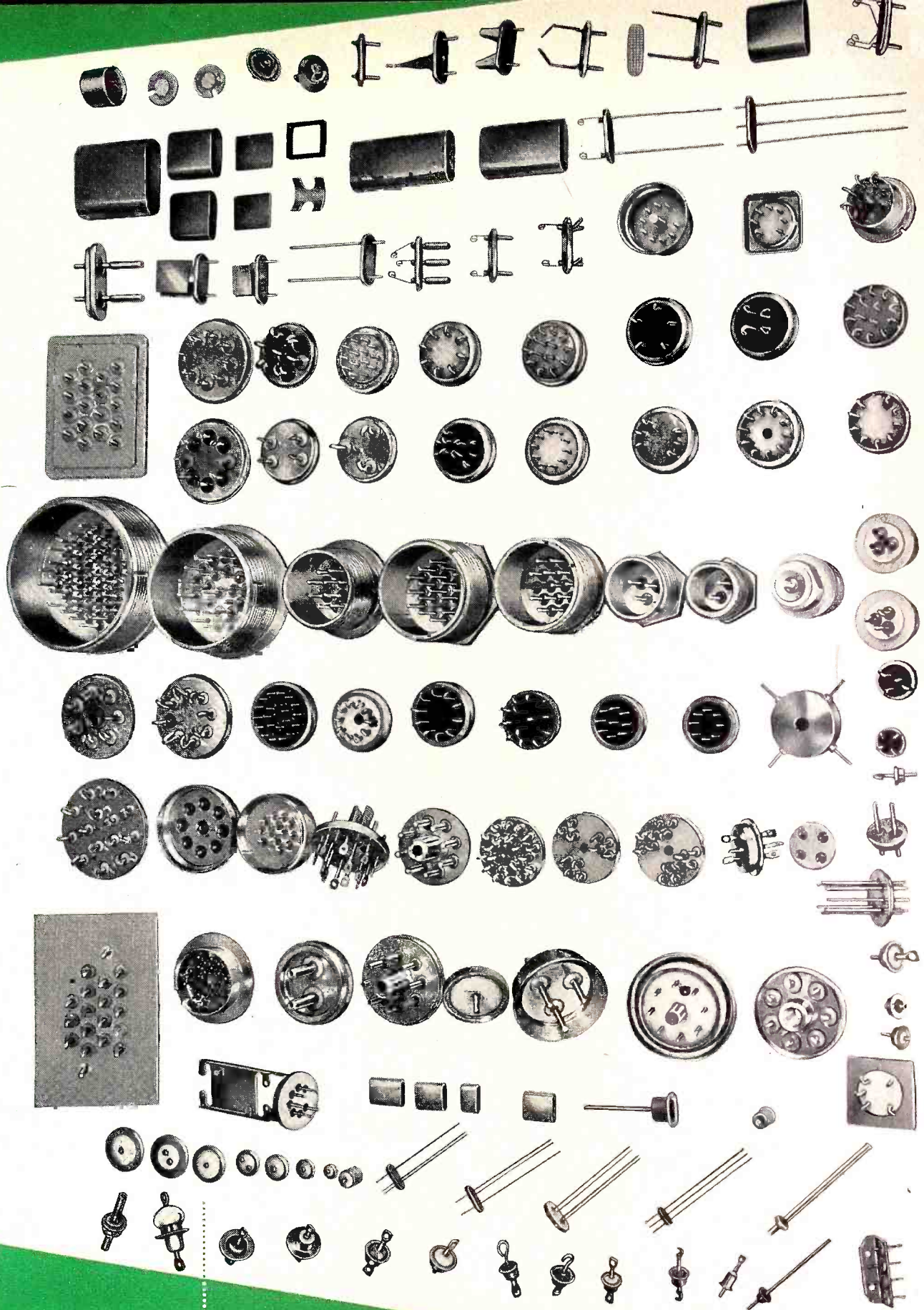
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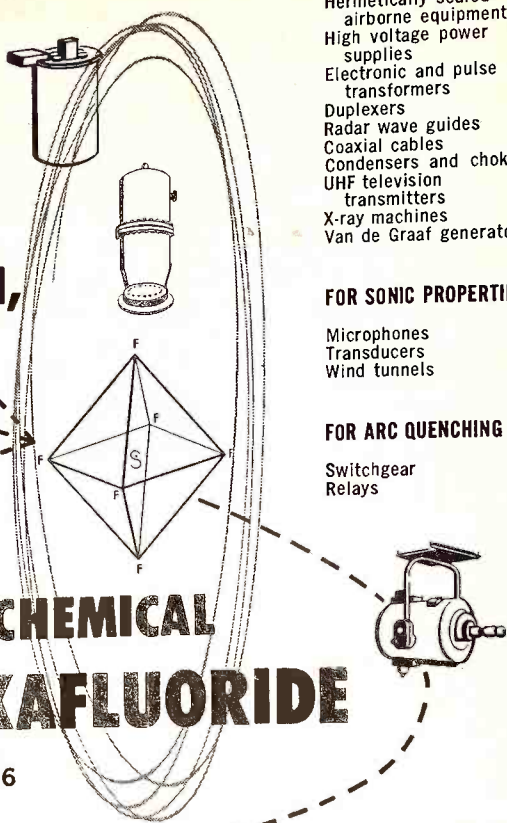


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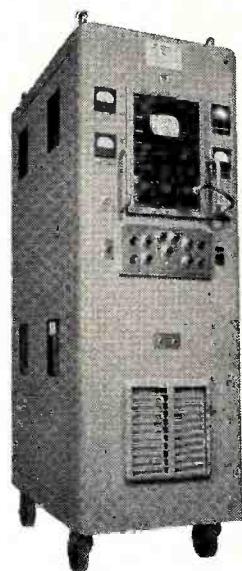
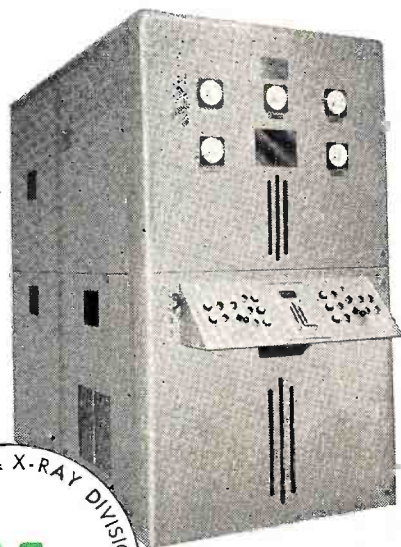
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- Input voltage 440 or 550 volts—3 phase
- Internal signal generator for trigger pulse
- Output pulse for external synchronization
- Motor driven high voltage and heater controls
- Automatic voltage backdown on magnetron sparking
- Output voltage—90 kv at 160 amperes
- Output Z = 560 ohms
- PFN—2.0 microseconds at 500 cycles/sec
- Maximum duty = .001
- Internal pulse voltage and current viewing facilities



ONE MEGAWATT UNIT

Type Z820A

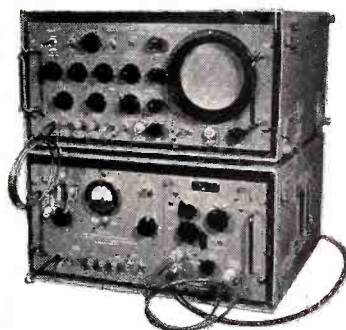
- Input Voltage—190—250 V single phase
- Provisions for mounting internal synchroscope
- Remote control operation
- Motor driven high voltage and heater controls
- Output Z = 1000 ohms
- PFN1—0.5 microseconds at 2000 cycles/sec
- PFN2—2.5 microseconds at 400 cycles/sec
- Internal pulse voltage and current viewing facilities

Data subject to change without notice. Prices on application.

Custom Engineered and Built

ANTENNA PATTERN ANALYZERS

Type T705A



FXR ANTENNA PATTERN ANALYZERS are general purpose test equipments designed for measuring the radiation patterns of rotating antenna systems. The analyzer, a receiver and indicator unit, has the following characteristics:

- Visual pattern display
- Response vs angle of rotation
- 1 to 10 kmc
- Four plug-in r-f heads
- Superheterodyne receiver
- Single knob oscillator control
- CW or pulsed operation
- Field or laboratory use



Electronics & X-Ray Division

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PRECISION MICROWAVE TEST EQUIPMENT

With its comprehensive line of Precision Microwave Test Equipment, FXR has developed a new, fresh-as-grass approach to the problems of microwave measurement. Every FXR product has been carefully evaluated in the light of latest advanced developments, the greatest accuracy and convenience in use, and the *cost-conscious* needs of the

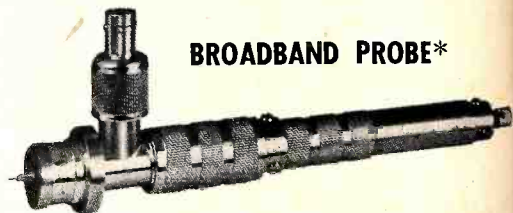
quality-conscious engineer who employs it . . . in the laboratory and on the production line. A large, fully equipped FXR plant . . . a well-rounded, growing staff of seasoned engineers . . . are capable of fulfilling your exact requirements with the fastest service in the industry, at costs well below the "sit-and-wait" variety.



PRECISION SLOTTED SECTIONS

| *TYPE NO. | FREQUENCY RANGE (kmc/sec) |
|----------------|--|
| L100A WG | 1.12 to 1.70 |
| N101A 3/8 COAX | 1.00 to 4.00 |
| N101B 3/8 COAX | 4.00 to 10.00 (1/2 λ 2.69 to 10.00) |
| V101A 7/8 COAX | 1.00 to 4.00 |

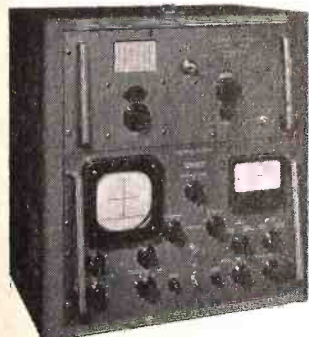
*See Waveguide Test Equipment Chart for "S" to "U" series.



BROADBAND PROBE*

| TYPE NO. | FREQ. RANGE (kmc/sec) | BARRETTER TYPE | CRYSTAL TYPES | USED WITH SLOTTED SECTIONS |
|----------|-----------------------|----------------|-----------------|--|
| B200A | 1.00 to 12.40 | 821 | 1N21B and 1N23B | L100A S101 N101A H101 N101B C101 |

*Dual tuned. NOTE: 1N23B crystal and 821 barretter supplied.



SPECTRUM ANALYZERS

SPECIFICATIONS SUMMARY

Interchangeable RF Heads
Push-Pull Deflection, both amplifiers
I-F Amplifier: Center frequency—20 mc
Bandpass—50 kc
Gain—Cascade input, approx. 110 db
Sweep Rate—10 to 20 cps
Frequency Dispersion—1 to 10 mc/inch
Viewable Pulse Lengths—0.2 to 2.0 micro-seconds
4 1/2 inch panel meter
5 inch oscilloscope tube

| TYPE NO. (Includes Power Supply Type Z800A) | R-F HEAD TYPE NO. | FREQ. RANGE (mc/sec) | FREQ. CAL. ACCURACY (mc/sec) |
|---|-------------------|----------------------|------------------------------|
| S700A | S900A | 2400-3400 | ±1.0 |
| S700B | S900B | 3000-3700 | ±1.0 |
| X700A | X900A | 8500-9600 | ±4.0 |

STANDING WAVE AMPLIFIER



SPECIFICATIONS SUMMARY

VSWR Range to 100
Noise level less than .03 microvolts
Maximum sensitivity: 0.1 microvolts

Variable, metered bolometer
Automatic bolometer probe
Low impedance output
Adjustable tilting panel

| TYPE NO. | FREQ. RANGE |
|----------|--------------------------------------|
| B810A | 300 to 4000 Narrow Band: 1000 cps |



DIRECT READING FREQUENCY METERS

*Type 410

*See Waveguide Test Equipment Chart.



WAVEGUIDE TEES AND BENDS

| SERIES AND. SHUNT TEES | HYBRID TEES | 90° BENDS |
|------------------------|-------------|----------------|
| *Type 620, 621 | *Type 622 | *Type 623, 624 |

*See Waveguide Test Equipment Chart.

WAVEGUIDE TEST EQUIPMENT—2.6 to 40.0 kmc

| EQUIPMENT | "S" 3"x1½" 2.6-3.95 kmc | "H" 2"x1" 3.95-5.85 kmc | "C" 1½"x¾" 5.85-8.2 kmc | "W" 1¼"x⅝" 7.05-10.0 kmc | "X" 1"x½" 8.2-12.4 kmc | "Y" .622"x.311" ID 12.4-18.0 kmc | "K" .420"x.170" ID 18.0-26.5 kmc | "U" .280"x.140" ID 26.5-40.0 kmc |
|----------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|------------------------------|--|--|--|
| Standards, Waveguide | S101A | H101A | C101A | W101A | X101A | Y102A | K102A | U102A |
| Standards, Waveguide | S151A | H151A | C151A | W151A | X151A | Y151A | K151A | U151A |
| Standards, Waveguide | | | | | X211A* | Y205A† | K205A† | U212A |
| Standards, Waveguide | S311A | H311A | C311A | W311A | X311A | Y311A | | |
| Standards, Waveguide | | | | | | Y312A | K312A | U312A |
| Standards, Waveguide | | | C410A | W410A | X410A | | | |
| Standards, Waveguide | S601A | H601A | C601A | W601A | X601A | | | |
| Standards, Waveguide | S620A | H620A | C620A | W620A | X620A | Y620A | K620A | U620A |
| Standards, Waveguide | S621A | H621A | C621A | W621A | X621A | Y621A | K621A | U621A |
| Standards, Waveguide | S622A | H622A | C622A | W622A | X622A | Y622A | K622A | U622A |
| Standards, Waveguide | S623A | H623A | C623A | W623A | X623A | Y623A | K623A | U623A |
| Standards, Waveguide | S624A | H624A | C624A | W624A | X624A | Y624A | K624A | U624A |

†TUNABLE



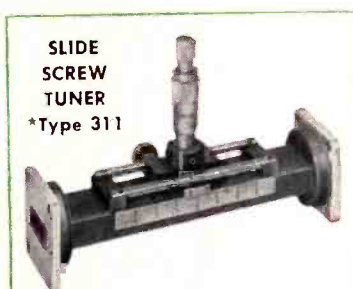
STANDARD MISMATCH

| VSWR | ELECTRICAL SPECIFICATIONS |
|------|---|
| 1.20 | Frequency Range: 8.20 to 12.40 kmc/sec Accuracy Range: 1.19 to 1.21 VSWR |



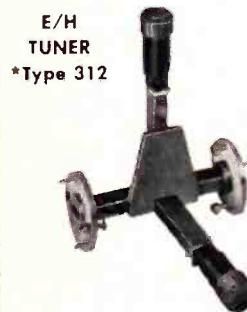
2K28 OSCILLATOR CAVITY

| TYPE NO. | FREQ. RANGE (kmc/sec) |
|----------|-----------------------|
| N750A | 2.40 to 3.45 |



SLIDE SCREW TUNER
*Type 311

WAVEGUIDE TUNERS



E/H TUNER
*Type 312

*See Waveguide Test Equipment Chart.



SHIELDED TUBE MOUNTS



KLYSTRON TUBE MOUNT

| TYPE NO. | **USED WITH TUBE TYPES | FREQ. RANGE (kmc/sec) | INPUT CONNECTOR | OUTPUT CONNECTOR | POWER SUPPLY ACCESS. CABLES |
|----------|------------------------------|--|--------------------|------------------|--|
| *N761A | 2K42 2K43 2K44 2K39 | 3300-4200 4200-5700 5700-7500 7500-10,300 | Jones P-2410-DB | UG-23B/U | Z761L (For PRD 801A) Z761M (for Sperry 555) |

*Accessory cables not included. **Not supplied.



TRANSMISSION LINE STANDS

| TYPE NO. | USED WITH TRANSMISSION LINE SIZE (inches) |
|----------|---|
| 7P10A | 3 x 1½, WG 2 x 1, WG |
| | 1½ x ¾, WG 1¼ x ⅝, WG 1 x ½, WG |
| 10B | 0.622 x 0.311 ID, WG 0.420 x 0.170 ID, WG 0.280 x 0.140 ID, WG ⅜ to 7/8 COAX |

OTHER AVAILABLE UNITS

(not illustrated)

- COAXIAL DETECTOR—N210A
- WAVEGUIDE TERMINATION—X501A
- WAVEGUIDE SHORT—X630A



Electronics & X-Ray Division

F-R MACHINE WORKS, Inc.

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"HLT 500B"
HIGH TEMP
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NYLON
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JAN-C-76 WIRES SR1R, SRHV, SRRF, WL
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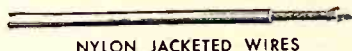
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From sub-miniature types tinier than a Lifesaver to husky "doughnuts" bigger than a telephone dial, if it's toroidal, B&W makes it. Over 20 years experience in winding all types of coils for military, commercial, and amateur electronic gear goes into these B&W Toroids.

Small quantities for prototypes or large production runs can be promptly supplied to your exact specifications. Or, if you prefer, B&W engineers will gladly work with you in developing new toroids for your particular needs.

B&W "AIR-WOUND" INDUCTORS

Highly efficient "air-wound" coils embodying extremely low losses, real space saving economy, and minimum weight were first pioneered by B&W. Now backed by over 20 years experience in this specialized field, B&W offers a complete line of "air-wound" inductors in types ranging from the versatile "Mini-inductor" to large, high power commercial units.

In addition to these standard items, B&W regularly manufactures coils for special requirements. The range in size up to the giant coils illustrated above may be designed for virtually all r-f applications.

Inquiries for any requirements will be given prompt consideration.

B&W FILTERS and TOROIDAL ASSEMBLIES

These space-saving toroidal units are a direct result of B&W's specialized experience in designing and manufacturing all types of toroids and associated assemblies.

Whether you need standard high-pass, low-pass, band-pass, or band-suppression filters or discriminators for r-f or audio frequencies . . . chances are B&W engineers have produced similar equipment in their collective engineering experience.

What's more, B&W's unmatched production facilities and full complement of test equipment assure that specifications will be matched in each and every unit.

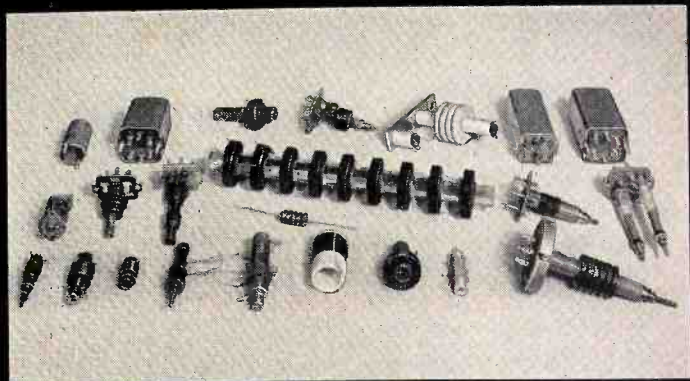
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Coils, Sub-Assemblies

B&W MULTIPLE-LAYER COILS and CHOKES

sal-pie, progressive-universal, bank wound, and . . . in fact just about any kind of coil you have ever needed has been produced by B&W. Types range from miniature inductors and midjet r-f, oscillator, and choke coils to giant tank coils and chokes for power transmitters or other r-f service.

Factory is fully equipped to design, produce, and test coils of practically any dimensions and with electrical characteristics to meet exacting requirements.



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Complete Radio Relay System • Mobile or Fixed Station Teletype Systems • Control Units for Teletype Systems • Direction Finding Equipment • Single or Dual Frequency Teletype Receiver Converters • Frequency Shift Keying Exciter Units, MO or Crystal • Low, Medium, and High Power Radio Transmitters • High Power Amplifiers • Switching Equipment.

In addition to complete facilities for designing, manufacturing and testing special communications equipment for military and commercial applications, B&W maintains a complete line of products for amateur radio. Write for details today.



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AUDIO OSCILLATOR
Model 200

30c-30kc range
± 1db 30c-15kc
1% stability



LINEAR DETECTOR
Model 404

400kc-30mc range
± 1db 20c-50kc
Balanced or unbalanced inputs.
Combines r-f detection & audio bridging.



AUDIO FREQUENCY METER
Model 300

0-30kc in 6 ranges
0.25 volts min. input
5% accuracy
Handles wave form ratios up to 8:1.



SINE WAVE CLIPPER
Model 250

Provides clipped sine wave for examining audio transients and response. Does the work of a square wave generator at less cost.



DIP METER
Model 600

1.75mc-260mc with 5 coils. 500 ua meter . . . adjustable sensitivity. Monitoring jack & B+ OFF Switch. Shaped for use in hard-to-get-at places.

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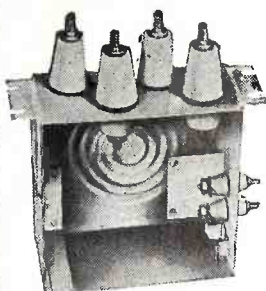
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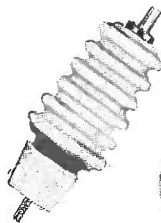
from the assembly of bushings in covers to actual hermetic sealing of your component.



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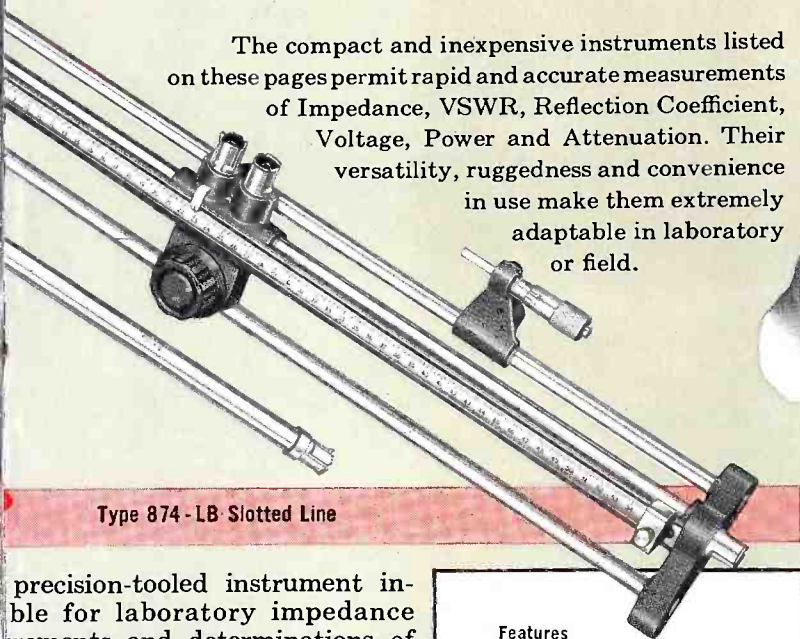


Unit Instruments and Coaxial Accessories for VHF-UHF MEASUREMENTS

on Antennas, Lines, Coaxial Components,
Lumped and Distributed Networks and Circuits

The compact and inexpensive instruments listed on these pages permit rapid and accurate measurements of Impedance, VSWR, Reflection Coefficient, Voltage, Power and Attenuation. Their versatility, ruggedness and convenience in use make them extremely adaptable in laboratory or field.

These are reliable, light-weight equipments in which specific functions are isolated in separate compact units. Combinations of these units permit innumerable setups for almost any vhf-uhf application.



Type 874-LB Slotted Line



The Type 874 Connector is the basis for G-R's completely integrated system for u-h-f measurements. Any two of these connectors plug smoothly into each other, completely eliminating the need for male and female parts — electrical uniformity is excellent — all units are designed for use on 50-ohm systems.

precision-tooled instrument in- ble for laboratory impedance rements and determinations of R or mismatch... at any fre- y from 300 to 5000 Mc.

erior electrical characteristics and operating conveniences, coupled compactness and light weight, this device extremely useful in work as well as in the development atory.

no other way are the fundamen- of high-frequency wave propa- n more effectively illustrated. The d Line clearly indicates positions ima and maxima, and determines ge-amplitudes and effects of diff- load terminations. It is a widely , low-cost demonstration piece ollege or high school laboratory s.

Features

- Frequency Range: 300 Mc to 5000 Mc
 - Accuracy: constancy of probe coupling $\pm 2\frac{1}{2}\%$ or better
 - Characteristic Impedance: 50 ohms $\pm 1\%$, throughout — inner conductor is supported at its ends only, minimizing discontinuities
 - Connectors: Type 874 with standing-wave ratio less than 1.05 to 4000 Mc
 - Probe Penetration: fully adjustable
 - Probe Travel: 50 cm
 - Probe-Carriage Drive: free sliding for rapid travel; vernier for fine adjustment
 - Scale: calibrated in centimeters — can be shifted to simplify calculations
 - Accessory Micrometer Vernier: for measurement of high standing-wave ratios by the "width of minimum" method
 - Portability: weighs only 8½ lbs.
- | | |
|--|----------|
| Type 874-LB Slotted Line with crystal detector | \$220.00 |
| Type 874-D20 Adjustable Stub for tuning with crystal | \$11.00 |
| Type 874-LV Micrometer Vernier Attachment | \$23.00 |



The field of application for the Slotted Line and Admittance Meter is much enlarged due to the many accessories now available for measurements on antennas, lines, coaxial components, and lumped and distributed networks.

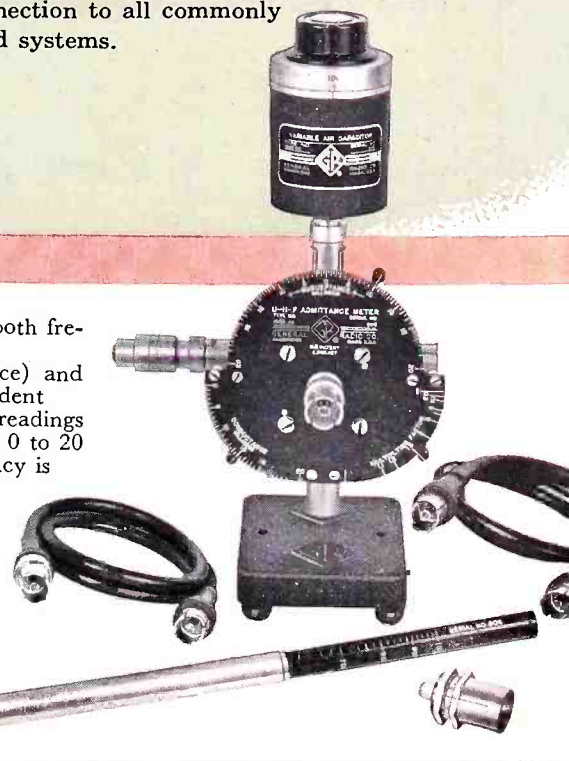
The Constant-Impedance Adjustable Line simplifies impedance measurements and eliminates line-length corrections between measuring point and unknown — the Balun and new Adaptors to v-h-f and u-h-f transmission lines make possible accurate measurements on balanced tv receiving-antennas and transmitting systems — the Component Mount and Insertion Unit provide a means for accurate high-frequency measurements of resistors, capacitors, and inductors — a variety of Adaptors permit connection to all commonly used systems.



Type 1602-B Admittance Meter . . . \$295

Type 1602-B Admit- Meter is a versatile in- tent for the rapid and ate measurement of tance, impedance or R over a 20 to 1500 ange — direct reading en 41 and 1500 Mc. It e used to match a load ne, to compare directly ppedance of one circuit nponent to that of an- , as well as for direct lnce measurements.

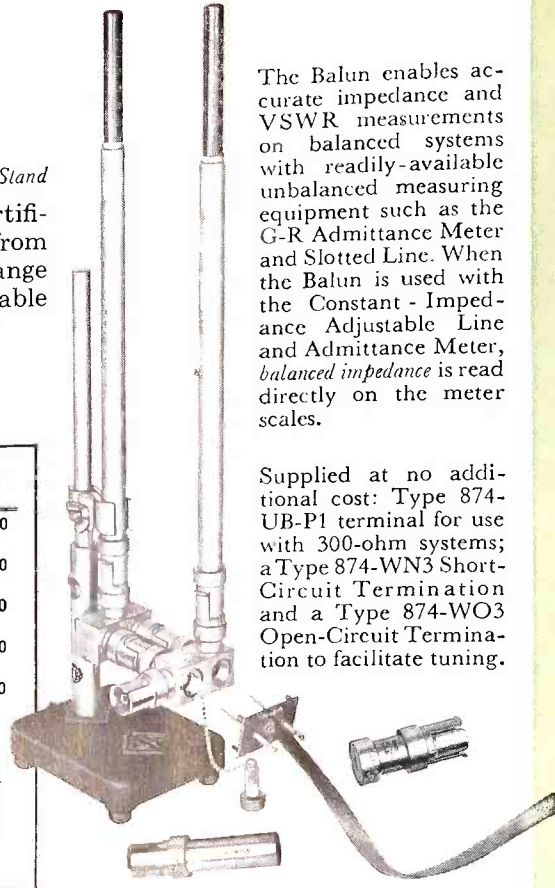
- ★ Scales are direct reading and independent of both fre- quency and calibration of the detector
- ★ No sliding balance — conductance (or resistance) and susceptance (or reactance) adjustments are independent
- ★ Accuracy of both conductance and susceptance readings up to 1000 Mc is $\pm (3\% + 0.2 \text{ millimho})$ over a 0 to 20 millimho range — from 20 to ∞ millimho, accuracy is $\pm (3\sqrt{M}\% + 0.2 \text{ millimho})$; "M" is scale multi- plying factor — above 1000 Mc, errors increase slightly — for matching, 3% accuracy to 2000 Mc
- ★ Admittance Meter is supplied with an Ad- justable Stub and Variable Air Capacitor for use as susceptance standards, a 50-ohm Termination for the conductance standard, two Patch Cords for connection to detector and generator, a Panel Connector for the detector, and a wooden storage case.



Type 874-UB Balun . . . \$75.

Shown with accessory 874-D20 Stubs and 874-Z Stand

a coaxial transformer which uses an artificial half-wave line for converting from balanced to unbalanced impedance. Range is 54 to 1000 Mc — instrument is tuneable for maximum accuracy.



The Balun enables accurate impedance and VSWR measurements on balanced systems with readily-available unbalanced measuring equipment such as the G-R Admittance Meter and Slotted Line. When the Balun is used with the Constant - Impedance Adjustable Line and Admittance Meter, *balanced impedance* is read directly on the meter scales.

Supplied at no additional cost: Type 874-UB-P1 terminal for use with 300-ohm systems; a Type 874-WN3 Short-Circuit Termination and a Type 874-WO3 Open-Circuit Termination to facilitate tuning.

| Frequency Range (Megacycles) | Type (Two of each required) | Total Price |
|------------------------------|--|----------------------------|
| 470 to 1000 | 874-D20 Adjustable Stubs | \$22.00 |
| 350 to 525 | 874-D20 Adjustable Stubs and 874-L10 Air Lines | \$32.00 |
| 275 to 380 | 874-D20 Adjustable Stubs and 874-L20 Air Lines | \$33.00 |
| 225 to 280 | 874-D20 Adjustable Stubs and 874-L30 Air Lines | \$34.00 |
| 170 to 280 | 874-D50 Adjustable Stubs and 874-L30 Air Lines | \$36.00 |
| 174 to 216 | 874-VC Variable Capacitors and 874-L10 Air Lines | Price available on request |
| 140 to 174 | 874-VC Variable Capacitors and 874-L20 Air Lines | |
| 88 to 140 | 874-VC Variable Capacitors and 874-L30 Air Lines | |
| 54 to 88 | 874-VC Variable Capacitors and 874-XL Series Inductors | |



Type 1217-A Unit Pulser . . . \$195.

NEW! is a highly useful addition to the growing line of Unit Instruments. Used with other Units and Accessories, it permits transient studies on a wide variety of networks. . . pulse modulation over complete vhf-uhf television band. . . wave testing of amplifiers. . . and a variety of other pulse measurements.

- Large Variety of Pulse Repetition Rates — 30, 60, 100, 200, 500 cycles, 1, 2, 5, 20, 50, 100 kilocycles
- Wide Range of Pulse Durations — continuous coverage from 0.2 μ sec to 60,000 μ sec
- Fast Rise Time — 0.05 μ sec; fall time 0.15 μ sec with open circuit shunter
- Output Voltage — 15 μ v and 1M Ω — top of pulse is flat within 5% of maximum amplitude a times.
- Excellent Stability — no time jitter visible on scope
- High Pulse Amplitude — permits use of time delay circuit — may be used directly on deflection plates of oscilloscope
- Variable Pulse-Amplitude Control — per zero to maximum settings
- Output Voltage — 20 v, on open circuit positive or negative pulses
- Output Impedance — 200 ohms for positive pulses, 1500-ohms for negative
- Self-Contained Oscillator — unit is independent of external synchronizing signal
- External Synchronization — where repetition rates are required, 25 v rms sufficient for locking from 0 to 100 cps
- Power Supply — Type 1203-A Unit Power Supply is recommended
- Dimensions are 10 $\frac{1}{2}$ x 5 $\frac{1}{2}$ x 6 $\frac{1}{4}$ inches
- Weight is 5 $\frac{1}{4}$ lbs.



NEW!

Type 1216-A Unit I-F Amplifier . . . \$365.

Shown above with 874-MR and 1209-A Unit Oscillator

the basic element in a high-frequency null detector for use with Slotted Line, Admittance Meter and other measuring equipment. The signal to be detected and a local-oscillator frequency are mixed in the Type 874-MR Mixer Rectifier to produce a 30-Mc difference frequency which is detected by this I-F Amplifier. With this system, any signal from 50 to 5000 Mc may be reliably and conveniently detected.

- 4-stage, high-gain, 30-Mc amplifier is terminated in rectifier and panel meter — modulation on signal is amplified by cathode follower with 0.4 Mc bandwidth and is available at binding posts for monitoring
- 90-db amplifier gain over 0.7 Mc bandwidth at 30-Mc center frequency — bandwidth sufficiently wide to detect pulsed signals
- High Sensitivity — less than 2 μ volts from 400-ohm source for 1% meter deflection; 50 μ volts for full scale deflection
- Accurate built-in 70-db attenuator provides reliable measurement of relative signal levels — enables accurate high-frequency attenuation measurements
- Two internal power supplies in Unit — one for the amplifier and one for the local oscillator to be used in detection
- AVC provided for null-detection
- Dimensions are 5 $\frac{1}{2}$ x 10 $\frac{1}{2}$ x 6 $\frac{3}{8}$ inches; Net Weight is 8 $\frac{1}{4}$ lbs.



874-VI Voltmeter Indicator, \$70. and 874-VR Voltmeter Rectifier, \$30.

Connecting Cord, \$5.50
are used in conjunction to measure monitor voltage, and for converting detectors into 50-ohm signal generators. The crystal detector is used in the Voltmeter Rectifier. The Indicator consists of a milliammeter, sensitivity control and a circuit for calibrating the crystal detector to the desired level between 0.1 and 2000 Mc. Measurement accuracy is ± 0.05 volts. Frequency range, 15 to 2500 Mc suitable for resonance correction above 1000 Mc.

Type 1000-P6 Crystal Diode Modulator . \$40.

permits wide band, amplitude modulation of oscillators over a 20 to 1000 Mc carrier range. With this modulator, any standard tv-receiver's video signals can be used to "picture modulate" a signal generator operating at any vhf or uhf frequency. . . 50-millivolts r-f and 0.2 volt at modulation terminals produces 30% amplitude modulation; modulating frequencies may be any value from 0 to 5 Mc.



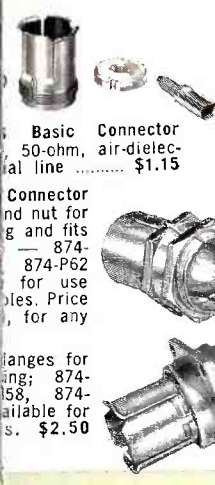
Type 1000-P7 Balanced Modulator . . . for full 100% amplitude modulation of frequencies from 60 to 2500 Mc.

This unit is particularly designed for pulse work such as radar and tv receiver testing where 100% linear modulation, good rise-time characteristics, and negligible incidental f-m are essential. . . \$225.

Unique design bucks out carrier between pulses, permitting maximum double-sideband modulation; suppression between pulses is 60 db throughout frequency range — as much as 10 mv r-f output into 50-ohm load — one-volt peak modulation produces full r-f output from zero initial condition



NEW!



Basic Connector
50-ohm, air-dielectric line \$1.15



Connector and nut for G and fits
— 874-P62 for use with 62-ohm cables. Price \$1.75, for any other size, \$2.50

Changes for 874-P58, 874-P62 available for \$2.50



874-C Cable Connector for 50-ohm, 874-A2 Cable or equivalent \$1.70
874-C8 for RG-8/U Cable \$1.70
874-C58 for RG-29/U, RG-55/U, RG-58/U Cable \$1.70
874-C62 used with RG-62/U (not matched) \$1.70

874-Y Cliplock rolls around mated connectors holding them securely in place. 10 Cliplocks \$1.75



NEW!

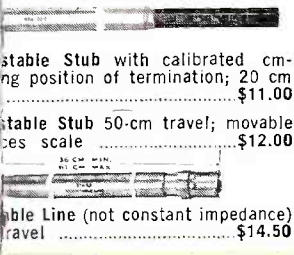
874-QU3 Adaptor to 3/8 inch UHF line . . . \$87. . . . couples to standard 50-ohm u-h-f transmission line . . . enables direct connection of any G-R coaxial test-equipment to antenna systems for impedance and VSWR measurements at the operating frequency.

These elements are silver plated for minimum loss. Electrical characteristics are excellent; VSWR is less than 1.03 to 920 Mc.



NEW!

874-QV2A Adaptor to 1/8 inch line . . . \$46. . . . similar to 874-QU3 except couples to 51.5-ohm v-h-f transmission line. When used with the Admittance Meter for rapid and reliable antenna testing, VSWR of this adaptor is less than 1.02 over the complete v-h-f band.



Adjustable Stub with calibrated cm- travel, position of termination; 20 cm \$11.00

Adjustable Stub 50-cm travel; movable termination scale \$12.00

Adjustable Line (not constant impedance) travel \$14.50

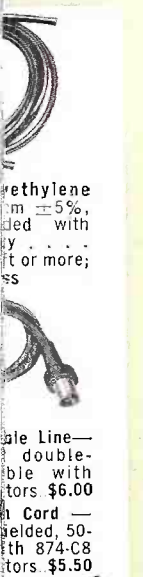


874-L10 10-Cm Air Line with 874-B Connector at each end \$5.00

874-L20 20-Cm Air Line \$5.50

874-L30 30-Cm Air Line \$6.00

874-LK Constant-Impedance Adjustable Line is an air-dielectric, coaxial line which telescopes to change length; 50-ohm impedance remains constant along line regardless of setting \$36.00



Ethylene cable with shielded conductors; 50-ohm or more; \$5.50

Shielded Cable— double-shielded with 874-C58 connector and Type 274-ND Double Shielded \$5.50

874-Z Stand for supporting coaxial systems; includes heavy base, horizontal and vertical rods and three universal clamps \$15.00



874-WN Short Circuit Termination for establishing reference conditions \$2.25

874-WN3 has "short" 3-cm further away \$2.75



874-W0 Open Circuit Termination with shielding cap \$1.75

874-W03 with "open" 3-cm further down the line \$2.50



874-T Tee for connecting elements in shunt with a coaxial line \$8.50



874-EL 90 Degree Ell for right-angle bends \$6.50



874-JR Rotary Joint permits rotation of one section with respect to other \$9.00



874-LR Radiating Line enables coupling to field within a line \$7.50



874-MB Coupling Probe for electrostatic coupling to external fields \$3.25



874-MA Adjustable Coupling Loop can be clamped in any desired position \$5.50



874-WM 50-ohm Termination provides impedance match to 50-ohm systems from dc to several thousand Mc \$17.50



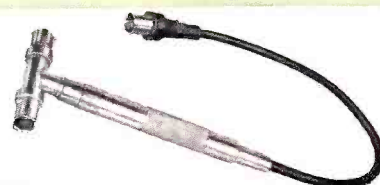
32A Patch has 3-ft. 50-ohm shielded cable with 874-C58 connector and Type 274-ND Double Shielded \$5.50

Assemble-ment adaptor, shielded, 50-ohm, 874-C58 connector \$2.00



874-F1000 Low-Pass Filter for reducing harmonics above 1000 Mc \$10.00

874-F500 Low-Pass Filter cuts off at 500 Mc \$16.00



874-GA Adjustable Attenuator is precision-tooled, 120-db continuously-adjustable type for use from 100 to 4000 Mc. It can be used to produce known voltage ratios for attenuation measurements and for converting oscillators simply and inexpensively into signal generators when used with the Type 874-MR Mixer Rectifier \$55.00



874-GF 20-db Fixed Attenuator with maximum power input of 1/2 watt and 0.5 db accuracy to 2000 Mc; useful to 5000 Mc \$18.00

874-GG 10-db Fixed Attenuator similar to 874-GF \$18.00



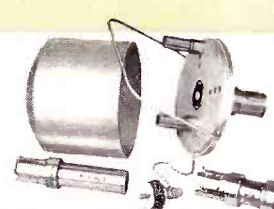
874-K Coupling Capacitor, blocks dc and low audio frequencies \$8.50



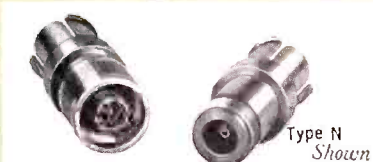
874-MR Mixer Rectifier for mixing signals from 50 to 5000 Mc. Conversion to a G-R Unit and the Type 874-MA Amplifier as an amplifier for high-frequency demodulation \$32.50



874-X Insertion Unit for mounting "home-made" attenuators, v-h-f transformers, impedance matching networks, and other components. Shielding sleeve slides over opening \$8.25



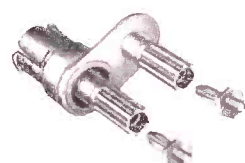
874-M Component Mount for minimizing stray effects when measuring impedance of R-L-C components and other circuit combinations, from dc to 5000 Mc. Can be used with Slotted Line or Admittance Meter. 874-WN3 and 874-W03 are supplied to simplify measurements \$25.00, complete



| To Adapt to Type | Order (Jack) | G-R Type (Plug) | Price |
|------------------|--------------|-----------------|-----------------|
| N | 874-QNJ | 874-QNP | \$3.75 & \$4.50 |
| C | 874-QCJ | 874-QCP | \$4.75 & \$6.25 |
| BNC | 874-QBJ | 874-QBF | \$4.75 & \$4.75 |
| UHF | 874-QUJ | 874-QUF | \$4.00 & \$4.25 |
| HN | 874-QHJ | 874-QHF | \$6.50 & \$6.50 |



874-Q7 Adaptor to G-R Type 774 Connector \$3.75



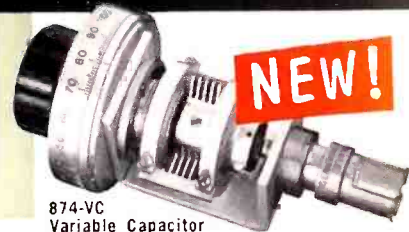
874-Q2 Adaptor for connecting Type 874 system to Type 274 Connector, binding posts, banana plugs \$3.50



874-Q6 Adaptor fits G-R Type 274-NF Lead Assembly \$2.25



Since 1915
Manufacturers of
Electronic Apparatus
for Science and Industry

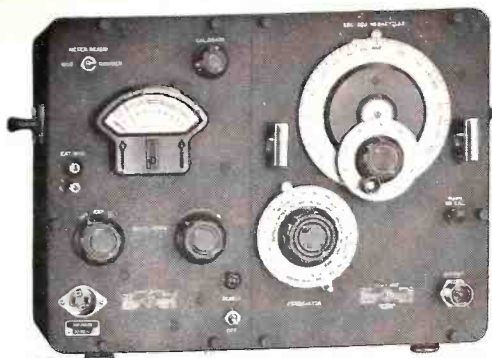


NEW!

874-VC Variable Capacitor
(Shielded Case supplied)

is a general-purpose tuning element for use at lower frequencies where adjustable stubs and lines are inconvenient because of their large physical sizes.

The unit features milled aluminum rotor and stator, high-temperature polystyrene insulation, precision ball bearings for smooth operation, an accurately-engraved dial drum and well-shielded enclosure. Capacitance variation is 56 μf at 1 kc. Minimum capacitance setting remains essentially constant at 14 μf to 200 Mc; maximum capacitance setting is 70 μf to 50 Mc . . . \$42.50



VHF and UHF Standard Signal Generator

Butterfly Tuning Circuit has wide range and no sliding contacts . . . frequency-calibration accuracy is $\pm 1\%$, direct reading . . . attenuator provides continuously-adjustable voltages from 0.5 μV to 1.0 volt, open circuit . . . internal 1-kc amplitude modulation; provision made for 30-cycle to 15-kc external modulation, adjustable from 0 to 50% with panel dial . . . panel meter indicates carrier output-voltage or modulation percentage.

- Type 1021-AV, 50 to 250 Mc . \$595.
- Type 1021-AU, 250 to 920 Mc . \$615.

These units are reliable, easily-operated power sources widely used in measurements with bridges, slotted lines and other coaxial equipment.



Type 1651-A Bolometer Bridge . . . \$325.

a flexible bridge-circuit for measuring r-f power in milliwatt range; useful in educational laboratories as well in industrial research and development for innumerable applications. A variety of G-R Thermistor Units and Bolometer Holders are available for measurements from 0.500 mw. Other measurements can be made using a variety of power-sensitive elements with resistances from 25 to ohms at frequencies up to 4000 Mc.

GR Unit oscillators

are compact and highly-efficient sources of power for maximum versatility. They are ideally adapted for use in industrial laboratory or college experimentation class. One Type 1203-A Power Supply and several oscillator sections permit maximum coverage at minimum cost.

- Type 1211-A Unit Oscillator . 0.5 to 50 Mc . \$295.
- Type 1215-A Unit Oscillator . 50 to 250 Mc . \$190.
- Type 1208-A Unit Oscillator . 65 to 500 Mc . \$190.
- Type 1209-A Unit Oscillator . 250 to 920 Mc . \$235.



Type 1203-A Unit Power Supply, for use with Unit Oscillators . . . \$40.



Type 1213-A Unit Crystal Oscillator . . . \$130.

a source of standard frequencies at very-high and ultra-high frequencies. The heart of the unit, the crystal, is plated, welded to absorb shock, hermetically sealed, and has low temperature coefficient of frequency. (Type 1203-A Power Supply recommended).

When adjusted to Station WWV, instrument-stability is approximately one part per million can be relied upon for long number of hours.



GENERAL RADIO Company

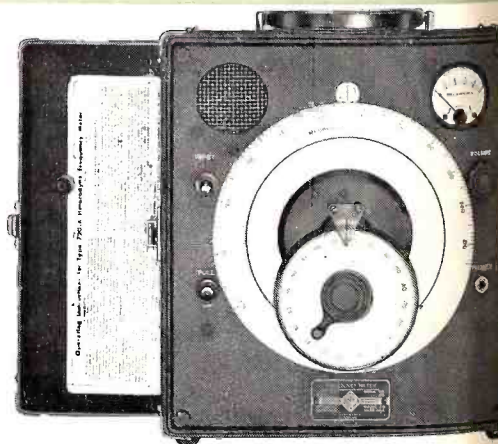
275 Massachusetts Avenue, Cambridge 39, Massachusetts, U. S. A.

90 West Street NEW YORK 6

920 S. Michigan Avenue CHICAGO 5

1000 N. Seward Street LOS ANGELES 38

| | | |
|-------------------------------|----------------------|---------------------------|
| ADMITTANCE METERS | MODULATION METERS | SIGNAL GENERATORS |
| AMPLIFIERS | MOTOR CONTROLS | SOUND & VIBRATION METERS |
| COAXIAL ELEMENTS | NULL DETECTORS | STROBOSCOPES |
| DISTORTION METERS | OSCILLATORS | TV & BROADCAST MONITORS |
| FREQUENCY MEASURING APPARATUS | PARTS & ACCESSORIES | U-H-F MEASURING EQUIPMENT |
| FREQUENCY STANDARDS | POLARISCOPES | UNIT INSTRUMENTS |
| IMPEDANCE BRIDGES | PRECISION CAPACITORS | VARIACS |
| LIGHT METERS | PULSE GENERATORS | V-T VOLTMETERS |
| MEGOhmmeters | R-L-C DECADES | WAVE ANALYZERS |
| | R-L-C STANDARDS | WAVE FILTERS |



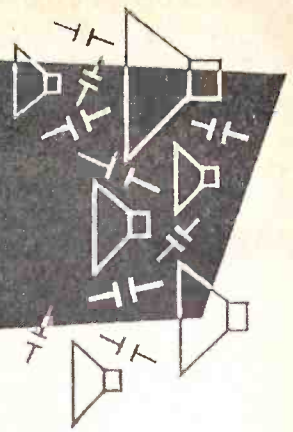
Type 720-A Heterodyne Frequency Meter . . . \$410.

a completely self-contained and portable instrument for rapid and accurate measurement of frequencies from 10 to 3000 Mc. (fundamental range, 100-200 Mc.)

Measurement accuracy is $\pm 0.1\%$. Many operating conveniences: butterfly tuned circuit avoids difficulties inherent in manual tuning; adjustable panel-antenna eliminates need for direct connection to source under measurement; panel meter, internal speaker or terminals for head-phones available for detection

HIGH-FIDELITY SPEAKERS and ELECTROLYTIC CAPACITORS

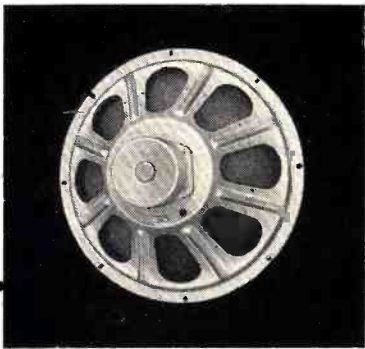
for the Electronic Industry



by
Magnavox

**SPECIALISTS in Quantity Production
of QUALITY COMPONENTS**

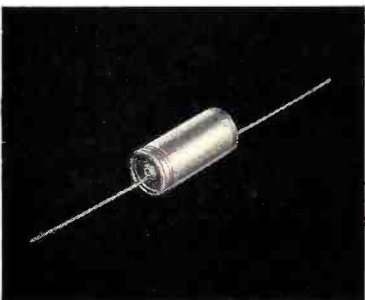
True High Fidelity Speakers 4" to 15" Diameter



Electrolytic Capacitors



Type FP Sizes 1 inch and
1 3/8 inch Diameter



TM Sizes 5/8 inch to 1 inch
Diameter

- The Ultimate for every High-Fidelity Application
- Nearly 200 Designs meet your every response requirement
- Exactingly built for dependability and uniformity by Magnavox, Originator of the Dynamic Loud Speaker.

When You Specify Magnavox Components

*You Buy Extra Insurance for your
products.....at no extra cost!*

DEPENDABILITY • ECONOMY • DURABILITY

The Time-Tested Qualities of All Magnavox Components

Particular attention given to all special requirements for Monochrome and Color TV, Radio Receivers, Radio-Phonograph Combinations, Automotive Radios, Coin-operated Phonographs, Electronic Organs, Recorders, Amplifiers, Sound Systems, Test Equipment and Military.

There is no substitute for experience. We solicit your application problems which will receive prompt and courteous attention.

Magnavox
Quality Electronics for More than 43 Years

**SPEAKERS
CAPACITORS
SOLENOIDS
ELECTRONIC EQUIPMENT**

THE MAGNAVOX COMPANY

DEPT. 82 • FORT WAYNE 4, INDIANA

Dependable Electronic Tubes for...

TRANSMITTING • RECTIFYING • INDUSTRIAL
SPECIAL PURPOSE • TELEVISION



4J52
65 Kilowatt peak power packaged magnetron for airborne applications.



5918
High power triode for broadcast communications and industrial applications.



F-892-R
Used in 5 and 10 KW AM transmitters.

Basic Technical Data Covering Complete Line of FEDERAL POWER TRIODES

| Type | Description | Cooling* | Max. Plate Dissipation | Mu | Max. Plate Input | Max. DC Plate Volt. | Max. Freq. for Max. Ratings | Filament Voltage |
|---------------|--------------|----------|------------------------|------|------------------|---------------------|-----------------------------|------------------|
| F-3X2500A3 | HF Triode | A | 2.5 KW | 20 | 8 KW | 4,000 | 110 MC | 7.5 |
| F-3X2500F3 | HF Triode | A | 2.5 | 20 | | 6,000 | 30 | 7.5 |
| F-7C23 | Pulse Triode | A | 1.2 | 25 | | 17,000 | 5 | 11.0 |
| F-7C25 | HF Triode | A | 2.5 | 25 | 5.6 | 4,500 | 50 | 11 |
| F-7C26 | HF Triode | A | 1 | 17 | 3 | 3,000 | 150 | 9.0 |
| F-8C25 | AF Triode | A | 5 | 6 | 10 | 5,000 | | 7 |
| F-9C23 | RF Triode | W | 25 | 32 | 50 | 15,000 | 20 | 22 |
| F-9C28 | AF Triode | W | 40 | 4.75 | 100 | 15,000 | | 7.5 |
| F-9C29 | AF Triode | A | 20 | 4.75 | 50 | 15,000 | | 7.5 |
| F-9C30 | RF Triode | W | 40 | 42 | 120 | 15,000 | 20 | 7.5 |
| F-9C31 | RF Triode | A | 20 | 42 | 100 | 15,000 | 20 | 7.5 |
| F-110X | RF Triode | W | 25 | 40 | 50 | 20,000 | 3 | 28 |
| F-124-A | RF Triode | W | 40 | 42 | 135 | 20,000 | 20 | 13.6 |
| F-124-R | RF Triode | A | 20 | 42 | 100 | 20,000 | 20 | 13.6 |
| F-125-A | AF Triode | W | 40 | 4.75 | 100 | 15,000 | | 13.6 |
| F-127-A | RF Triode | A | 0.2 | 38 | 0.95 | 3,000 | 30 | 10 |
| F-128-A | RF Triode | A | 0.6 | 36 | 3 | 3,500 | 30 | 11 |
| F-129-B | RF Triode | W | 7.5 | 26 | 18 | 12,000 | 30 | 18 |
| F-129-R | RF Triode | A | 5 | 26 | 18 | 12,000 | 30 | 18 |
| F-132-A | AF Triode | A | 0.6 | 10 | 1.8 | 3,500 | | 11 |
| F-134 | RF Triode | W | 150 | 21 | 450 | 20,000 | 22 | 25 |
| F-212E | RF Triode | A | 0.275 | 16 | 0.7 | 2,000 | 4.5 | 14 |
| F-220CA/320BA | RF Triode | A | 5 | 40 | 22.5 | 15,000 | 4 | 21.5 |
| F-220C/320B | RF Triode | W | 10 | 40 | 22.5 | 15,000 | 4 | 21.5 |
| F-342-A | RF Triode | W | 25 | 40 | 50 | 20,000 | 4 | 20 |
| F-343-A | RF Triode | W | 10 | 40 | 36 | 18,000 | 4 | 21.5 |
| F-343-AA | RF Triode | A | 5 | 40 | 20 | 18,000 | 4 | 21.5 |
| F-631 | RF Triode | W | 25 | 40 | 50 | 20,000 | 3 | 28 |
| F-862-A | RF Triode | W | 100 | 45 | 200 | 20,000 | 1.6 | 33 |
| F-891 | RF Triode | W | 6 | 8.5 | 18 | 12,000 | 1.6 | 11/22 |
| F-891-R | RF Triode | A | 4 | 8.5 | 15 | 10,000 | 1.6 | 11/22 |
| F-892-A | RF Triode | W | 10 | 50 | 30 | 15,000 | 1.6 | 11/22 |
| F-892-R | RF Triode | A | 4 | 50 | 18 | 10,000 | 1.6 | 11/22 |
| F-898-A | RF Triode | W | 100 | 45 | 200 | 20,000 | 1.6 | 16.5 |
| F-5604 | HF Triode | A | 10 | 19.5 | 32.5 | 12,500 | 22.5 | 11 |
| F-5606 | RF Triode | W | 10 | 50 | 30 | 15,000 | 1.6 | 22 |
| F-5619 | HF Triode | W | 20 | 19.5 | 32.5 | 12,500 | 22.5 | 11 |
| F-5658 | RF Triode | W | 20 | 20.5 | 60 | 10,500 | 25 | 12 |
| F-5666 | HF Triode | W | 12.5 | 21 | 20 | 10,000 | 22.5 | 11 |
| F-5667 | RF Triode | A | 7.5 | 21 | 20 | 10,000 | 22.5 | 11.0 |
| F-5668 | RF Triode | W | 20 | 50 | 28 | 14,000 | 5 | 22 |
| F-5669 | RF Triode | A | 10 | 50 | 28 | 14,000 | 5 | 22 |
| F-5680 | HF Triode | A | 2.5 | 25 | 12 | 6,000 | 30 | 13.0 |
| F-5771 | RF Triode | W | 22.5 | 20 | 60 | 12,500 | 25 | 7.5 |
| F-5874 | AF Triode | W | 7.5 | 6 | 15 | 6,000 | | 7 |
| F-5917 | HF Triode | W | 5 | 20 | 8 | 4,000 | 110 | 7.5 |
| F-5918 | RF Triode | W | 70 | 37 | 300 | 17,500 | 22 | 11 |
| F-5919 | RF Triode | A | 35 | 37 | 175 | 17,500 | 22 | 11 |
| F-5996 | HF Triode | A | 2.5 | 25 | 12 | 6,000 | 30 | 13.0 |
| F-6009 | HF Triode | W | 6 | 25 | 12 | 6,000 | 30 | 13 |
| F-6179 | AF Triode | W | 50 | 4.75 | 120 | 15,000 | | 27.2 |
| F-6366 | HF Triode | A | 3 | 25 | 7 | 5,500 | 30 | 11 |
| F-6367 | HF Triode | A | 3 | 25 | 12 | 6,200 | 30 | 10 |
| F-6399 | HF Triode | W | 5 | 25 | 7 | 6,200 | 30 | 11 |

* A=Forced Air Cooling W=Water Cooled

FEDERAL PULSED MAGNETRONS

| Type | Description | Oper. Freq. Mc/sec | Oper. Volt. KV | Min.* Power Output KW | Output Transmission Line |
|--------|-----------------------------|--------------------|----------------|-----------------------|--------------------------|
| 2J31 | Fixed freq.-External Magnet | 2840 ± 20 | 20.0 | 240 | Coax |
| 2J32 | Fixed freq.-External Magnet | 2800 ± 20 | 20.0 | 240 | Coax |
| 2J33 | Fixed freq.-External Magnet | 2760 ± 20 | 20.0 | 240 | Coax |
| 2J36-A | Fixed freq.-External Magnet | 9085 ± 80 | 11.5 | 28 | Waveguide |
| 2I49 | Fixed freq.-External Magnet | 9080 ± 80 | 12.0 | 40 | Waveguide |
| 2J55 | Fixed freq.-Packaged | 9375 ± 30 | 12.0 | 40 | Waveguide |
| 2J56 | Fixed freq.-Packaged | 9245 ± 30 | 12.0 | 40 | Waveguide |
| 4J52 | Fixed freq.-Packaged | 9375 ± 30 | 15.0 | 65 | Waveguide |
| 5J26 | Tunable-External Magnet | 1220-1350 | 27.5 | 400 | Coax |

*Duty cycle .001

FEDERAL RECTIFYING TUBES

| Type | Description | Max. Peak Inverse Volt. | Max. Peak Current (Amps.) | Filament Voltage |
|---------|---------------|-------------------------|---------------------------|------------------|
| F-869-B | Mercury Vapor | 20,000 | 10 | 5 |
| F-857-B | Mercury Vapor | 22,000 | 40 | 5 |
| F-575-A | Mercury Vapor | 15,000 | 6 | 5 |
| F-673 | Mercury Vapor | 15,000 | 6 | 5 |
| F-315-A | Mercury Vapor | 15,000 | 6 | 5 |

HANDBOOK OF TUBE OPERATION

72 Page booklet giving complete technical data on how to obtain longer service life from your power vacuum tubes. Write Dept. K-613 for your copy.



Federal Telephone and Radio Company

A Division of INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

100 KINGSLAND ROAD, CLIFTON, N. J.

In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.

Federal's MOBILE RADIO COMMUNICATION EQUIPMENT for INDUSTRIAL USE



FT-153-A-10CZ
TRANSMITTER RECEIVER



134 A
CONTROL UNIT

FT-153-A-10CZ Fixed-Station equipment designed for office desk installation, with telephone-type control.

Improve plant operations with Federal Mobile Radio equipment. More efficient dispatch of fork-lift trucks, cranes, yard trucks to jobs within and around factory buildings. Easy to install—Low in cost—Dependable operation. Three types of equipment available with RF power output of 10 watts at 162 Mc.



FT-153-10 "Transit-Call"
Transmitter and Receiver
for standard mounting.
Total weight is under 29
pounds.

FT-156 "Transit-Call"
Transmitter and Receiver
designed for dashboard
mounting.



COMPLETELY
SELF-CONTAINED

DELAY LINES and PULSE TRANSFORMERS

Delay Lines:

The new Federal Delay Lines are of the lumped constant type. They are compact, lightweight, efficient and meet military requirements. They are hermetically sealed against dust, dirt and moisture.

RANGE OF DELAY.....0.3 to 45 microseconds
IMPEDANCE RANGE.....100 to 10,000 ohms
MINIMUM RISE TIME.....0.5 microseconds

Pulse Transformers:

Of miniaturized construction, compact and efficient. Meet government specifications and are hermetically sealed.

DUTY CYCLE......1 maximum PULSE WIDTH......5 to 7.0 microseconds
RISE TIME......05 microseconds minimum

FILTERS

Various filters are available including high-pass, low-pass and band-pass for audio and carrier type applications. Meet commercial and military specifications. Hermetically sealed against dust, dirt and moisture. Use toroidal type high Q coils.

TOROIDS

With high Q performance they are self shielding and available in hermetically sealed cases, encapsulated, or unsealed and to meet military requirements.

POWER TRANSFORMERS

Hermetically sealed, compact, rugged and high quality types to meet commercial and military specifications. Meet Class A, B or H temperature requirements. Also available in lightweight, high temperature, 400 cycle aircraft type.

FEDERAL TRANSFORMERS ARE DESIGNED AND BUILT TO MEET CUSTOMER SPECIFICATIONS.

MINIATURE ANTI-CAPACITY SWITCHING KEY

For airborne and other equipment—whenever compactness and light weight are prime factors. A miniature, light-weight design with 8 "Break-Make" contacts. Two groups of 12 contact springs each are actuated by a molded phenolic drive roller with a simple motion of the lever. Both sides are non-locking. Contact springs are molded into units of 4 springs each, formed and pre-tensioned which will reduce adjusting of springs after assembly to a minimum. The complete spring pileup consists of 6 interlocking molded blocks, mounted into frame with a screw. Meets military requirements.



"SINGLE-CRYSTAL-STABILIZED" GERMANIUM DIODES Featuring HERMETICALLY-SEALED CONSTRUCTION

Designed to be built into compact modern electronic equipment. Even under adverse conditions it will insure long life and the ultimate in reliable performance.

These Types Available:

1N34 . . . 1N34A . . . 1N38 . . . 1N38A . . . 1N39 . . . 1N48 . . . 1N51 . . . 1N52 . . .
1N54 . . . 1N54A . . . 1N55 . . . 1N55A . . . 1N56 . . . 1N56A . . . 1N58 . . . 1N58A
. . . 1N63 . . . 1N64 . . . 1N65 . . . 1N69 . . . 1N70 . . . 1N75 . . . 1N81.



MINIATURE TRANSFORMERS

Hermetically Sealed input, output transformer-stage Audio Transformers, featuring Federal's new hermetically sealed transformer. Hermetically sealed power transformers and chokes. Meets government specifications.

TELEPHONE TYPE RELAYS



Telephone type relays available with a variety of contact combinations and coil resistances. Single and double coil combinations available with coil resistances from a few ohms to several thousand ohms.



Federal

RADIO-TV SELENIUM RECTIFIERS

The revolutionary circuit elements that have led the way to important design advances in TELEVISION & RADIO RECEIVERS & ELECTRONIC EQUIPMENT. Wherever DC power is required there is a Federal Radio-TV Selenium Rectifier to do the job... and do it with an efficiency and reliability that is backed by the outstanding reputation of Federal—America's oldest and largest manufacturer of Selenium Rectifiers.

| • Federal Cat. No. | Max. Output MA-DC | Max. Input (RMS) Volts | MA | Min. Ser. Res. Ohms | Peak Inverse Volts (Max.) | Peak Current (Max.) | Δ Construction and Nom. Cell Size | Application |
|--------------------|-------------------|------------------------|-------|---------------------|---------------------------|---------------------|-----------------------------------|-------------------------|
| 1159 | 20 | 130 | 54 | 50 | 380 | 200 | 3/8" Dia. (T) | B+ Booster; Bias |
| 1263A | 65 | 130 | 135 | 35 | 380 | 500 | 1 1/16" Square (E) | B+ Radio, UHF Converter |
| 1002A | 65 | 130 | 175 | 22 | 380 | 650 | 1" Sq. (E) | B+ AC-DC (5 tube) |
| 1003A | 75 | 130 | 200 | 22 | 380 | 750 | 1" Sq. (E) | B+ 3-way Radios |
| 1101A | 100 | 130 | 270 | 22 | 380 | 1000 | 1" Sq. (E) | B+ Radios, Television |
| 1004A | 100 | 130 | 270 | 22 | 380 | 1000 | 1 1/4" Sq. (E) | B+ Radios, Television |
| 1005A | 150 | 130 | 410 | 15 | 380 | 1500 | 1 1/4" Sq. (E) | B+ Radios, Television |
| 1006A | 200 | 130 | 540 | 5 | 380 | 2000 | 1-17/32" Sq. (E) | B+ Television |
| 1028A | 250 | 130 | 675 | 5 | 380 | 2500 | 1-17/32" Sq. (S) | B+ Booster; Bias |
| 1090A | 300 | 130 | 810 | 5 | 380 | 3000 | 1-17/32" Sq. (S) | B+ Television |
| 1231A | 325 | 130 | 880 | 5 | 380 | 3250 | 1 5/8" Sq. (S) | B+ Television |
| 1261A | 350 | 130 | 945 | 5 | 380 | 3500 | 1 5/8" Sq. (S) | B+ Television |
| 1023A | 350 | 130 | 945 | 5 | 380 | 3500 | 1 3/4" Sq. (S) | B+ Television |
| 1130A | 300 | 130 | 1080 | 5 | 380 | 3000 | 2" Sq. (S) | B+ Television |
| 1021A | 450 | 130 | 1200 | 5 | 380 | 4500 | 2" Sq. (S) | B+ Television |
| 1200A | 600 | 130 | 1600 | 5 | 380 | 6000 | 2 1/2" Sq. (S) | B+ Television |
| 1223A | 750 | 130 | 2000 | 5 | 380 | 7500 | 2 1/2" Sq. (S) | B+ Television |
| 1014A | 100 | 160 | 270 | 22 | 460 | 1000 | 1 1/4" Sq. (E) | Vibrator |
| 1022A | 450 | 160 | 1200 | 5 | 460 | 4500 | 2" Sq. (S) | B+ Television |
| 1233 | 20 | 260 | 54 | 50 | 740 | 200 | 3/8" Diam. (T) | B+ Booster |
| 1007A | 75 | 160* | 200 | 22 | 460 | 750 | 1" Sq. (S) | Vibrator Doubler |
| 1008A | 100 | 160* | 270 | 22 | 460 | 1000 | 1 1/4" Sq. (S) | Vibrator Doubler |
| 1009A | 200 | 160* | 540 | 5 | 460 | 2000 | 1-17/32" Sq. (S) | Vibrator Doubler |
| 1015 | 150 | 25 | 175 | ..... | 35 | 750 | 1" Sq. (E) | Bridge Rectifier |
| 1016 | 300 | 25 | 350 | ..... | 35 | 1500 | 1 1/4" Sq. (E) | Bridge Rectifier |
| 1017 | 600 | 25 | 700 | ..... | 35 | 3000 | 1-17/32" Sq. (E) | Bridge Rectifier |
| 1229A | 750 | 195 | 2000 | 5 | 570 | 7500 | 2 1/2" Sq. (S) | B+ Television |
| 1018 | 1600 | 26‡ | ..... | ..... | ..... | ..... | 4 1/4" lg. (Mtg. Plt.) | Battery Charger |
| 1001A | 75 | 20 | 200 | ..... | 35 | 750 | 1" Sq. (E) | Bias Rectifier |

Δ(E) Eyelet. (S) Stud. (T) Paper Tube.

*These rectifiers have two sections—characteristics given apply to one section only; if both sections are used in series, voltage input is 320 volts.

†The characteristics given for this rectifier are based on its use in a half-wave rectifier circuit with a 3-cell battery load.

‡The characteristics given for this rectifier are based on its use in a full-wave rectifier circuit with a 3-cell battery load.

• 'A' after code number indicates locking lug.



FEDERAL'S RADIO-TV SELENIUM RECTIFIER HANDBOOK

80 pages of valuable designs, characteristics and application. Available for 50 cents (coin only).

SELENIUM RECTIFIER EQUIPMENTS

**QUALITY-BUILT
MAGNETIC AMPLIFIERS**
Powered by Quality Controlled

Federal

SELENIUM RECTIFIERS

Presently used in a wide range of successful applications for industry and the Armed Forces, such as:

- Voltage Control
- Temperature Control
- Current Control
- Photoelectric Control
- Speed Control
- Counting
- Position Control
- Automatic Regulation

Federal Selenium Rectifiers, in partnership with the right magnetic components, provide Magnetic Amplifiers outstanding for:

- Stability • Accuracy • Long Life
- High Gain • Fast Response
- Low-cost Operation

Submit your magnetic amplifier requirements to Federal—write to Dept. F-53-B

POWER SUPPLIES: Designed to furnish a dependable and constant source of D-C power. Whether for industrial or laboratory use, these equipments are available in sizes to serve your requirements. For industrial requirements they are used to power magnetic equipment such as chucks, brakes, clutches, screens, separators, drums and pulleys, and also provide power for lifting magnets, relays, circuit-breakers and D-C motors.

| Code Number | A-C Input | | D-C Output | |
|-------------------|-----------|--------------|------------|-----------------|
| | Volts | Phase Cycles | Volts | Amps. |
| FTR 3246-BS* | 115 | 1 | 60 | 6 10 |
| FTR 3352-BS | 115 | 1 | 50/60 | 5/10 20/10 |
| FTR 3093-AS* | 115 | 1 | 60 | 12 3 |
| FTR 3138-BS* | 115 | 1 | 60 | 12 5 |
| FTR 3185-AS* | 115 | 1 | 60 | 12 7.5 |
| FTR 3339-BS | 115/230 | 1 | 50/60 | 6-24 18 |
| FTR 3341-AS | 115 | 1 | 50/60 | 28 5 |
| FTR 3128-BS** | 115 | 1 | 60 | 22-30 10 |
| FTR 3300-DS | 115 | 1 | 60 | 2-32 50 |
| FTR 3340-BS | 115 | 1 | 50/60 | 5-70 12 |
| INDUSTRIAL | | | | |
| FTR 3115-JS | 115 | 1 | 50/60 | 115 1 |
| FTR 3116-BS | 115 | 1 | 50/60 | 115 5 |
| FTR 3117-HS | 115 | 1 | 50/60 | 115 10 |
| FTR 3117-JS | 230 | 1 | 50/60 | 115 10 |
| FTR 3152-AS | 220/440 | 3 | 50/60 | 115/230 4.4/2.2 |
| FTR 3153-AS | 220/440 | 3 | 50/60 | 115/230 6.6/3.3 |
| FTR 3154-AS | 220/440 | 3 | 50/60 | 115/230 8.8/4.4 |
| FTR 3155-AS | 220/440 | 3 | 50/60 | 115/230 13/6.5 |
| FTR 3228-BS | 220/440 | 3 | 50/60 | 115/230 26/13 |

**Filtered and regulated equipment. *Filtered.



Federal

ENGINEERING & MANUFACTURING FACILITIES

THE SELENIUM RECTIFIER DIVISION

Offers Its Outstanding Engineering and Manufacturing Facilities to

GOVERNMENT CONTRACTORS

**Consult us for Aircraft,
Ground and Naval Requirements**

The Selenium Rectifier Division of Federal—the nation's headquarters for selenium rectifiers—is ready to serve you with start-to-finish production of power supplies, battery chargers, voltage regulators, engine starters, cathodic protection and other units—compact, rugged, quiet, dependable power equipments designed for any DC output.

Federal knows selenium rectifiers. Federal has unmatched power conversion experience . . . an experience backed by years of successfully meeting the rigid requirements of contracts for military equipments. And Federal has the capacity to deliver your orders—when you want them!

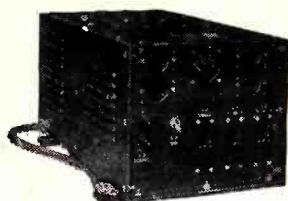
Mail us your specifications today!



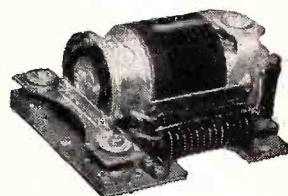
DUTY FEDERAL
A RECTIFIER



BS
POWER SUPPLY

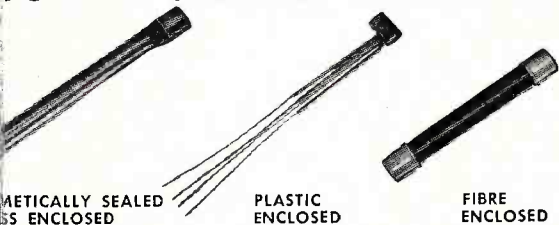


FTR 3414-AS GROUND
AIRCRAFT POWER SUPPLY



FTR 3141-CS CLIP-IN
VOLTAGE REGULATOR

VOLTAGE SELENIUM RECTIFIERS



HERMETICALLY SEALED
S ENCLOSED

PLASTIC
ENCLOSED

FIBRE
ENCLOSED

| Federal Code Number | DC Output Voltage | Max. Output MA-DC | Max. Peak Inverse Voltage | AC Input Voltage |
|---------------------|-------------------|-------------------|---------------------------|------------------|
| 147H110Q1 | 1400 | 8 | 4000 | 1400 |
| 147H 82Q1 | 1050 | 8 | 3000 | 1050 |
| 147H 55Q1 | 700 | 8 | 2000 | 700 |
| 147H 28Q1 | 350 | 8 | 1000 | 350 |

SELENIUM RECTIFIERS for Industrial Service From AC to DC . . . Milliwatts to Kilowatts

Low-cost power conversion . . . efficient, dependable . . . from a-c to d-c. Introducing new, broad range adaptability in diverse fields, conditions and applications. They obtain direct current from any alternating current source. They are small, light, easy to install. They meet all needs of an unattended service.



FOR COMPLETE DATA Write for Federal's Data Booklet on Selenium Rectifiers. An informative guide to characteristics and applications of the industry's most comprehensive line of high quality rectifiers. Address Dept. 913.



The FEDERAL System of ENCAPSULATION

Federal's method of encapsulating selenium rectifiers and allied components presents an entirely new approach to civilian and military equipment design — particularly where environmental or other unusual conditions necessitate special applications. It is now possible to encapsulate transformers, capacitors, resistors and other components—into single blocks of equipment. Such a method facilitates the replacement of individual as well as entire components without the necessity of time-consuming disassembly. Assures excellent thermal shock characteristics and resistance to vibration and cracking of the sealed unit over wide temperature ranges. Embedments withstand low temperatures to minus 100°C as well as high temperatures to plus 125°C. Send for F-534 for complete details.



FEDERAL CONTACT PROTECTOR



Federal's Contact Protectors are a sure way to longer life for relay contacts, eliminating circuit failure and interference caused by arcing.

1. Suppresses contact arcing
2. Extends Contact Life by more than 1000 times
3. Reduces circuit failure due to contact erosion (locking, surging, etc.)
4. Minimizes RF Interference
5. Has negligible effect on speed of operation of circuit
6. Needs no attention
7. Is easily installed
8. Requires little space
9. Is low in cost
10. Available as hermetically sealed unit to meet all JAN specifications.

Federal Telephone and Radio Company

A Division of INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

100 KINGSLAND ROAD, CLIFTON, N. J.

In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.



FEDERAL VARIETY OF CABLE TYPES

Federal's cable department produces a variety of H-F cable types. Some of these cables are produced by Federal exclusively. All are made to the most exacting standards of quality and control. The materials used

are the finest research has developed, assuring top electrical characteristics. Initial dimensional precision helps to maintain stability over a wide temperature range.



SOLID DIELECTRIC COAXIAL CABLES

consist of a solid or stranded inner conductor, dielectric material, one or two copper wire braids, a synthetic resin protective jacket and, in some cases, a protective armor or

metal braid. Dual coaxial cables are similar in design to the solid dielectric types, except that two accurately-spaced inner conductors are used.



LOW-CAPACITANCE COAXIAL AIR-SPACED CABLES

have a construction similar to that of the solid dielectric types, except that air is made a portion of the dielectric. One method of accomplishing this effect and still maintaining a high dielectric strength is through a con-

struction involving an inner conductor in a thin-walled dielectric tube. This is achieved by means of a dielectric thread wound in a long spiral.



SPIRAL DELAY, HIGH IMPEDANCE LINES

There are four types available with delays of 1 microsecond per foot; .2 microsecond per foot; .1 microsecond per foot and .042 micro-

second per foot. 1 microsecond per foot delay line is ideal for color TV use.

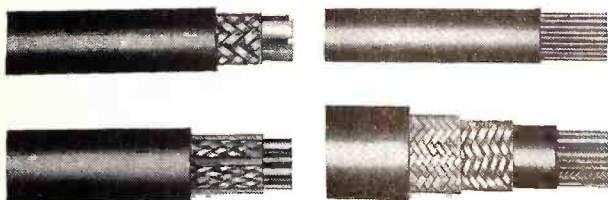


TELEVISION ANTENNA LEAD-IN WIRE

consists of two accurately-spaced conductors over which is extruded the dielectric material. These lead-in wires have no braid, jacket or armor except in special cases. The advances

in television have meant ever-new approaches to the design of TV lead-in to the point where it has taken many varied forms, the latest being the tubular shaped "pipeline" lead-in

SPECIAL CABLE PROBLEMS



Federal Telephone and Radio Corp. maintains a stock of most of the required types. When requirements are so special that they cannot be met by Federal's cable types, Federal research and engineering facilities are readily available to develop any new cable constructions. Charges are based on quantity. Special Orders — like all Federal production — are executed under the high standards maintained by Federal "Quality Control." Every length of cable is carefully checked to see that it meets all tests indicated for the type ordered. Toughness, heat resistance, moisture resistance, dielectric strength, cold-bend — these are just a few of the many tests that must be passed before approval for shipment is given. Federal's consulting service is yours for the asking.

Federal also manufactures many types of plastic-insulated wires and multi-conductor cables for television, intercom and numerous special purposes.

COMMUNITY TV COAXIAL CABLE

FEDERAL'S "BIG 5"—The answer to any Community TV lead-in problem... Engineered for long life, low line loss and **DEPENDABLE** all-weather signal transmission... over the longest link. Federal's K-14, RG-11/U and RG-59/U are the H-F coaxials you can specify with utmost confidence... for community TV Distributing Systems in any area... for any amplifier system used.

Wherever the annoying, profit-eating problems of signal leakage and revenue loss exist, the answer is Federal's new K-125 and K-126 non-radiating alternates for RG-11/U and RG-59/U—used in conjunction with Federal's K-14—the primary lead-ins famous for lowest line loss, low cable runs and fewer amplifiers required. Both K-125 and K-126 are double-shielded and double-jacketed.

All of the "BIG 5" are made to Federal's high standards of quality and that means *dependable, all-weather transmission performance!*

Principal characteristics of Federal's "BIG 5" of Community TV

| TYPE | ZO Impedance Ohms | Capacitance per ft. micro-micro farads | ATTENUATION DB per 100 Feet | | | | Jacket OD Mills (Max.) | Weight per 1000 Ft. (lb.) |
|---------|-------------------|--|-----------------------------|-------|-------|-------|------------------------|---------------------------|
| | | | 50Mc | 100Mc | 200Mc | 400Mc | | |
| K-14 | 71 | 21.5 | .57 | 0.70 | 1.42 | 2.3 | 885 | 392 |
| RG-11/U | 75 | 20.5 | 1.5 | 2.15 | 3.2 | 4.7 | 415 | 89 |
| RG-59/U | 73 | 21 | 2.7 | 4.0 | 5.7 | 8.5 | 250 | 36 |
| K-125 | 75 | 20.5 | 1.5 | 2.15 | 3.2 | 4.7 | 470 | 127 |
| K-126 | 73 | 21 | 2.7 | 4.0 | 5.7 | 8.5 | 325 | 79 |

COMPLETE COAXIAL CABLE ASSEMBLIES

also are available from Federal to meet your requirements. This service offers the same "Precision Production" that made Federal the outstanding name in coaxial cables.



Federal Telephone and Radio Company

A Division of INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

100 KINGSLAND ROAD, CLIFTON, N. J.

In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.

Federal

HIGH-FREQUENCY CABLES

It's **Federal** for . . . EVERY H-F TRANSMISSION LINE REQUIREMENT

| Type | Low Temp. Black Jacket Δ | ZO Impedance Ohms | Nominal Capacitance Per Foot | Nominal Attenuation 100 Mc. Db/100 Ft. | Inner Conductor Strands | Braid + | Jacket X |
|-------------|-----------------------------|----------------------|---------------------------------|--|-------------------------|-----------|----------|
| | | | Micro-Micro Farads | | | | |
| RG-5B/U | 50 | 28.5 | 2.4 | S1 | C260 | V335 | |
| RG-6A/U | 76 | 20 | 2.8 | CW1 | S264 | NCV339 | |
| RG-8A/U | 52 | 29.5 | 2.1 | C7/#21 | C304 | V379 | |
| RG-9B/U | 51 | 30 | 2.3 | S7/#21 | (2)S355 | NCV430 | |
| RG-10A/U†† | 52 | 29.5 | 2.1 | C7/#21 | C340 | V415 | |
| RG-11A/U | 75 | 20.5 | 2.1 | T7/#26 | C340 | NCV475 | |
| RG-12A/U†† | 75 | 20.5 | 2.1 | T7/#26 | C340 | NCV475 | |
| RG-13A/U | 74 | 20.5 | 2.1 | T7/#26 | C355 | V430 | |
| RG-14A/U | 52 | 29.5 | 1.4 | C1 | C463 | NCV558 | |
| RG-17A/U | 52 | 29.5 | .85 | CW1 | (2)C463 | V558 | |
| RG-18A/U†† | 52 | 29.5 | .85 | C1 | C760 | NCV885 | |
| RG-19A/U | 52 | 29.5 | .68 | C1 | C760 | NCV945 | |
| RG-20A/U†† | 52 | 29.5 | .68 | C1 | C990 | NCV1135 | |
| RG-21A/U | 53 | 29 | 14.0 | Res. wire | C990 | NCV1195 | |
| RG-22B/U | 95 | 16 | 4.0 | *C7/0.0152" | (2)S264 | NCV339 | |
| RG-23A/U | 125 | 12 | 1.7 | *C7/#21 | (2)T355 | NCV430 | |
| RG-34A/U | 53.5 | 28.5 | 4.2 | *C7/#21 | C845x446 | V960x670 | |
| RG-35A/U†† | 71 | 21.5 | 1.8 | C1 | C845x446 | 1034x735 | |
| RG-57A/U | 58 | 26.5 | 3.1 | C7/0.0152" | C150 | PE184 | |
| RG-58B/U | 53.5 | 28.5 | 4.2 | C1 | C150 | PE184 | |
| RG-58C/U | 50 | 28.5 | 5.3 | T19/0.0071" | C540 | V640 | |
| RG-59A/U | 73 | 21 | 3.8 | CW1 | C760 | NCV945 | |
| RG-62A/U | 93 | 13.5 | 3.1 | CW1 | T220 | PE250 | |
| RG-63B/U | 125 | 10 | 2.0 | CW1 | T176 | PE206 | |
| RG-65A/U | 950 | 44 | 3.0 | *C7/#21 | T540 | V640 | |
| RG-74A/U†† | 93 | 13.5 | 3.1 | CW1 | T150 | V200 | |
| RG-108A/U | 76 | 24.5 | 4.0 | *T7/#28 | C191 | V250 | |
| RG-111A/U†† | 95 | 16 | 4.0 | *C7/0.0152" | C191 | V250 | |
| RG-112A/U | 71 | 21.5 | .70 | C1 | C340 | V415 | |
| RG-113A/U | 72 | 22 | 4.0 | C7/#30 | C340 | V415 | |
| RG-114A/U | 72 | 22 | 6.1 | *C7/#28 | C340 | NCV615 | |
| RG-115A/U | 160 | 8.3 | 8.0 | B1 | C340 | V475 | |
| RG-116A/U | 300 | 4.2 | 3.4 | *B1 | C340 | NCV475 | |
| RG-117A/U | 34 | 39 | 4.5 | T41/#34 | PE665x300 | PE665x300 | |
| RG-118A/U | 200 | 7.8 | .56 | *C7/#21 | T177 | NCV240 | |
| RG-119A/U | 71 | 21.5 | .70 | C1 | T355 | NCV490 | |
| RG-120A/U | 72 | 22 | 4.0 | C7/#30 | C760 | NCV885 | |
| RG-121A/U | 72 | 22 | 6.1 | *C7/#28 | C195 | V250 | |
| RG-122A/U | 160 | 8.3 | 8.0 | B1 | C191 | NCV250 | |
| RG-123A/U | 300 | 4.2 | 3.4 | *B1 | T232 | V282 | |
| RG-124A/U | 34 | 39 | 4.5 | T41/#34 | C435x235 | V490x290 | |
| RG-125A/U | 200 | 7.8 | .56 | *C7/#21 | C150 | V200 | |
| RG-126A/U | 71 | 21.5 | .70 | C1 | PE665x300 | PE665x300 | |

An Original Development
by Federal

RG TYPE CABLES

WITH THE NEW
LOW-TEMPERATURE
NON-CONTAMINATING
THERMOPLASTIC JACKET

Federal is supplying low temperature non-contaminating jackets on all cable types which now call for it and will also supply such compounds for specific cables to meet customers' requirements. The low temperature, non-contaminating jacket was an original Federal development.

The new RG types are outstanding for their longer service life under the most adverse conditions. Their non-contaminating feature means there is no reduction in dielectric strength due to molecular migration.

New HR* WIRES

14 to 24 AWG

High impact strength, resists thermal shock. Impervious to the action of corrosive chemicals and highly resistant to most organic solvents. Water absorption is nil therefore the corona formations and surface flash-over are minimized. Low cold flow. Covers a wide temperature range (-55°C-150°C) to cover any application for hook-up wire. Also can be used at lower temperatures and higher temperatures for short periods.

TEFLON INSULATED WIRE and CABLES

Your inquiries are invited on these new Federal wires and cables.

*Heat Resistant



Copper, T—Tinned Copper, S—Silver Plate Copper, B—Bronze, OD in mils (max.)
Vinyl, PE—Polyethylene, NCV—Non-contaminating Vinyl, OD in mils (max.)
Information in column to right under RG Type Cables.
Braid (Jacket dimension given is over armor)
Inner conductors.
*Conductor Strands column indicates material by same abbreviations as +
copperweld.

FOR COMPLETE DATA

Write for Federal's Catalog on HF Cables. An informative guide to characteristics and applications of the industry's most comprehensive line of high quality HF Cables. Address Dept. 913.

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100 KINGSLAND ROAD, CLIFTON, N. J.

In Canada: Federal Electric Manufacturing Company, Ltd., Montreal, P. Q.
Export Distributors: International Standard Electric Corp., 67 Broad St., N. Y.





P. Roy Marshall of the Bendix Aviation Corporation says:

“We save more than the cost of a mold on every run... thanks to Plaskon[®] Alkyd”

“As compared to the expense of fabricating commutators and other complex parts from sheet stock, we save many times the cost of the mold on every run by using PLASKON Alkyd reinforced with glass fibers.”

So successful has been Bendix aviation experience with Alkyd, that they are using it for 24 critical parts in which lack of strength and dimensional stability would be disastrous.

And other electronic manufacturers, with increasing frequency, are turning to PLASKON Reinforced Alkyd for molding intricate parts that previously had to be made by costly, multiple-assembly operations.

They are discovering that PLASKON Alkyds save

them time and money, and that, because of the superior strength and electrical qualities of Alkyd, better products can be made.

Other PLASKON Alkyds include granular and putty type compounds. Like Reinforced Alkyds, these have the excellent electrical properties, dimensional stability and molding characteristics that help solve many production headaches in jobs for which they are specified.

Why not find out what PLASKON products can do for you? Our technical staff is ready at all times to discuss your problems, help you find the right material for your needs. Write today or call your nearest PLASKON Man. He'll be glad to assist you without obligation.

advantages for the electronics industry

with **PLASKON**® reinforced ALKYD

Elimination of costly fabrication reduces production costs

Provides solid mounting for inserts

High dielectric strength

Superior arc resistance

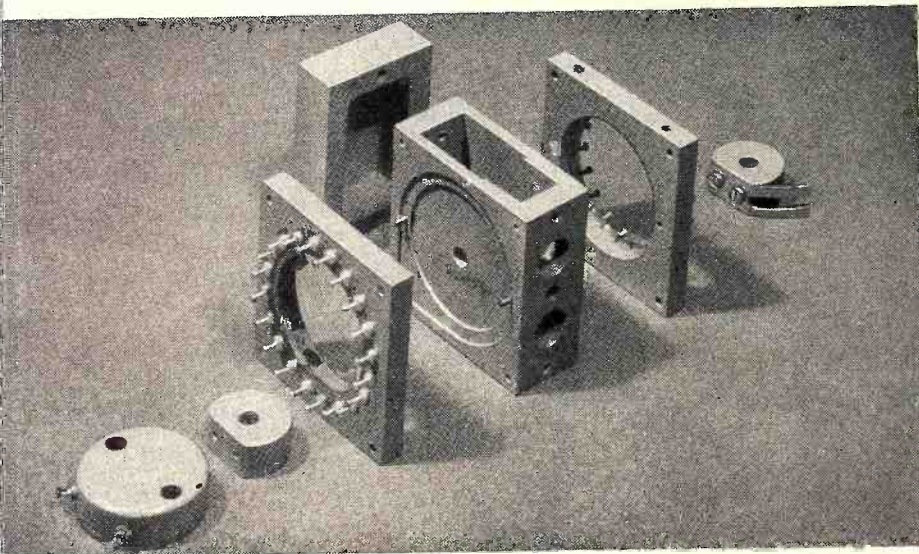
5. Extreme dimensional stability

6. Great impact strength and shock resistance

7. Resistance to heat and fire


8. Can be molded to extremely close tolerances

9. Outstanding structural strength



Dimensional stability of Plaskon Reinforced Alkyd allows close-tolerance molding of this disassembled commutator. Excellent bonding with metal saves cost on expensive metal inserts. Strength of material allows molding of thin sections. Most important, PLASKON Reinforced Alkyd saves money by cutting down rejects. Pieces shown are molded by Bridges Plastic Products, Inc. (Los Angeles).

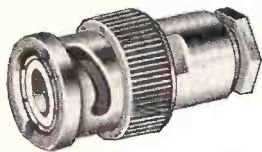


For further information on PLASKON plastics and resins address BARRETT DIVISION, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, New York. Whitehall 4-0800. 



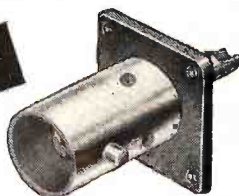
Connector Specialists!

DAGE HAS FACILITIES FOR PRODUCING YOUR CONNECTOR NEEDS IN QUANTITY—QUICKLY

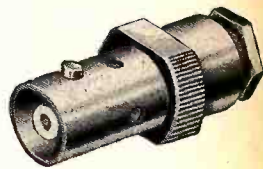


UG-88B/U

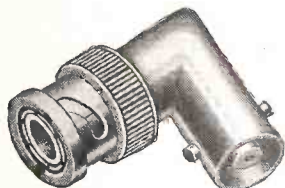
TYPE BNC



UG-290/U



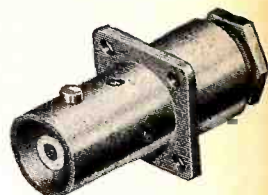
UG-89 /U



UG-306/U



UG-657/U

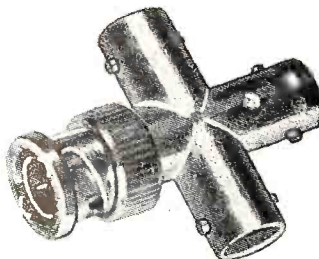


UG-262/U

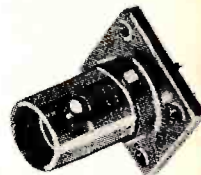
IMPROVED BNC's



UG-260B/U



A-101-106



UG-290A/U

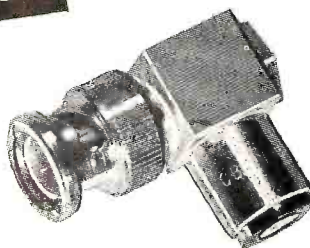


UG-89B/U

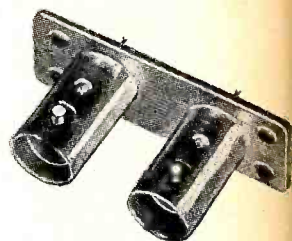


UG-641/U

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CBSN-863



A-CBSN-381-360

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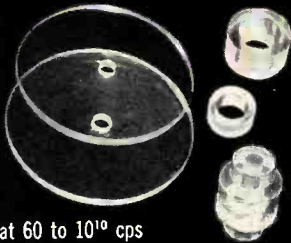
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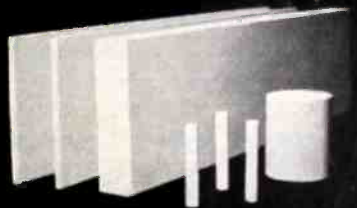
| | |
|--------------------------------|---------------------------------|
| Dissipation Factor below .0005 | } at 60 to 10 ¹⁰ cps |
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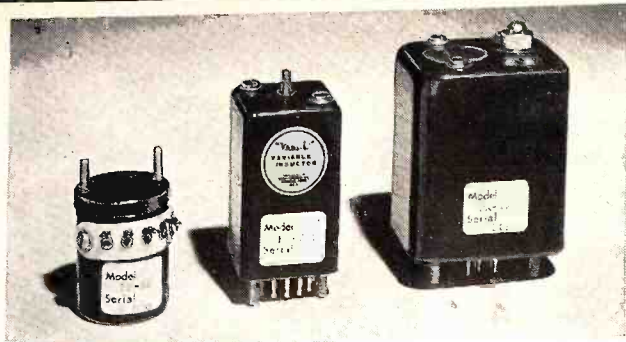
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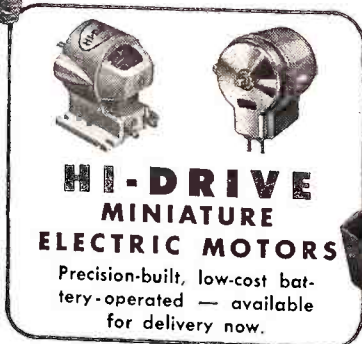
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Immediately following the Product Listings in the

DIRECTORY SECTION

of this Issue is a list of more than

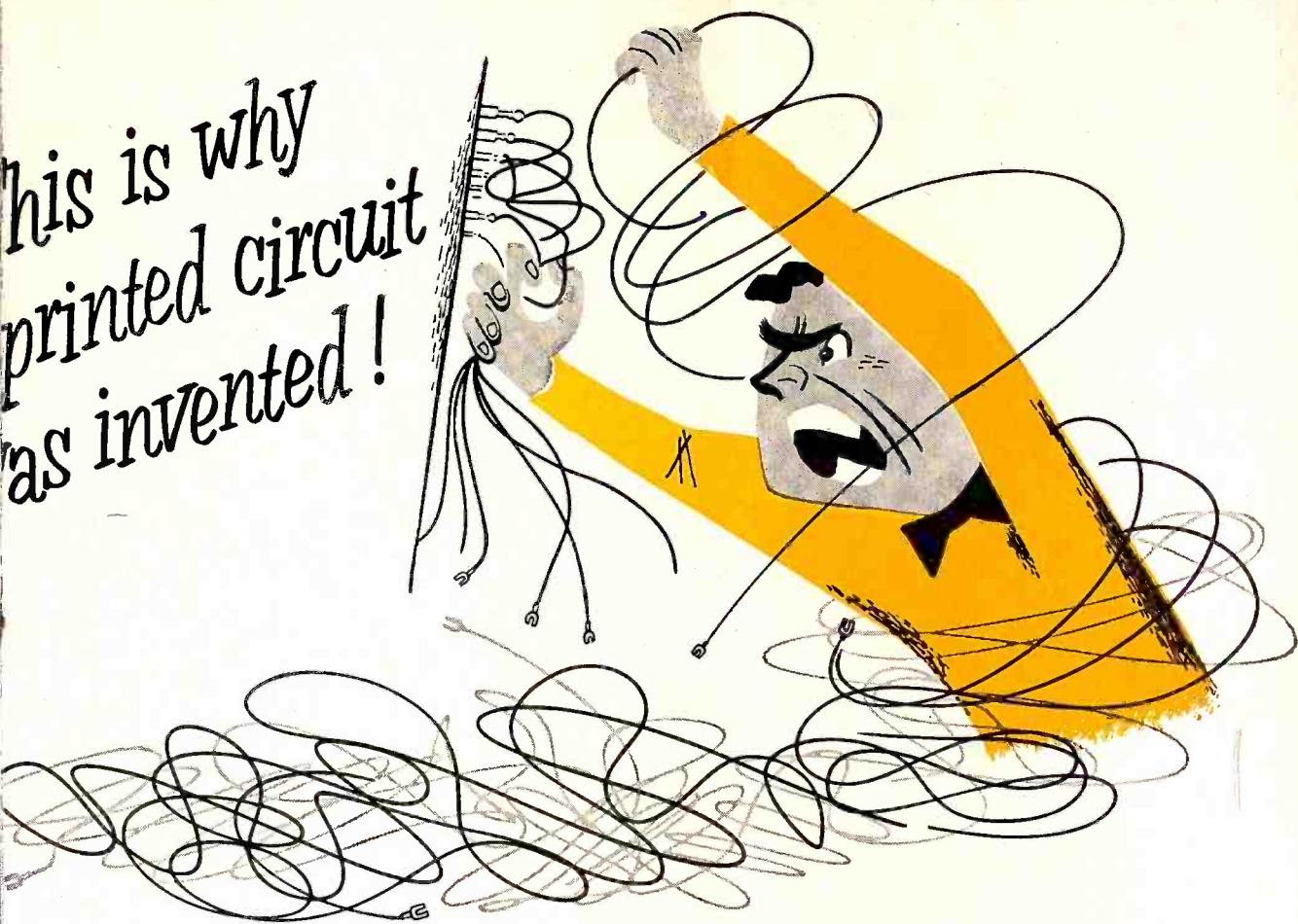
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No. 84 Winding Machine

| Model | Wire Range | Max. Dia. | Traverse | RPM | Coils at Once | HP | Floor Space |
|-------|------------|-----------|--------------|---------|---------------|-----|-------------|
| 84 | #19-42 | 5" | 1/32"-1 1/2" | 400-750 | 1, 2, 3 or 4 | 1/4 | 26" x 31" |

"Gainer mechanism" and calibrated "strap-type" tensions insure accurate, uniform winding, also quick change-over. Simple design, rugged construction assure long life.

LAYER-WOUND COILS

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Nos. 96 and 103 Winding Machines

| Model | Wire Range | Max. Dia. | Traverse | RPM | Coils at Once | HP | Floor Space |
|-------|------------|-----------|--------------|----------|---------------|-----|-------------|
| 96 | #19 to 46 | 6" | 1/16"-3 1/4" | 500-1800 | 1 or 2 | 1/4 | 30" x 26" |
| 103 | #19-38, 46 | 7" | 1/2"-8" | 200-1200 | 1 or 2 | 1/2 | 40" x 36" |

Wire and cotton mechanically guided. Automatic counter. Quick change-over. Adjustable for wide range of coil sizes.

GUTTER-WOUND COILS

for Heavy Duty



No. 98 Winding Machine

| Model | Wire Range | Max. Dia. | Traverse | RPM | Coils at Once | HP | Floor Space |
|-------|------------|-----------|----------|--------|---------------|-----|--------------|
| 98 | #8-20, 30 | 1 1/2" | 1/4"-12" | 35-135 | 1 or 2 | 3/4 | 4'9" x 3'10" |

Automatic guiding. Wire turns placed in grooves formed by preceding layers—for maximum density. Automatic stop at end of coil or end of each layer, as required.

SPOOL-WOUND COILS

No Insulation Between Layers



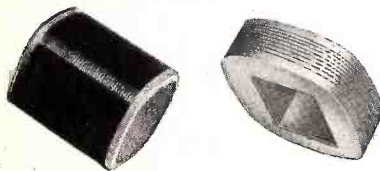
No. 102 High Speed Winding Machine

| Model | Wire Range | Max. Dia. | Traverse | RPM | Coils at Once | HP | Floor Space |
|-------|------------|-----------|--------------|----------|---------------|-----|------------------------|
| 102 | #20-44 | 3 1/4" | 1/16"-2 7/8" | 500-4700 | 1 Per Head | 1/2 | 51" x 24" (3 heads) |

Standard machine, 3 individually operated winding heads. Output is synchronized on basis of handling time per coil. Wire-layer length quickly adjusted. Automatic stop.

PAPER-INSULATED COILS

In Stick Form



Nos. 104 and 107 (Automatic Feed) Winding Machines

| Model | Wire Range | Max. Dia. | Traverse | RPM | Coils at Once | HP | Floor Space |
|-------|------------|-----------|----------|--------|---------------|-----|-------------|
| 104 | #19-42 | 4 1/2" | 1/16"-5" | 0-2500 | 3 to 14 | 1/2 | 48" x 35" |
| 107 | #19-42 | 4 1/2" | 1/16"-5" | 0-2500 | 4-30 | 1 | 76" x 42" |

Coils wound in stick form—3 to 14 on No. 104; 4 to 30 on No. 107. Sensitive "strap-type" tensions insure smooth flow of finest wires. Paper or acetate sheet automatically inserted. Uniform overlap at all diameters. Adjustable traverse mechanism. Automatic stop. Rapid transfer of wire turns.

PAPER-INSULATED COILS

Hand-feed



No. 108 Stick Winder — modern - - - flexible

| Model | Wire Range | Max. Dia. | Traverse | RPM | Coils at Once | HP | Floor Space |
|-------|------------|-----------|----------|----------|---------------|-----|-------------|
| 108 | #20-42 | 5" | 5/16"-4" | 325-2300 | 4 to 30 | 1/2 | 72" x 36" |

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Type MC



Type TM

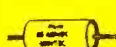


Type DO



Type 85LPT

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Type PG
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Type CT

CP04, TOCP11



Type PTIM,
CP 25



"IMP" Molded



Type PDM,
CP 53



Type PEM,
CP 67, CP 69



Type PKM,
CP61 to CP65



Type PLMF,
CP70



Type PI,
CP70

METALLIZED PAPER



Type MT



Type MPD



Type MPT



Type MPG

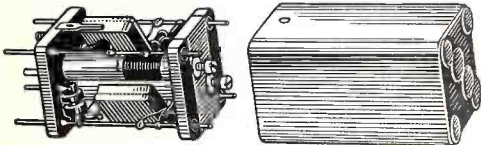
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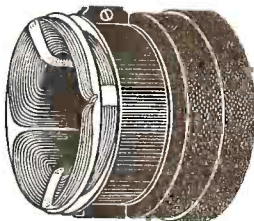
DELAY LINES



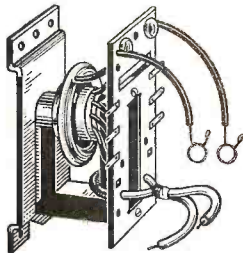
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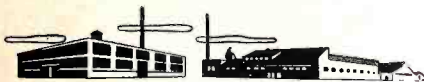
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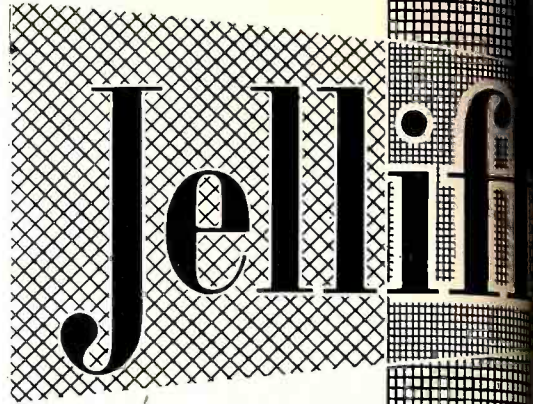


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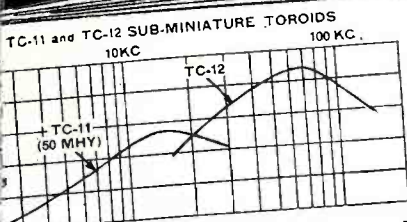
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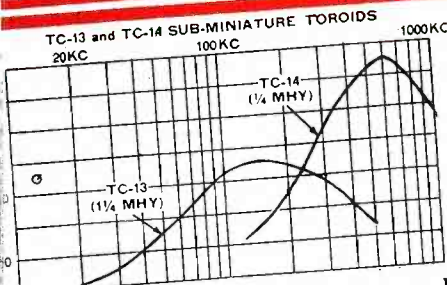


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TC-14 Recommended for 200KC to 1 megacycle. This is best employed at inductances less than 1MHY.

MINIATURE TELEMETERING FILTERS

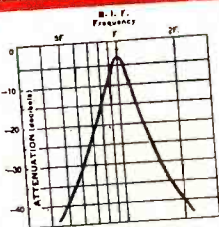
In view of the large number of filters that are employed in telemetering equipment, the size of the filters is a major contributing factor to the size of the equipment. As the approximate volume of a set of twenty standard telemetering band pass filters is 1500 cubic inches, even for ground based equipment this bulk can be objectionable. This is particularly true of mobile station. Our cognizance of this led to the development of a series of miniaturized filters that necessitates practically no sacrifice of desired attenuation characteristics.

The tremendous advantage of these new filters can be seen from the fact that a set of the same twenty filters would have a volume of less than 300 cubic inches representing a reduction by volume of 80%. Every telemetering filter now being supplied in the standard case is also available in the new miniaturized version.

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These are economical band pass filters designed to operate either from a triode plate or cathode follower to the grid of a tube. A voltage gain of ten or more can be provided depending upon the desired band width. Range of center frequencies available lies between 60 cycles and 50,000 cycles.

Base dimensions: 1-3/16 x 1-11/16

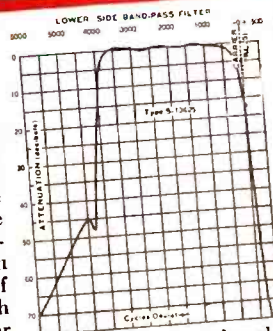


WE ARE PROUD OF OUR RECORD AS A MOST PROGRESSIVE FIRM IN THE ENGINEERING AND MANUFACTURING OF FILTER NETWORKS AND RELATED COMPONENTS. ENGINEERS AND ENGINEERING BUYERS AUTOMATICALLY THINK OF "BURNELL" IN RELATION TO FILTER DESIGN PROBLEMS AS WELL AS PRODUCTION REQUIREMENTS FOR FILTERS OR TOROIDS.

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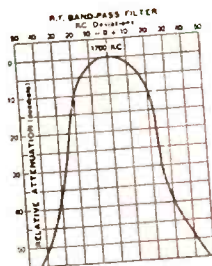
LOWER SIDE BAND FILTERS

Shortly after these side band filters were introduced to the communications industry by Burnell & Company, a new interest in side band reception arose. Although other types of side band filters have been manufactured for some time, their use was limited because of extremely high cost, limited availability, and excessive volume. In attempting to overcome all of these disadvantages, our engineering staff concentrated on the development of a set of filters which would employ high quality toroids instead of crystal elements previously employed in such filters. As the effectiveness of a side band filter depends primarily upon how close the cut off frequency can be placed to the carrier frequency (and still provide sufficient attenuation) it was necessary first to determine the optimum carrier frequency at which the high Q of the toroids could permit a sharp enough rate of cut off and high enough attenuation to the opposite side band. It was for this reason that a choice of the 25kc carrier was made.



R. F. BAND PASS FILTERS

Until quite recently toroidal band pass filters were not too practicable at frequencies beyond the I. F. range. However, since developing toroids with much higher Q at radio frequencies than hitherto obtainable, we have extended the range of our filters to as high as two and three megacycles. A number of these attenuation filters have been able to replace types formerly employing expensive crystal elements. An additional important factor is the great reduction in size over R. F. filters, usually constructed with air core or "iron slug" coils.



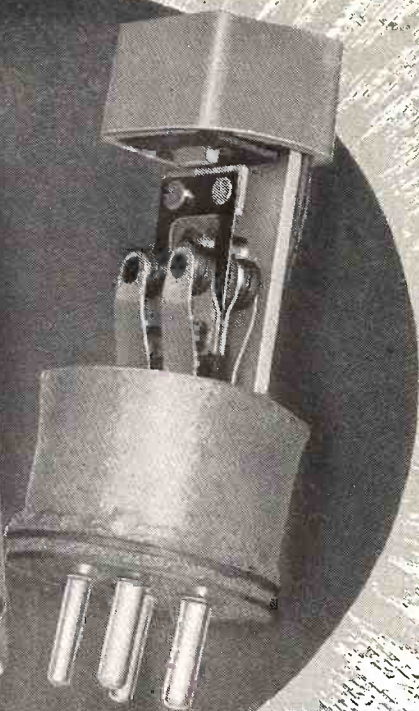
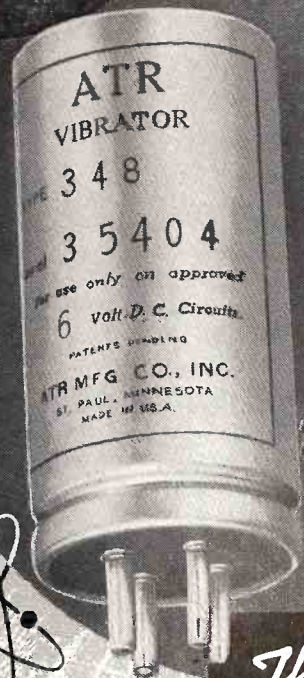
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ABC NUCLEONICS ABP

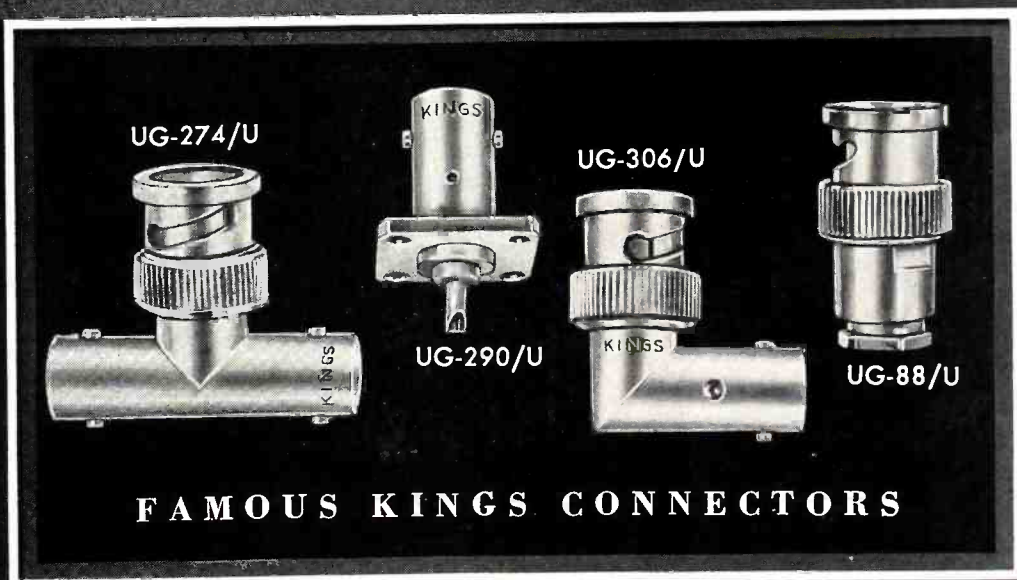
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330 West 42nd St., New York 36, N. Y.

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FERDINAND V, 1452-1516, was the Spanish King of Castile and Leon. As Ferdinand II he was also King of Aragon. His policies, though severe, founded Spain's imperial greatness. He married Isabella of Castile. King Ferdinand is best-known to Americans because he and the Queen aided Christopher Columbus in his famed voyages of discovery.



In the field of electronics, industries all over America have discovered that they can always depend upon Kings Connectors for both standard and special applications. Because of the highest standards of manufacture, plus long experience, the Kings organization can meet your own specific connector requirements, whatever they may be. You'll be glad you called on Kings first.

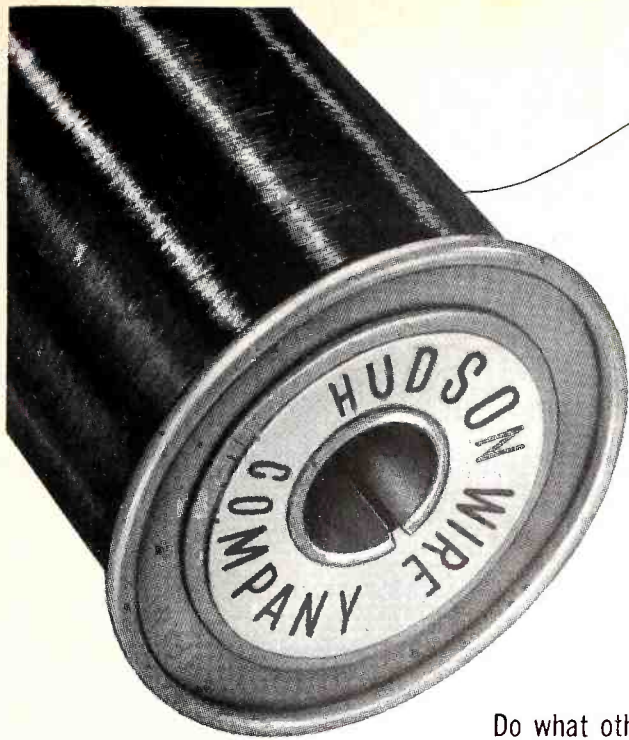


FAMOUS KINGS CONNECTORS

BNC SERIES



KINGS *Electronics* CO., INC.
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made finer

Do what other electronic and electrical manufacturers have done for years: Turn your fine-wire problems and requirements over to Hudson Wire. You will be served promptly, satisfactorily, economically, by craftsmen backed by over 50 years of fine-wire specialization.

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| Zinc | Stainless Steel |
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| Silver-plated Coppers, Brasses, Bronzes | Aluminum and Silver-Plated |
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Ossining, N. Y.

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Available on bare or enameled wire, single- or double-coated

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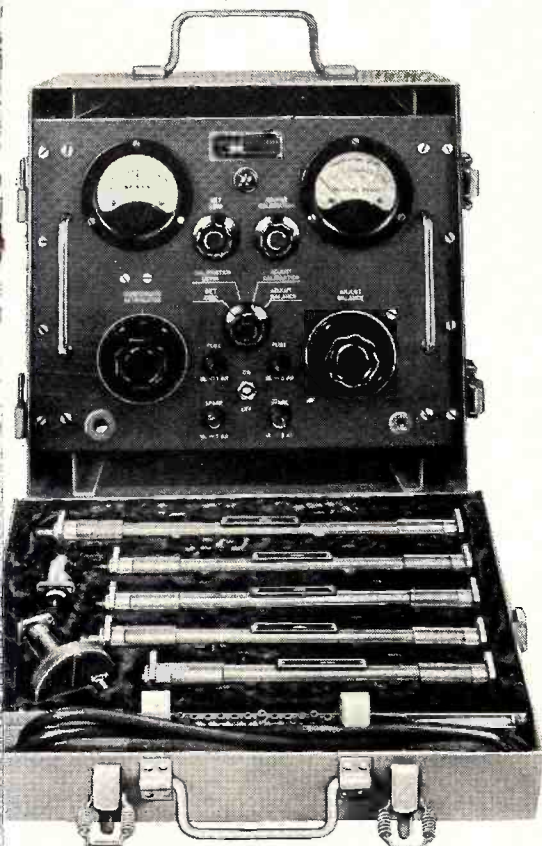
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Voltage Range: 0-100 Volts DC
Resolution: At least 50 microvolts between 0 and 1 volt
50 microvolts between 1 and 10 volts
5 millivolts between 10 and 100 volts

Absolute Accuracy: \pm 0.1% of reading
Input Impedance: Infinite at null

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Voltage Range: 0-600 Volts DC
Resolution: At least 5 millivolts between 0 and 10 volts
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STACKPOLE



FIXED RESISTORS

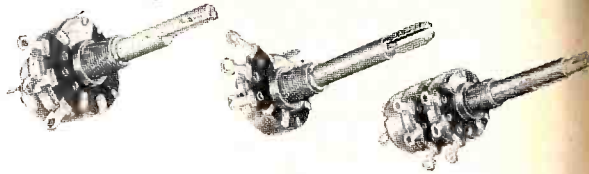
JAN-R-11 TYPES

Styles
RC10, RC20,
RC21, RC30,
RC31, RC41,
and RC42.
Write for
Stackpole
Bulletin J-2.

1/2-, 1-, and 2-Watt Sizes in all RETMA Preferred Values

Fully insulated and moisture-protected by phenolic sleeves, Stackpole resistors are available in all standard and many special values for radio, television, military and commercial uses. In addition, Stackpole offers special resistors for automotive, lightning arrestor, capacitor discharge, surge and other uses.

Write for Stackpole Catalog RC-9.

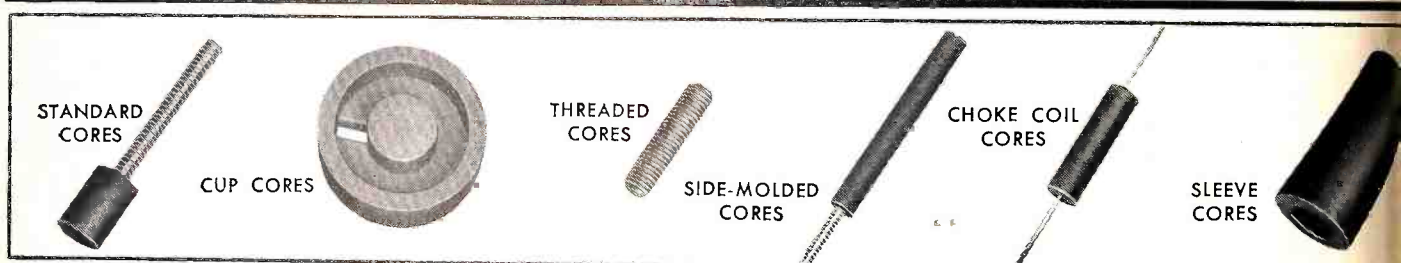


VARIABLE RESISTORS

VERSATILE SWITCHES

Small, reliable line switches are made in ratings and circuitry for every need including portable and auto radios.

Stackpole offers a dependable selection of volume and tone control potentiometers, etc. for radio, TV instruments, and other equipment. Single, ganged, and concentric designs are available in values from 500 ohms to 5 megohms and in ratings from .5 watt. Types range from the midjet LR control for TV the conservatively rated .6 watt Type LP for heavier duty wear. Special taps, extended bushings or other features can be supplied. Write for Catalog RC-9.



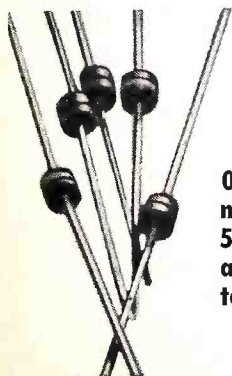
IRON CORE HEADQUARTERS

The widespread use of high Q coils with a consequent reduction in complicated circuitry has resulted in no small part from Stackpole engineering that has made new and better iron cores available at attractive prices. Stackpole production includes practically all types in common use — including cores for high- and low-fre-

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For all styles — standard or special — Stackpole manufacturing techniques assure iron cores of outstanding dependability and uniformity. Write for Catalog RC-9.

Fixed Composition CAPACITORS



47 TYPES

0.1 to 10.0
mmf. RETMA
5%, 10%,
and 20%
tolerances.

Type GA

Unmatched for low cost, high stability, and scarcely larger than 1/2-watt resistors, Stackpole "GA" capacitors are the most efficient way to couple or by-pass R-F circuits. Sturdily molded of high-dielectric constant material, these low-value capacitors have physical and electrical advantages that save assembly and testing time in virtually every R-F circuit. Write for Stackpole Catalog RC-9.

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for fast, low cost assembly

Inexpensive Stackpole molded coil forms permit smaller coils and pave the way for simplified point-to-point wiring with a minimum of soldered connections. Either axial or hairpin leads, securely anchored, are available. Types can also be supplied with iron core sections, thereby increasing Q materially, decreasing the amount of wire for a given inductance, and reducing stray magnetic fields. Write for details and samples to specifications.



STACKPOLE

Ceramag

THE REALLY UNIFORM FERROMAGNETIC CORES



**Lower Losses with Higher Efficiency . . .
Lighter Weight — Smaller Sizes
Much Higher Permeability**

Stackpole Ceramag Cores provide permeabilities of 10 to 1 or higher by comparison with iron cores. In addition, they have less corona and operate much cooler due to eddy current losses from their high resistivity.

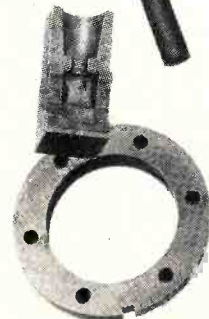
Remarkable uniformity of Ceramag Cores has long been the first choice of leading television producers. Typical applications include use as cores for flyback transformer, cathode ray tube deflection yokes, width control; low-voltage; I-F pulse and coupling transformers; and others where Ceramag offers distinct advantages. Both standard and special Ceramag grades are covered in RC-9A.



LOW COST SWITCHES for instruments, radios, appliances, and small motors and similar uses

Our product—add to its convenience and "saleability" sturdy, low-cost slide switches! Over 20 fractional and new 3 amp. types for fractional HP motors are available. Most types can be supplied with or without detent, ratchet, or other features to match your specifications. Modifications, including adaptations for rotary or other operation, can be produced economically. Write for new Switch Bulletin RC-9B.

CARBON & GRAPHITE SPECIALTIES

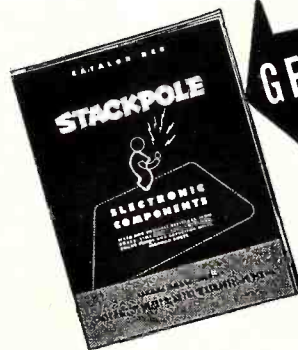
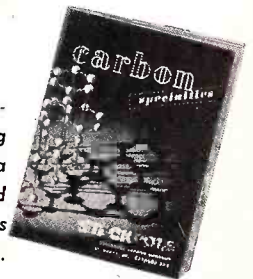


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Electronic Components Division

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For The
**ELECTRONIC
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THE MOST COMPLETE
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IN THE INDUSTRY!

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MAGNETIC IRON CORES**

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(iron and phenolic)
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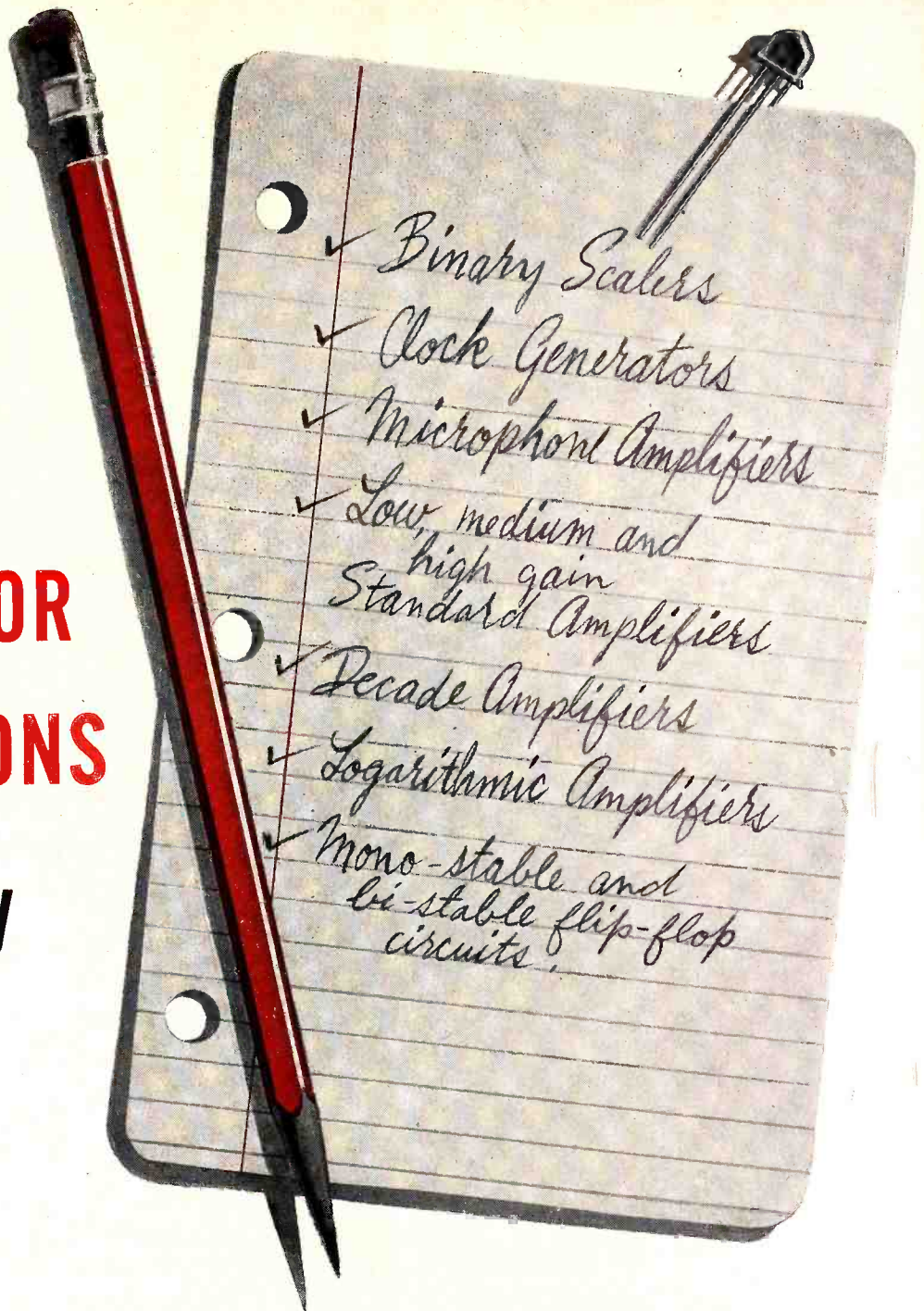
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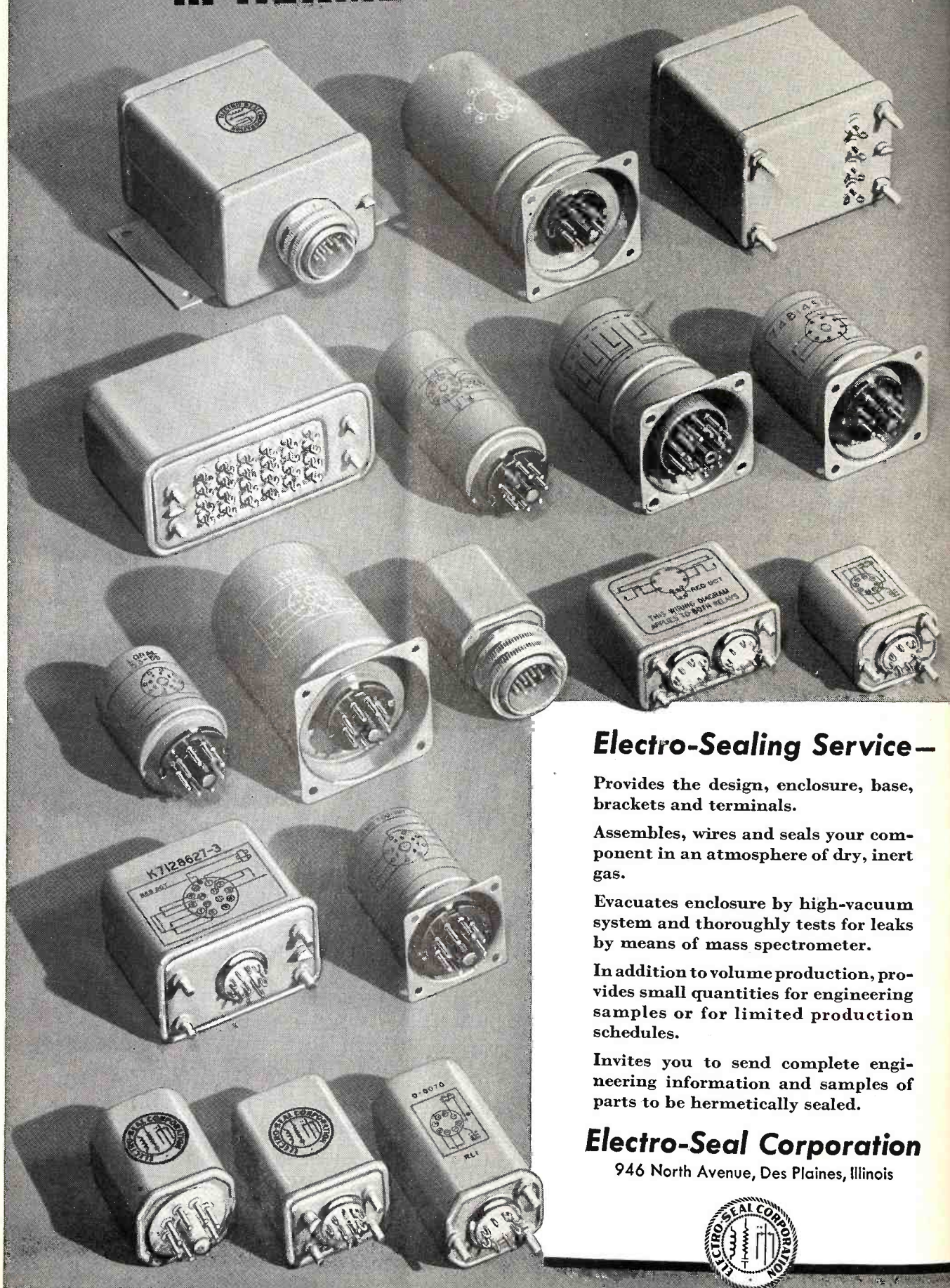
Is there an application here that is significant to your operation or product design? If so, our Transistor Application Engineers are ready to confer with you.

Hydro-Aire is manufacturing point-contact and junction Transistors to the very high standards of quality control for which all Hydro-Aire products have become famous. In addition, it is an essential part of the program to explore with energy and imagination the ever-widening field of new uses constantly opening up for Transistors. This is why it is in your interests to keep in touch with us, so that you will benefit from our work both in current applications and applications that will be developing in the coming months.

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ELECTRO-SEAL provides the utmost in HERMETIC SEALING SERVICE!



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Provides the design, enclosure, base, brackets and terminals.

Assembles, wires and seals your component in an atmosphere of dry, inert gas.

Evacuates enclosure by high-vacuum system and thoroughly tests for leaks by means of mass spectrometer.

In addition to volume production, provides small quantities for engineering samples or for limited production schedules.

Invites you to send complete engineering information and samples of parts to be hermetically sealed.

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New Taylor laminates are premium in everything but price

YOU'LL LIKE everything about this new family of Taylor paper-base laminates—including their price. They're a new kind of hot-punch laminate, uniform all the way through, with no surface overlay of resin.

In insulation resistance, water absorption, power factor, flame retardance and dimensional stability, they'll meet or exceed your strictest specifications. And they punch and stake so well . . . with smooth surfaces and clean edges . . . that you can produce complex parts with maximum utilization of each sheet.

Four different grades are available in production quantities, in standard sheet size of approximately 49" by 49":

XXXXP-301 . . . *the top grade laminate* with unusually high insulation resistance, lowest water absorption . . . excellent punching and staking.

XXP-351 . . . a high grade laminate with most of the properties of XXXP-301, at lower price.

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Taylor Fibre Co. Plants in Norristown, Pa.; and La Verne, Calif. *Branch offices in Atlanta; Boston; Chicago; Cleveland; Dayton; Detroit; Indianapolis; Los Angeles; Milwaukee; New York City; Philadelphia; Rochester; San Francisco; St. Louis; and Tolland, Connecticut. Distributors in Grand Prairie and Houston, Texas; Jacksonville, Florida; New Orleans, Louisiana; and Toronto, Ontario.*

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TAYLOR
Laminated Plastics
Vulcanized Fibre

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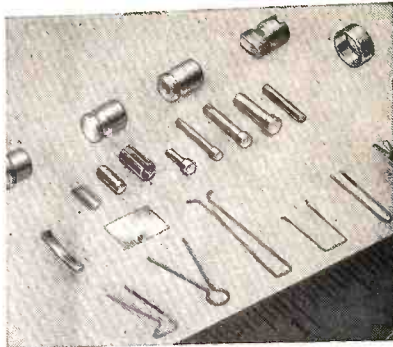


PRECIOUS METAL ALLOYS

For ELECTRICAL and ELECTRONIC APPLICATION

CONTACTS

CONTACTS, brushes, wipers, slip rings, commutator segments and similar components for electrical instruments and apparatus represent a field in which Ney Research has a long list of important accomplishments. Ney precious metal alloys specially developed for these applications are widely and very successfully used. And now enlarged manufacturing facilities have been added to meet the steadily increasing demand.



SLIP RINGS AND COMMUTATOR BARS



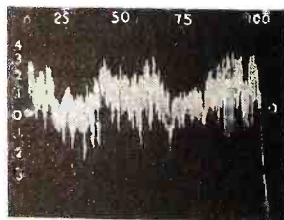
NEY #90 Alloy, overcomes many of the disadvantages of coin silver when used in slip ring and commutator bar applications. Actually a modification of coin silver, NEY #90 is subjected to a carefully controlled processing

that produces a uniform hardness of 120-130 Brinell which has been found best for slip ring type applications. Since performance is also markedly influenced by surface condition, especially when brush pressure must be low, NEY #90 Alloy rings are given a specially developed finish that greatly reduces wear and electrical noise. NEY #90 Alloy is available in seamless tubing in all sizes up to 4" O. D., also in the form of plate, rod, wire and fabricated parts.

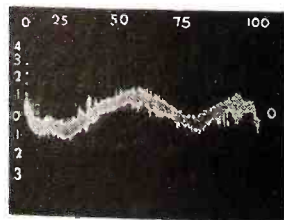
TEST RESULTS

Illustrations at right are typical test results of PALINEY* #7 . . . a Ney Precious Metal Alloy . . . being used for sliding contacts on nickel-chrome wire-wound potentiometers in comparison with phosphor bronze contacts. Figures show low initial error and maintained linearity of PALINEY* #7 performance. Condition of both contacts and windings after test indicate practically no wear.

Cathode Ray Oscillograph (Top Right) showing percentage error of standard potentiometer after one million cycles or two million sweeps of phosphor bronze contact over the wire. Initial linearity was $\pm .17\%$ and the error increased to $\pm 28\%$ plus noise.



(Bottom Right) Performance of standard potentiometer modified by substitution of PALINEY* #7 contact after one million cycles or two million sweeps over wire. The initial error was reduced to $\pm .12\%$ and this linearity was maintained throughout the test.



*Reg. T.M. of The J. M. NEY Co.

Write for your copy of Ney Data Book, "NEY PRECIOUS METALS FOR NON-CORROSIVE WEAR-RESISTANT PARTS." (Bulletin R-12) or Reprints of Technical Bulletins R-13 and R-14. Or call our Engineering Department outlining your needs.

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ML-200 Series

Crystals for color television are available to your specific calibration for either the ringing or oscillator circuit. This new design provides hermetic seal at an economical cost.

NOW IN PRODUCTION . . .

Newly-Designed CRYSTALS for COLOR TELEVISION

MIDLAND is ready now to supply you in quantity with color TV crystals to your exact specifications . . . and to advise with you on any phase of this subject.



MIDLAND MINIATURES

Midland has developed, and is expanding, a new series of crystal units which will comprise the MIDLAND MINIATURE line. Their small glass enclosures insure true hermetic seal and long-term stability.

Type ML-6 Range
1.0 mc.—100 mc. Supplied per mil Type CR-18, CR-19, CR-23, CR-27, CR-28, CR-32, CR-33, CR-35, CR-36, CR-48 when specified. Hermetically sealed metal holder with glass and metal base. Height of can is 3/4 in. Pins are .050" dia., spaced .486".

Type ML-6A
Identical to Type ML-6 except provided with .093" diameter pins.

Type ML-6S Range
5.0 mc.—100 mc. for those applications in which long-term stability is the paramount requisite.

Type ML-6W Range
3.0—15.0 mc. This unit is same as Type ML-6 except wire leads are provided, eliminating need for crystal socket.

Midland
PAY OFF IN PERFORMANCE

The quality of Midland Crystals—which is another way of saying the completely dependable job they will do for you—is assured by exacting tests and controls through every step of processing. The finest precision equipment and most advanced techniques known to the industry are used by Midland from selection of raw quartz to final sealing of the crystal.

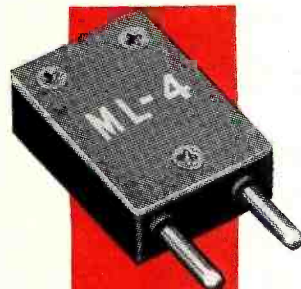
That's a big reason why Midland has climbed to its present position as the world's largest producer of quartz crystals for use in 2-way communications and other electronic devices.

Midland's engineering staff is ready to help in any project involving the use of crystals.

*Whatever your Crystal need, conventional or specialized
When it has to be exactly right, contact*

Midland
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3155 Fiberglas Road Kansas City, Kansas

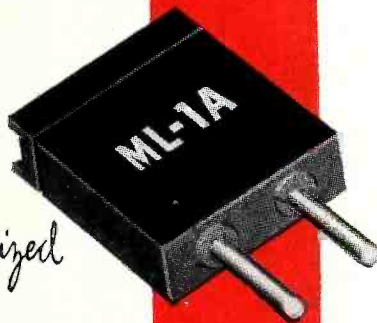
CRYSTALS



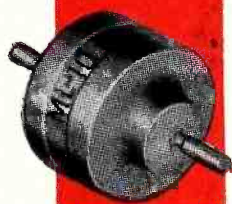
Type ML-4 Range
1.0 - 10.0 mc. Supplied per mil Type CR-5, CR-6, CR-8, CR-10 when specified. Holder is phenolic, gasket sealed. Holder size is 1 1/8 x 1 1/8 x 1 1/8 with .093" diameter pins 1/2" long spaced .486".



Type ML-13
Units of this type are currently undergoing tests on experimental basis. The unit is hermetically sealed. Pin dimensions are the same as our Type ML-6. Height of can is 1 1/2-inch.



Type ML-1A Range
2.0 - 15.0 mc. Supplied per mil Type CR-1A when specified. Holder is phenolic, gasket sealed. Holder size is 1 1/4" x 1 1/8" x 27/64" with .125" diameter pins 3/8" long, spaced at .500".



Type ML-10 Range
15.0 - 50.0 mc. Supplied per mil Type CR-24 when specified. Over-all length is 1.055". Pin contacts, .062" diameter.

ALLIED'S RELAY GUIDE

ADDITIONAL FEATURES

1. Available with Standard Ceramic Insulation.
2. Available with bakelite base and screw terminals.
3. Available hermetically sealed.
4. Available with auxiliary contacts.
5. Available for low capacity.
6. For intermittent operation only.
7. Available in double-break contact arrangement
8. Available with ceramic insulation only.
9. Listed by Underwriters Laboratories, Inc.
10. Designed to handle a maximum of 75 watts of radio frequency up to 150 megacycles when inserted in a properly terminated 52 ohm line.

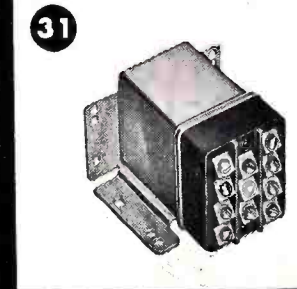
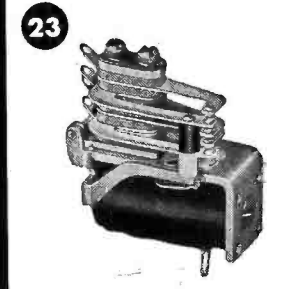
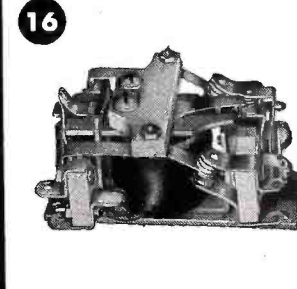
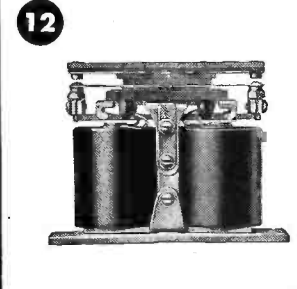
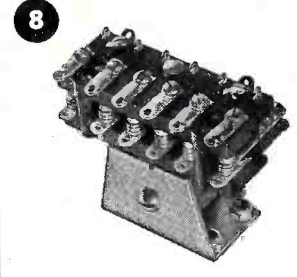
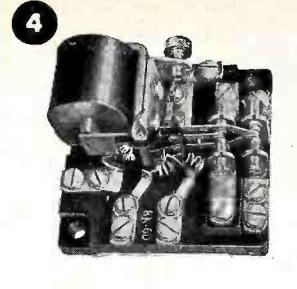
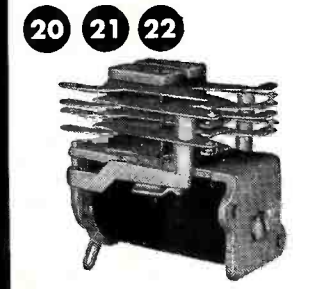
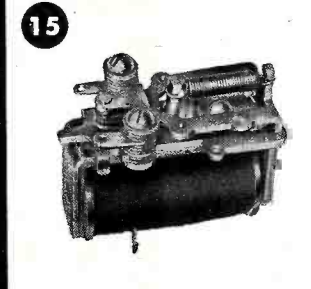
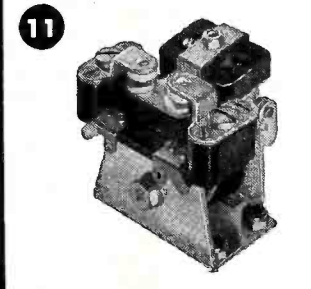
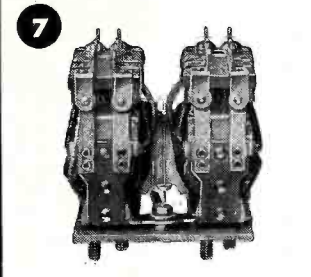
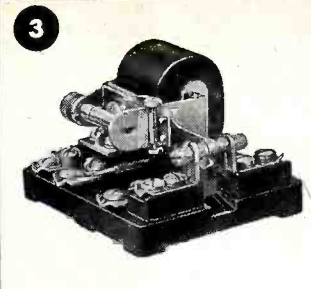
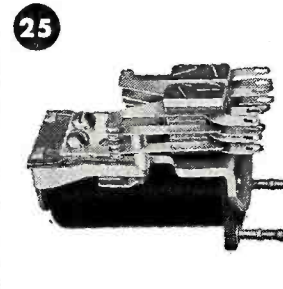
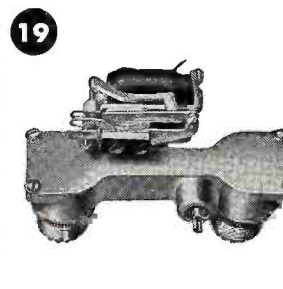
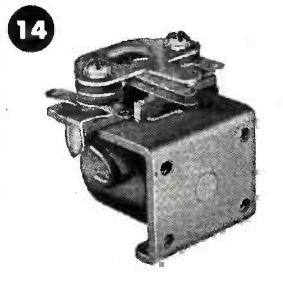
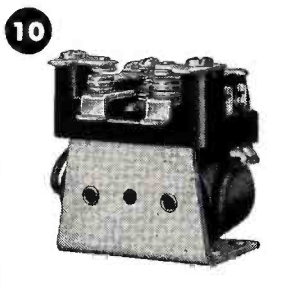
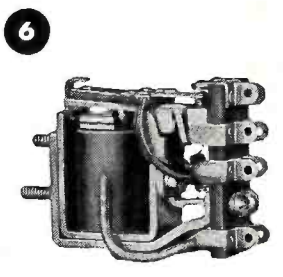
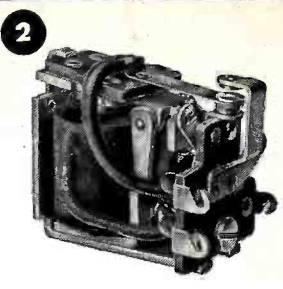
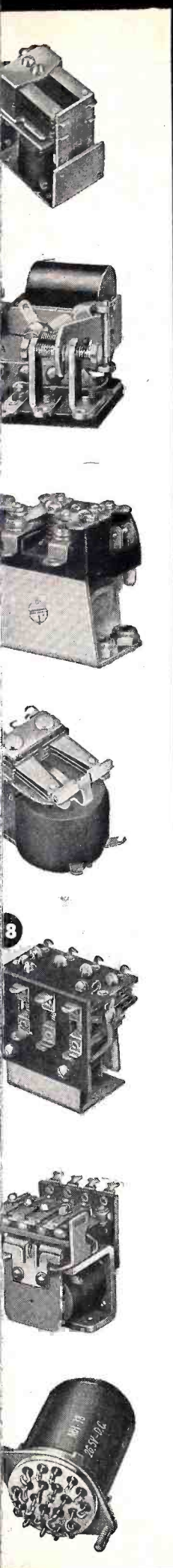
NOTE 1.
Minimum coil data applies where shock and vibration are not a factor.

| ALLIED TYPE | MAXIMUM CONTACT ARRANGEMENT | CONTACT RATING AT 24 V. DC AND 110 V. AC. | COIL OPERATION | COIL DATA IN VOLT-AMPERES OR WATTS A.C. DC. | | | MAX. RATED VOLTS OF STANDARD COILS | | MAX. RATED VOLTS OF STANDARD COILS | | DIMENSIONS | | | ADDITIONAL FEATURES AS NOTED AT FOOT |
|-------------|-----------------------------|---|----------------|---|--------------|---------|------------------------------------|-------|------------------------------------|--------------------|------------|-------|---------|--------------------------------------|
| | | | | MINIMUM | RATED | MAXIMUM | HEIGHT | WIDTH | LENGTH | WEIGHT IN OUNCES | | | | |
| | | | | | | | | | | | MINIMUM | RATED | MAXIMUM | |
| 1 | PK | 4.P.D.T. | 10 | AC 2.9 | 5.0 | 11.0 | 4000 | 220 | 2-1/8 | 1-1/8 | 2-1/16 | | | |
| | | | | DC 0.8 | 1.5 | 5.0 | 4500 | 110 | | | | | | |
| 2 | AS | S.P.D.T. | 5 | AC 2.5 | 3.5 | 5.0 | 3500 | 230 | 1-3/16 | 15/16 | 1-5/8 | | | |
| | | | | DC 0.5 | 1.0 | 4.6 | 3485 | 60 | | | | | | |
| 3 | B | S.P.D.T. | 1 | AC 0.09 | 0.12 | 9.5 | 12000 | 110 | 1-3/4 | 2-3/8 | 2-3/4 | | | |
| | | | | DC 0.009 | 0.012 | 4.9 | 12000 | 12 | | | | | | |
| 4 | BK | D.P.D.T. | 1 | AC .190 | .24 | 9.5 | 12000 | 150 | 1-21/32 | 2-5/8 | 2-5/8 | | | |
| | | | | DC .019 | .024 | 4.9 | 12000 | 18 | | | | | | |
| 5 | BG | S.P.D.T. | 2 | DC .011 | .05 | 4.8 | 5000 | 16 | 1-1/4 | 1-3/4 | 1-3/8 | | | |
| 6 | BJ | D.P.D.T. | 5 | AC 2.8 | 3.5 | 7.3 | 3700 | 230 | 1-9/16 | 7/8 | 2-11/32 | | | |
| | | | | DC 1.0 | 2.0 | 5.5 | 5000 | 115 | | | | | | |
| 7 | BJU | ELECT. LATCH 4.P.D.T. | 5 | AC 3.6 | 9.0 | | 3700 | 220 | 1-15/16 | 1-7/8 | 1-9/16 | | | |
| | | | | DC 2.8 | 3.5 | | 3700 | 110 | | | | | | |
| 8 | BN | 6.P.D.T. | 10 | DC 1.5 | 3.5 | 8.0 | 4460 | 125 | 2-9/16 | 3 | 1-23/32 | | | |
| 9 | BO | D.P.D.T. | 15 | AC 3.6 | 4.5 | 10.0 | 2675 | 250 | 1-15/16 | 1-1/2 | 1-5/8 | | | |
| | | | | DC 1.5 | 2.5 | 5.7 | 5000 | 112 | | | | | | |
| 10 | BOY | D.P.D.T. | 15 | DC .50 | .75 | 7.2 | 10000 | 87 | 1-15/16 | 1-1/2 | 1-5/8 | | | |
| 11 | CNA | S.P.S.T. N.O. OR N.C. | 50 | AC 7.2 | 10.5 | 14.0 | 600 | 230 | 2-1/2 | 2 | 2-1/4 | | | |
| | | | | DC 1.0 | 3.5 | 6.5 | 4460 | 125 | | | | | | |
| 12 | DS | DIFFERENTIAL D.P.D.T. | 5 | DC .04 | .05 | 5.0 | 8000 | 20 | 1-13/16 | 1-3/16 | 2-3/8 | | | |
| 13 | ME | D.P.D.T. | 5 | DC .2 | 1.25 | 3.5 | 2930 | 60 | 1-3/16 | 13/16 | 1-3/8 | | | |
| 14 | F | S.P.D.T. | 2 | DC .08 | .20 | 4.5 | 4900 | 16 | 1-1/2 | 1-3/16 | 1-3/8 | | | |
| 15 | SW | S.P.D.T. D.P.D.T. | 2.5 | DC .003 .012 | .012 .050 | 4.25 | 13800 | 230 | 1-7/16 | 1-1/16 | 1-19/32 | | | |
| 16 | HRX | 3.P.D.T. | 15 | DC 1.5 | 3.0 | 7.0 | 4420 | 115 | 1-1/2 | 2-11/16 | 1-5/8 | | | |
| 17 | PO | 3 & 4.P.D.T. | 15 | AC 8.0 | 10.5 | 17.2 | 870 | 230 | 2-1/4 | 3.P.D.T. 1-5/8 | 1-7/8 | | | |
| | | | | DC 1.0 | 2.5 | 8.2 | 5000 | 112 | | 4.P.D.T. 2-3/16 | 1-7/8 | | | |
| 18 | POY | 3 & 4.P.D.T. | 15 | DC 0.6 | 1.0 | 8.0 | 10000 | 110 | 2-1/4 | | | | | |
| 19 | RA | CO-AXIAL S.P.D.T. | 1.25 R.F. | DC 0.5 | 2.5 | 5.0 | 4100 | 110 | 2 | 2-7/8 | 1-3/4 | | | |
| 20 | SK-C-C | D.P.D.T. | 2 | DC .200 | 2.5 | 4.2 | 4500 | 110 | 1-5/16 | 31/32 | 1-9/16 | | | |
| 21 | SK-CC-C | 3.P.D.T. | 2 | DC .400 | 2.5 | 4.2 | 4500 | 110 | 1-1/2 | 31/32 | 1-9/16 | | | |
| 22 | SK-CC-CC | 4.P.D.T. | 2 | DC .600 | 2.5 | 4.2 | 4500 | 110 | 1-1/2 | 31/32 | 1-9/16 | | | |
| 23 | TSL | D.P.D.T. | 2 | DC 0.5 | 1.0 | 5.0 | 2000 | 55 | 1-9/16 | 1-3/16 | 1-1/16 | | | |
| 24 | PB | 4.P.D.T. | 10 | AC 3.0 | 6.0 | 8.5 | 380 | 115 | 1-13/16 | 1-7/16 | 1-1/2 | | | |
| | | | | DC 1.0 | 2.5 | 6.0 | 4800 | 110 | | | | | | |
| 25 | LK | 6.P.D.T. | 2 | DC .040 | .65 | 7.0 | 11000 | 110 | 1-5/8 | 1-3/32 | 2-7/32 | | | |
| 26 | SKH | Hermetically sealed relay — data same as SK | | | | | | | | | | | | |
| 27 | BOHO | Hermetically sealed relay — data same as BO | | | | | | | | | | | | |
| 28 | MH18 | 6.P.D.T. | 2 | DC 1.0 | 3.0 | 6.0 | 6500 | 110 | 1-23/32 | 1-3/16 | 1-3/16 | | | |
| 29 | MH12 | 4.P.D.T. | 2 | DC 0.8 | 2.5 | 5.0 | 5000 | 110 | 1-23/32 | 1-3/64 | 1-3/64 | | | |
| 30 | MH6 | D.P.D.T. | 2 | DC 0.7 | 2.0 | 4.0 | 2425 | 55 | 1-3/4 | .6 | .6 | | | |
| 31 | PBHS | 3.P.D.T. | 10 | DC 1.4 | 2.5 | 3.1 | 5000 | 110 | 2-21/32 | 3 | 3 | | | |



ALLIED CONTROL

ALLIED CONTROL COMPANY, INC., 2 EAST END AVENUE, NEW YORK 21, N. Y.



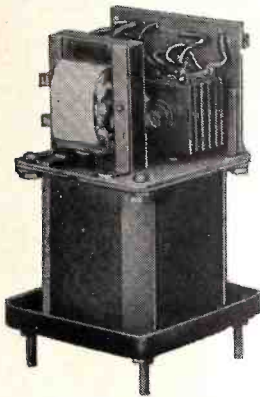
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AFFILIATE OF GENERAL CERAMICS CORP.

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- Saturable Transformers
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- Transi-mag* — Transistor Magnetic Amplifier

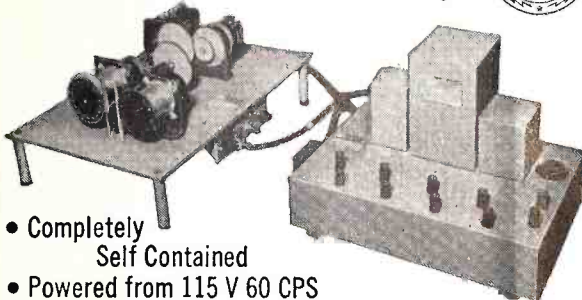
1/4 to 3 HP PACKAGED VARIABLE SPEED DRIVES by



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- Rugged, Reliable

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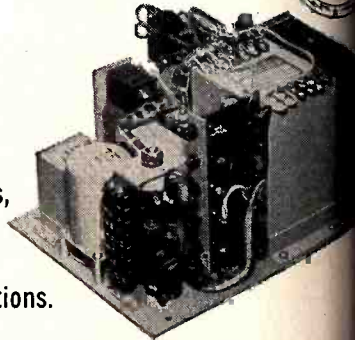
- Completely Self Contained
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DIESEL OR MOTOR — GENERATOR OR ALTERNATOR REGULATORS by

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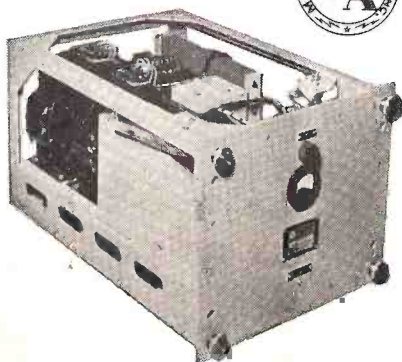
- Design for Specific Machines

Features:
High Accuracy, Fast Response, Ruggedness, Reliability, No Tubes, Meets Applicable Government Specifications.

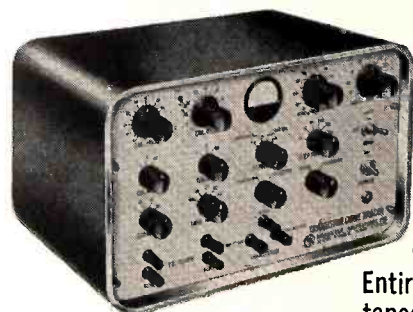


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- DC and AC Output
- High Current Carrying Capacity
- No moving Parts
- Reliable



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- Measures PNP or NPN Junction Transistors and P or N Type Point Contact Transistors

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- Dynamically Displays Entire Family of Curves Simultaneously on Oscilloscope
- Internally Generated Calibration Axes Displayed at Times in any One of Four Quadrants



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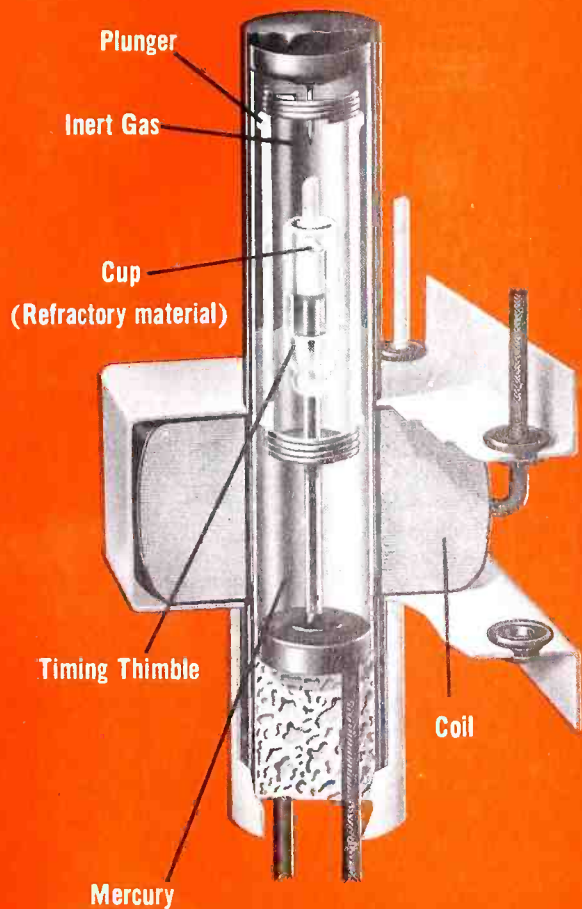
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Here's Why
Adlake Relays
give **SURE
POSITIVE
ACTION!**



When relay is energized, coil pulls plunger down. Mercury enters thimble, gradually displacing inert gas, which escapes through ceramic plug. When thimble has been filled, mercury-to-mercury contact is established . . . assuring positive snap action under all conditions!

5 Popular Relays from

1101 MODEL

Contact Arrangement:

Normally open or normally closed
Single pole—Single throw

Available in:

Time delay types of { Slow operate—quick release
Slow operate—slow release
Quick operate—slow release

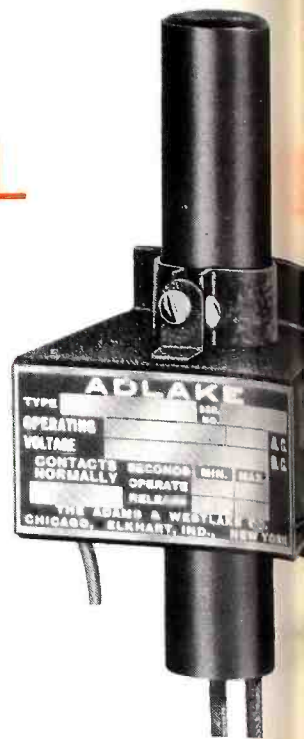
Load type: Quick operate—quick release

Maximum time delay: 20 minutes

Contact rating: Time delay relays to 15 amps.

Load relays to 50 amps.
Non-inductive, 115 v. 60 cy.

Voltage Coil: Up to 440 volts A.C. (25-50-60 cy.)



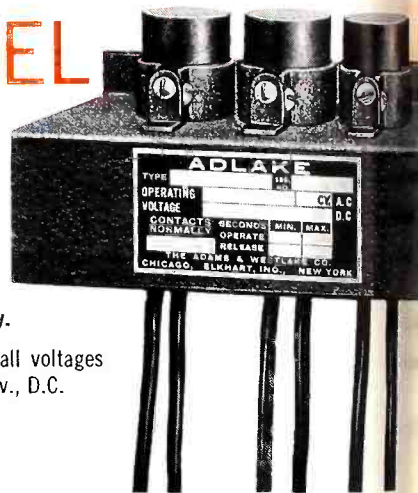
1133 MODEL

Contact Arrangement:

Normally open or normally closed
Three pole—Single throw

30 amp. capacity at 115 v. 60 cy.

Voltage Coil: Coils are available for all voltages to 440 volts, 50/60 cycles, or 220 v., D.C.



5000 MODEL ... SENS REL

(Designed for rapid operation under load conditions)

Contact Arrangement: Normally open or normally closed
Single pole—single throw

Contact rating: 5 amps., non-inductive, 115 v., 60 cy.

Voltage Coil: Up to and including 230 v., 60 cy.

Coil input: .007 amp. (less than 1 watt) at 115 v., 60 cy.

Maximum size: Height 3 1/2"; width 5 1/4"; projection, 2 3/4"

Wide Adlake line

MODEL

Arrangement: Normally open or normally closed

Available in:

- Slow operate—quick release
- Slow operate—slow release
- Quick operate—slow release

Quick operate—quick release

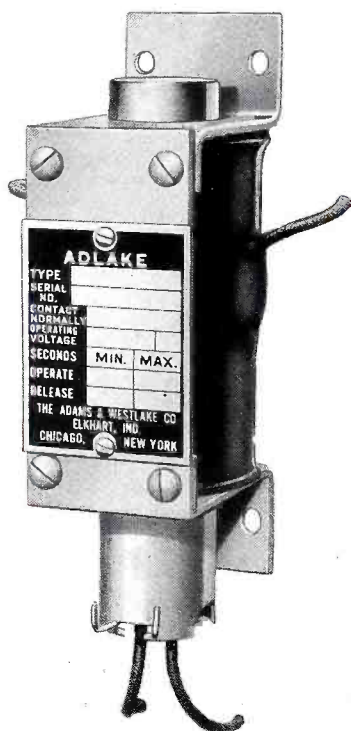
Time delay: 20 minutes

Rating: Time delay relays to 15 amps.

Load relays to 50 amps.

Non-inductive, 115 v. 60 cy.

To 130 v. D.C. (an external register in series with coil for higher operating voltages.)



MODEL

"MIGHTY MIDGET"

Arrangement: Normally open or closed—Single pole—Single throw

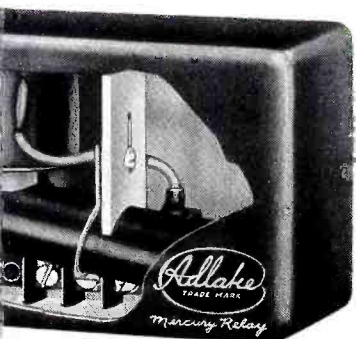
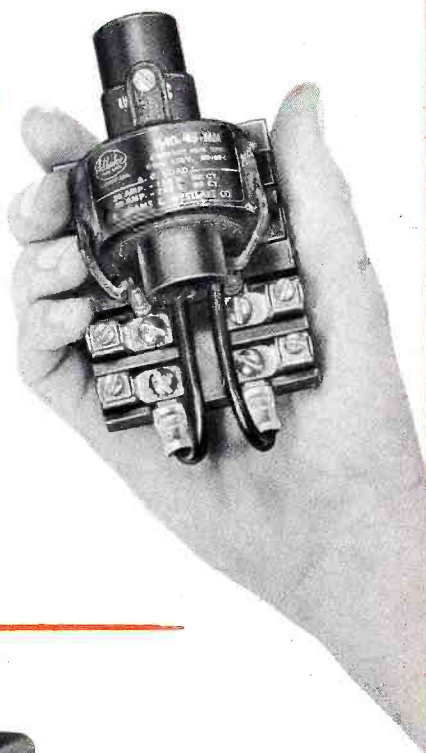
Rating: Quick acting load type only.

Rating: 30 amps. non-inductive —115 v. 60 cy.

Up to 440 v. 60 cy. and 220 v. D.C.

Dimensions: Height 3 3/8"-4 1/4"; width 2 1/2"; projection 2 3/8"

With compression type terminals to simplify installation.



Every Adlake Relay is:

HERMETICALLY SEALED

—dust, dirt, moisture, oxidation and temperature changes can't interfere with operation.

SILENT and CHATTERLESS

REQUIRES NO MAINTENANCE

ABSOLUTELY SAFE

MERCURY-TO-MERCURY CONTACT

—prevents burning, pitting and sticking.

...and every Adlake Relay is tested...and guaranteed... to meet specifications!

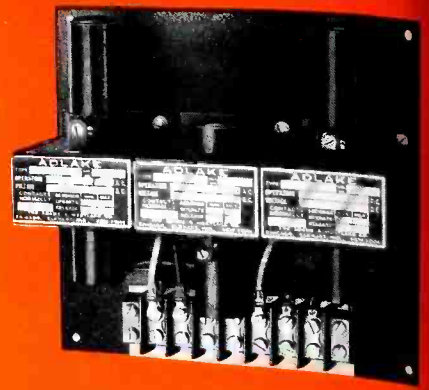
For complete details on the broad ADLAKE Relay line, send for your copy of the new ADLAKE Relay Catalog. Address: The Adams & Westlake Company, 1954 N. Michigan, Elkhart, Indiana; In Canada, write Powerlite Devices, Ltd., of Toronto.



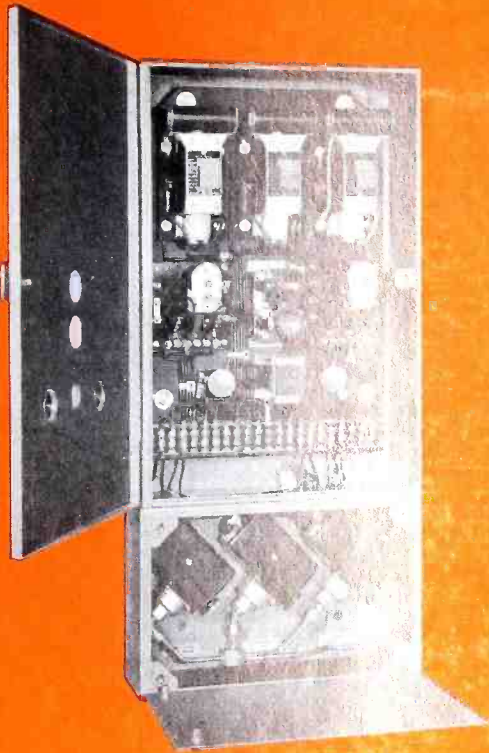
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Delayed Action Control



Complete Control Units



Special Waterproof
Junction Box

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Custom-Built Assemblies

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- LIGHTING CONTROL
- COMPLETE CONTROL UNITS
- DELAYED ACTION CONTROL
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SE11 Series



Ratings from 50 milliamperes to thousands of amperes. Used as power supplies, in electro-plating equipment, in battery chargers, and for numerous other applications.

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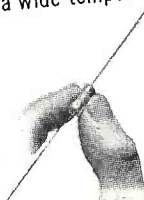
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VARIATORS AND BALANCED BRIDGES. Copper oxide (CX3 Series) and selenium (SM3 Series). Current and temperature characteristics precisely balanced. Hermetically sealed.



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Selenium (SE8L Series) and copper oxide (CX8 Series) types for low current use, providing excellent stability over a wide temperature range. Rugged and conservatively rated. Dependable operation maintained under moderate overload.



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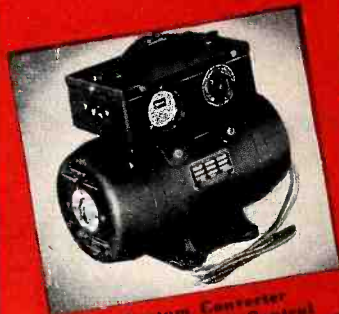
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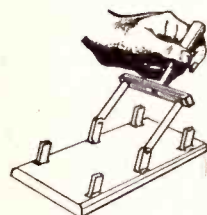
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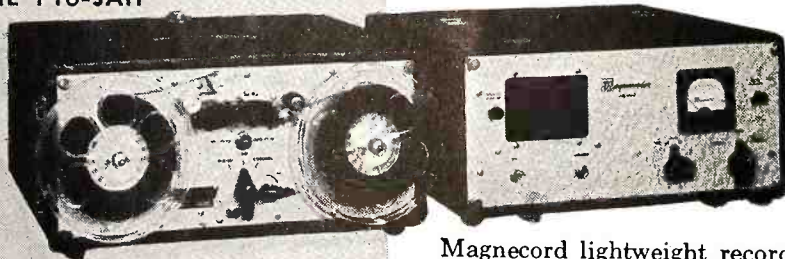
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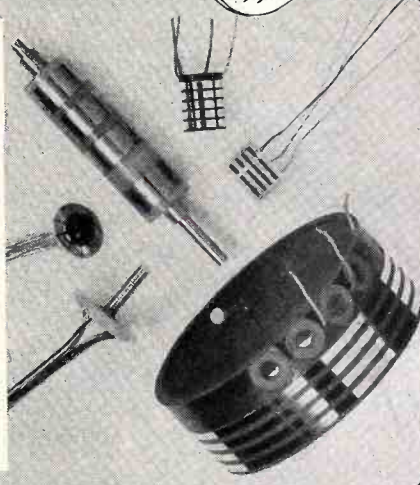
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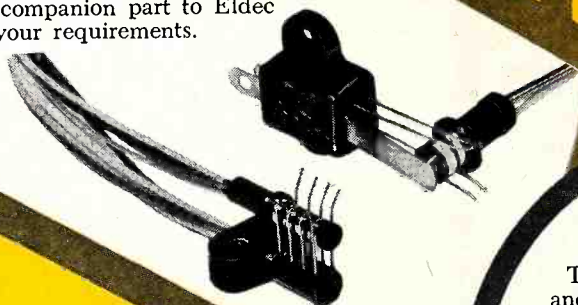
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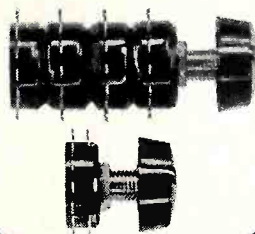
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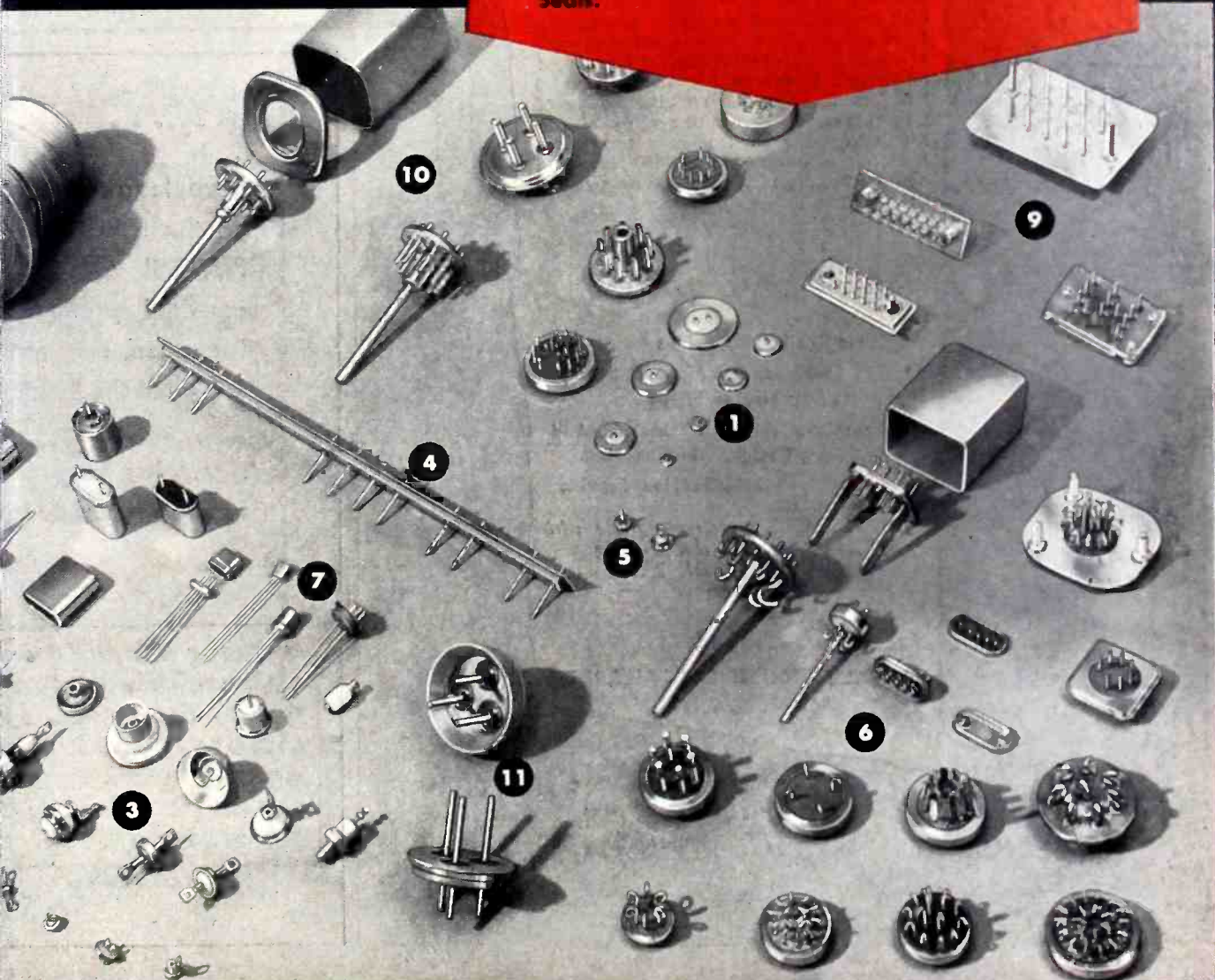
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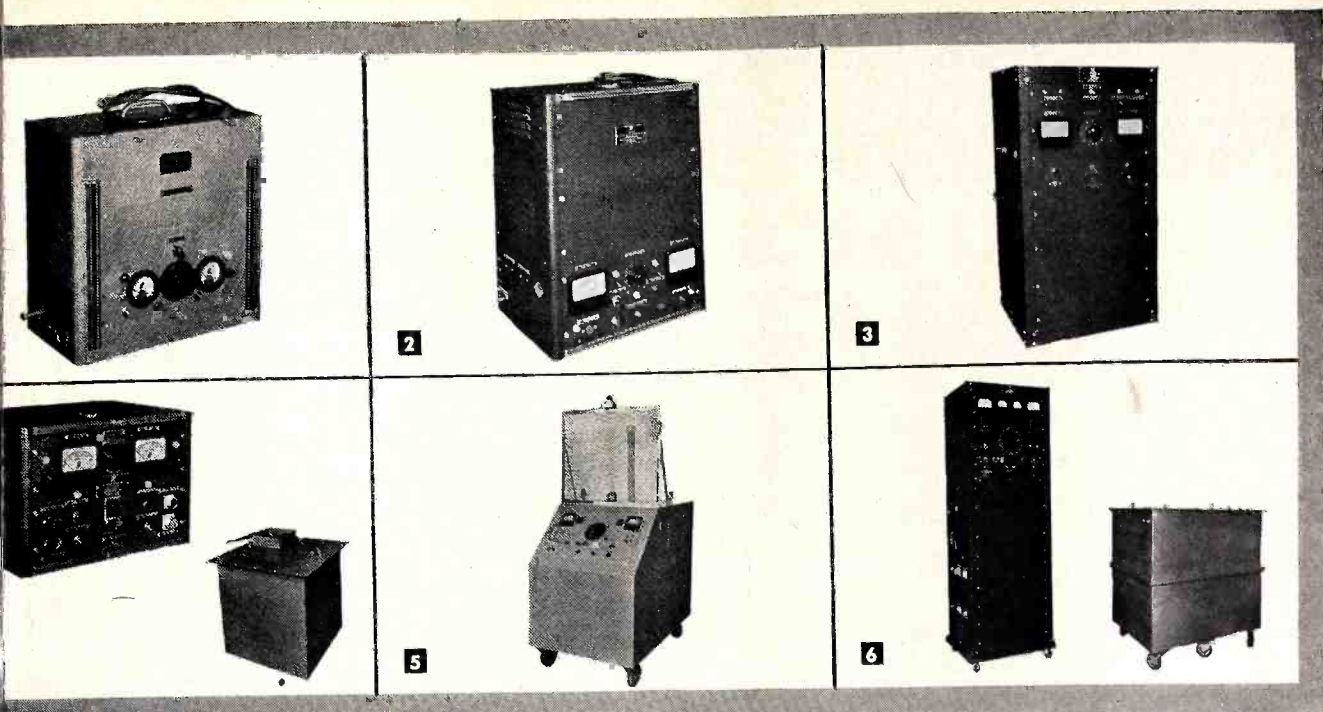
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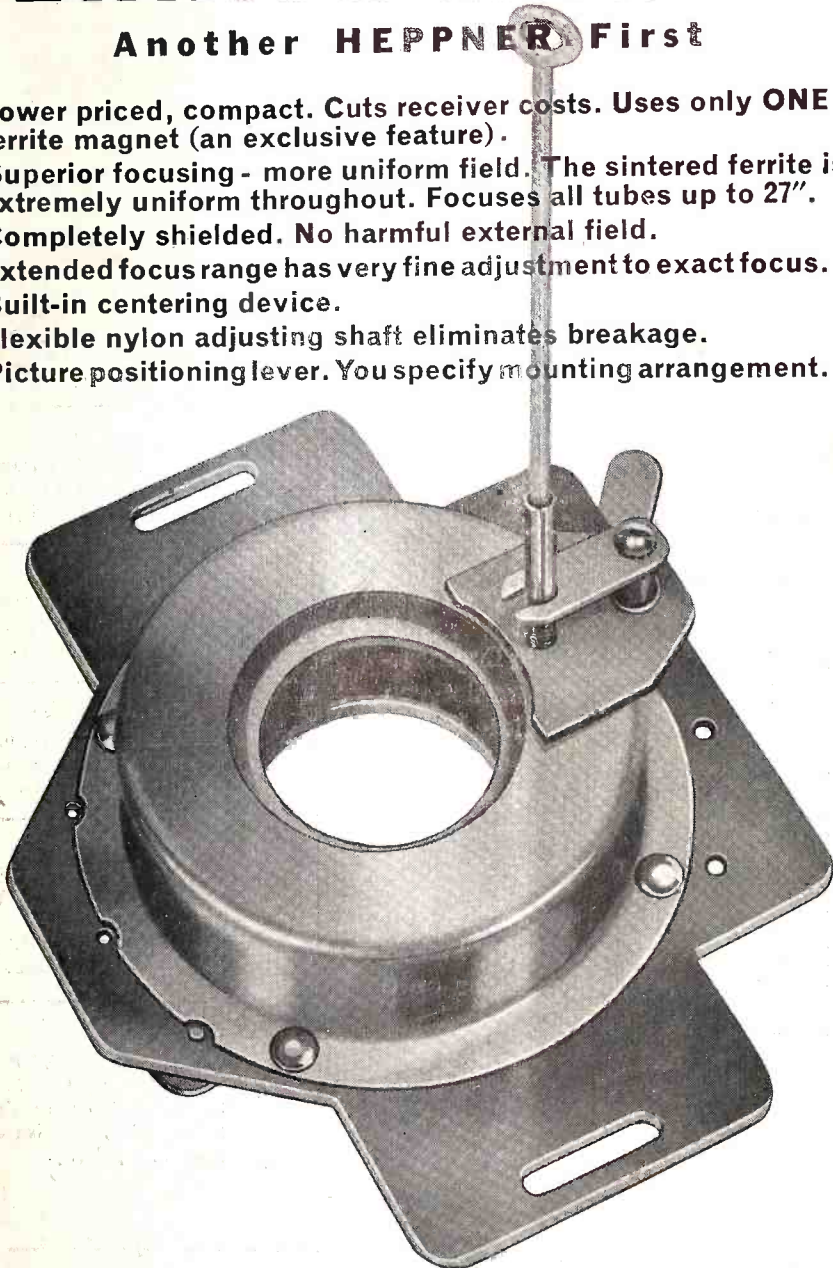


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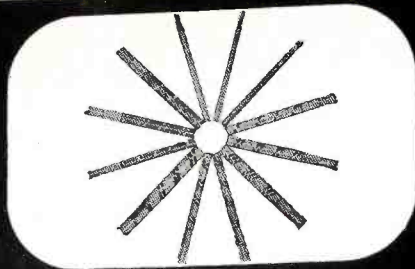
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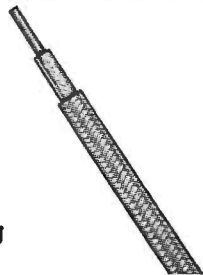
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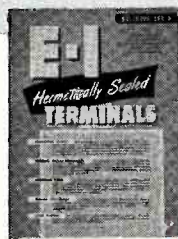
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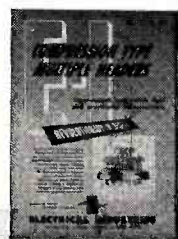
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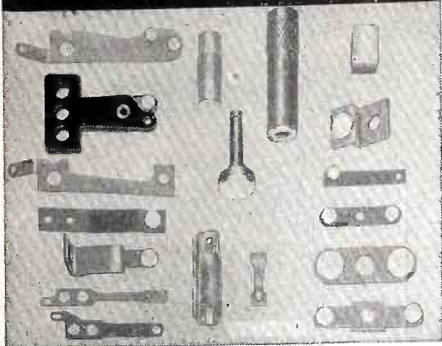
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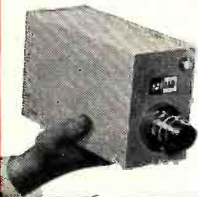
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 Efficiency: 0.2% Price: \$425.00

KAY-LAB WIDE BAND D.C. DECADE AMPLIFIER

Your best general-purpose amplifier—outstandingly constructed to afford extremely low input noise across high impedance. Chopper stabilized for zero drift, delivering step-wise variable gain from D.C. to 100 kilocycles. Feedback-type circuitry provides very low output impedance. Great flexibility is derived from 0, 20, 40, and 60 DB gains. Required instrument in every laboratory and development center . . . ideal production tool.



SPECIFICATIONS

Gain: 0, 20, 40 and 60 DB
 Band Width: Up to 100 KC depending on gain
 D.C. Output Impedance: Less than 0.05 ohms
 Input Impedance: 100,000 ohms
 Hum, Noise, and Drift: Less than 30 Microvolts
 Price: \$495.00

DYNAMIC MICRO-MIKERS

The Dynamic Micro-Miker is a precision instrument for measuring capacitance and inductance. Designed for use in operating circuits with the circuit under test. It is ideally suited for audio amplifier design and transistor testing.



FEATURES:
 Frequency Range: 0 to 30 MMFD, 0 to 200 MMFD, 0 to 0.001 MFD
 Output Range: 0 to 240 Microhenries
 Frequency: 1000 KC
 Accuracy: 1% Low and Medium Ranges, 2% High Range, 2% Inductance

KAY-LAB LOGATENS

KAY-LAB logatens are non-linear attenuating networks whose output voltage amplitude is a linear function of the logarithm of the input voltage amplitude. Models available with dynamic range to 60 DB.



GENERAL SPECIFICATIONS

Input: 0.1 to 100 volts (varies with model)
 Output: 10 Millivolts to 0.3 Volts (varies with model)
 Input Resistance: 20,000 Ohms
 Output Loading: Not less than 100,000 Ohms
 Accuracy: Up to 0.5 DB of Input

LOGS AND TECHNICAL BULLETINS AVAILABLE FOR ALL PRODUCTS

AMPLIFIERS — less than 25 microvolts internal noise — 50 volts RMS output — 1 megacycle bond width — gains of 40, 60 and 80 DB.
AMPLIFIERS — PRE-AMPLIFIER, DRIVER AMPLIFIER, DETECTOR AMPLIFIER — stabilized with negative feedback and having response flat within 1 DB from 10 cycles to 50 KC.
FILTERS — complete line of rejection-type filters — from .01 to 1000 cycles — immediately available from stock.
AMPLIFIERS — selective frequency high Q amplifiers — from .01 cycles to 1 KC.
STABILIZERS — plug-in units with variable rate controls for stabilizing A.C. servo systems.
TEMPERATURE THERMOSTATS — amplifier and relay systems for exact temperature control.
ATTENUATORS — servo-positioned potentiometer systems for use with analog computers.

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VULCANIZED FIBRE THERMOSETTING PLASTICS

phenolic, melamine and silicone resins in paper,
cotton fabric, glass cloth and Nylon base materials

CRAFTSMANSHIP...

Workmen of exceptional aptitude in the special characteristics of vulcanized fibre and thermosetting plastic (phenolics, melamines and silicones) have been trained through the years by BAER specialists in fabrication of such materials. Finest craftsmanship and economy can be depended upon.

MANUFACTURING...

20,000 sq. ft. of manufacturing and storage area plus complete standard and special equipment for most efficient production of large or small orders, assure perfection of product and prompt deliveries. BAER standards are well known.

ENGINEERING...

If you have a problem relating to the use of vulcanized fibre or thermosetting plastics, BAER engineers are always available for consultation. BAER experience and manufacturing techniques are especially valuable in the solution of problems in creating odd shapes with special physical characteristics.



All materials are made in strict accordance with NEMA and/or government standards.



•
BEVELING
DRILLING
HOT STAMPING
LAPPING
LUGGING
MARKING
MILLING
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ROUTING
SAWING
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STAMPING
THREADING
TURNING

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INSULATORS
ARC SHIELDS
BUSHINGS • DISCS
FUZE BLOCKS
GASKETS
GROMMETS
INSULATORS
NUTS • PANELS
RATCHETS • SPACERS
SPACER BLOCKS
SWITCH BARS
SWITCH HANDLES
TAGS • TUBES
TERMINAL BLOCKS
TERMINAL BOARDS
TRANSFORMER
WEDGES
WASHERS

... COLORS

Standard colors of vulcanized fibre are GRAY, RED and BLACK.

Fish paper (electrical insulation) is SLATE GRAY.

Thermosetting plastics are available in BLACK or NATURAL, depending upon the base material.

... STOCKS

Sheets, rods and tubes in fibre and plastics are available from BAER stocks. Almost anything you want—when you want it, can be provided by BAER. Send drawings, blue prints or rough sketches for our prompt estimate.

•
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SHAPES TO CUSTOMER
SPECIFICATIONS

N. S. BAER COMPANY

HILLSIDE, NEW JERSEY



PHONE WAVERLY 6-2250-1-2
MAIN OFFICE AND PLANT • 7 MONTGOMERY STREET

FIXED AND ADJUSTABLE RESISTORS (Continued)

| IRC Type | JAN or MIL Equivalent | Rated Wattage | Standard Tolerance Percent | Temp. rise at rated load/°C. | Temp. Coefficient %/°C. | Max. Operating Temp./°C. | OHMIC VALUES AVAILABLE | | | DIMENSIONS IN INCHES | | | Catalog Data Sheet | APPROXIMATE PRICES Lots of 1 (See note ■) Lots of 5000 (See note ■) (See note ■) |
|--|-----------------------|---------------|----------------------------|------------------------------|-------------------------|--------------------------|------------------------|------|---------------------------|----------------------|---------------|--------------|--------------------|--|
| | | | | | | | Min. | Max. | (JAN or MIL) (Commercial) | Length | O.D. or Width | Ferrule O.DX | | |
| COAXIAL CABLE TERMINATION RESISTORS | | | | | | | | | | | | | | |
| IRC manufactures concentric disc type resistors in 9 different sizes—outer diameters ranging from .240 to 1½". Rated wattage .8/sq. in., Standard Tolerance 20%, Temp. Rise at rated load 55° C., Max. Operating Temp. 80° C.—Values available from 5 ohms to 25,000 ohms. See Data Bulletin T-1 for individual specifications. Prices upon request. | | | | | | | | | | | | | | |
| HIGH FREQUENCY WAVE GUIDES | | | | | | | | | | | | | | |
| IRC Resistance strips are available in 6 different widths—from 7/8" to 2¾", lengths 12½", lengths 12½". Rated wattage .8/sq. in., Standard Tolerance 20%, Temp. Rise at rated load 55° C., Max. Operating Temp. 80° C. Values available from 19 ohms/sq. in. to 1.0 megohm/sq. in. See Data Bulletin T-1 for individual specifications. Prices upon request. | | | | | | | | | | | | | | |

| EPOXY ENCAPSULATED PRECISION WIRE WOUND RESISTORS | | | | | | | | | | | | | | | |
|--|-----------------------|---------------|----------------------------|------------------------------|--------|--------------------------|-------|----------|---------------------|-------|---------------|------------------|----------|--------------------|--|
| IRC Type | JAN or MIL Equivalent | Rated Wattage | Standard Tolerance Percent | Temp. Rise at Rated load °C. | Tapers | Max. Operating Temp. °C. | Min. | Max. | Mechanical Rotation | Depth | O.D. or Width | Standard Bushing | Switches | Catalog Data Sheet | APPROXIMATE PRICES Lots of 1 (See Note ■) Lots of 5,000 (See note ■) |
| WW-15M (new) | RB-15 | .25 | 1 | 20 | Yes† | 95 | 2 | 12,500 | 300° | 5/16† | 1/4 | 3/8 | 3/8-32 | A-2 | prices on request |
| WW-16M (new) | RB-16 | .35 | 1 | 20 | Yes† | 70 | 250† | 15 meg.† | 300° | 3/16† | 15/16 | 3/8 | 3/8-32 | A-4 | prices on request |
| WW-17M (new) | RB-17 | .50 | 1 | 20 | Linear | 70 | 5,000 | 30 meg. | 250° | 25/32 | 213/64 | No | No | SM6915-100-001 | prices on request |
| WW-18M (new) | RB-18 | .50 | 1 | 20 | Linear | 70 | 5,000 | 30 meg. | 250° | 25/32 | 213/64 | No | No | SM6915-100-001 | prices on request |
| WW-19M (new) | RB-19 | 1.00 | 1 | 20 | Linear | 70 | 5,000 | 30 meg. | 250° | 25/32 | 213/64 | No | No | SM6915-100-001 | prices on request |

VARIABLE RESISTORS

| SPECIAL PRODUCTS | | | | | | | | | | | | | | | |
|----------------------------|-----------------------|--------------------|----------------------------|---------------------------------|-------------------------|--------------------------|------------------|----------|---------------------------|----------------------|-------|----------------------|--------------------|--|-------|
| IRC Type No. | JAN or MIL Equivalent | Rated Wattage | Standard Tolerance Percent | Temp. rise at rated load in °C. | Temp. Coefficient %/°C. | Max. Operating Temp. °C. | VALUES AVAILABLE | | | DIMENSIONS IN INCHES | | | Catalog Data Sheet | APPROXIMATE PRICES Lots of 1 (See note ■) Lots of 5,000 (See note ■) | |
| | | | | | | | Min. | Max. | (JAN or MIL) (Commercial) | Length | O.D. | drop for single cell | | | |
| CHOKES | | | | | | | | | | | | | | | |
| CL1/2 | | | 20 | — | — | 140 | 0.22 m.h. | 1.0 m.h. | 300° | 3/8 | 3/16 | | H-1 | min. chg. | .0415 |
| CL1 | | | 10 | — | — | 140 | 0.22 m.h. | 7.5 m.h. | 300° | 23/32 | 1/4 | | H-1 | min. chg. | .0385 |
| CL1 | | | 10 | — | — | 140 | .47 m.h. | 24 m.h. | 300° | 1 1/4 | 1/4 | | H-1 | min. chg. | .0395 |
| CL2 | | | 10 | — | — | 140 | 1.0 m.h. | 39 m.h. | 250° | 1 3/4 | 21/64 | | H-1 | min. chg. | .07 |
| CAPACITORS | | | | | | | | | | | | | | | |
| CAS | | 500 V.D.C. | ± | | | 110 | .22 mmf. | 1.8 mmf. | | 1 3/4 | 1/8 | | K-1 | prices on request | |
| SELENIUM RECTIFIERS | | | | | | | | | | | | | | | |
| 6GA | | 2.5 to 46 VIP/cell | ± | 45 | | 80 | | | | .450 | .145 | | SR-1 | prices on request | |
| 9GA | | 2.5 to 46 VIP/cell | ± | 45 | | 80 | | | | .510 | .210 | | SR-1-2 | prices on request | |
| 28GA | | 2.5 to 46 VIP/cell | ± | 45 | | 80 | | | | ± | 37/64 | | SR-2 | prices on request | |
| 19PA | | 2.5 to 46 VIP/cell | ± | 45 | | 80 | | | | ± | 5/16 | | SR-2 | prices on request | |
| 25PA | | 2.5 to 46 VIP/cell | ± | 45 | | 80 | | | | ± | 3/8 | | SR-2 | prices on request | |

20 mA
 1/16
 5/16
 3/8
 7/16
 prices on request
 prices on request
 prices on request
 prices on request

SR-2
 SR-2
 SR-2
 SR-2
 SR-3

min. chg. .25

FEED-THRU TERMINALS

HS-1 5,000 V.D.C. 190

HS-1

GERMANIUM DIODES (New)

| IRC Type No. | Minimum Forward Current at 1 V. (MA) | Maximum Reverse Current (Micro-Amps) | Average Rectified Current (MA Max.) | Minimum Reverse Volts | Maximum Confinuance Reverse Operating Volts | Catalog Data Sheet | APPROXIMATE PRICES | |
|--------------|--------------------------------------|--------------------------------------|-------------------------------------|-----------------------|---|--------------------|------------------------|----------------------------|
| | | | | | | | Lots of 1 (See Note ■) | Lots of 5,000 (See Note ■) |
| IN34 | 5.0 | 30 (-10V), 800 (-50V) | 50 | 75 | 60 | N-1 | prices upon request | prices upon request |
| IN34A | 5.0 | 50 (-10V), 500 (-50V) | 50 | 75 | 60 | N-1 | prices upon request | prices upon request |
| IN38 | 3.0 | 6 (-3V), 625 (-100V) | 50 | 120 | 100 | N-1 | prices upon request | prices upon request |
| IN38A | 4.0 | 5 (-3V), 500 (-100V) | 50 | 120 | 100 | N-1 | prices upon request | prices upon request |
| IN48 | 4.0 | 833 (-50V) | 50 | 85 | 70 | N-1 | prices upon request | prices upon request |
| IN51 | 2.5 | 1,667 (-50V) | 25 | 50 | 40 | N-1 | prices upon request | prices upon request |
| IN52 | 4.0 | 150 (-50V) | 50 | 85 | 70 | N-1 | prices upon request | prices upon request |
| IN54 | 5.0 | 10 (-10V) | 50 | 35 | 35 | N-1 | prices upon request | prices upon request |
| IN54A | 5.0 | 7 (-10V), 100 (-50V) | 50 | 75 | 50 | N-1 | prices upon request | prices upon request |
| IN58 | 4.0 | 800 (-100V) | 50 | 120 | 100 | N-1 | prices upon request | prices upon request |
| IN58A | 4.0 | 600 (-100V) | 50 | 120 | 100 | N-1 | prices upon request | prices upon request |
| IN60 | 4.0 | 50 (-50V) | 50 | 125 | 100 | N-1 | prices upon request | prices upon request |
| IN63 | 2.5 | 200 (-50V) | 50 | 20 | 70 | N-1 | prices upon request | prices upon request |
| IN64 | 5.0 | 50 (-10V), 850 (-50V) | 50 | 85 | 70 | N-1 | prices upon request | prices upon request |
| IN65 | 3.0 | 25 (-10V), 300 (-50V) | 40 | 75 | 60 | N-1 | prices upon request | prices upon request |
| IN69 | 3.0 | 10 (-10V) | 30 | 125 | 100 | N-1 | prices upon request | prices upon request |
| IN70 | 3.0 | 10 (-10V) | 30 | 125 | 100 | N-1 | prices upon request | prices upon request |
| IN72 | 3.0 | 10 (-10V) | 30 | 125 | 100 | N-1 | prices upon request | prices upon request |
| IN81 | 3.0 | 10 (-10V) | 30 | 125 | 100 | N-1 | prices upon request | prices upon request |

* Also supplied with adjustable feature.
 † Non-inductive—all other types are inductive to varying degrees.
 ‡ See data bulletin for more details.
 †† See data bulletin.
 x Check catalog for spacing.

• All IRC products may be purchased through Electronic Parts Distributors. Those identified with a ● are normally carried in their stocks.
 ■ Prices indicated are based on average ranges & standard tolerances. Set-up & minimum charges apply in many cases. See price schedules for details.
 (new), indicates new items since January 1954.

FOR ADDITIONAL INFORMATION send for the Technical Bulletin indicated or contact your nearest IRC representative

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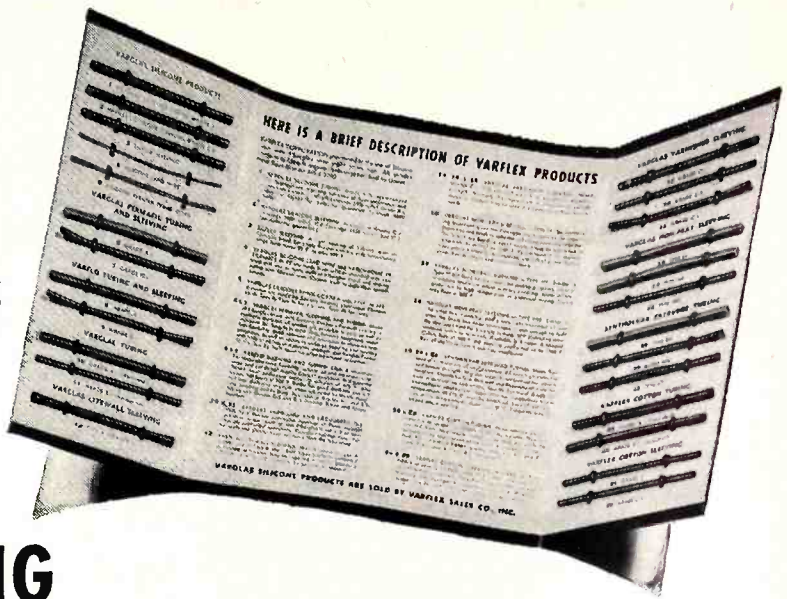
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VARSILICONE Class H insulating materials were prepared by our Laboratory. Retain flexibility, electrical properties and mechanical strength in temperatures ranging from -85°F. to 500°F. Available in tubing, sleeving, lead wire cord.

FIBERGLASS-IMPREGNATED VARGLAS TUBING Fiberglass coated with General Electric's Permafil resin. Extremely tough, resistant to solvents and elevated temperatures. Highly flexible. Can be bent or twisted with little or no loss of dielectric strength. Coils and standard 36" lengths.

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NEW! VARGLAS SILICONE RUBBER SLEEVING AND TUBING—the culmination of 5 years of research—for applications requiring extraordinary flexibility. Details on request.



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The list at the right is typical of the silver products readily available for your use. In addition, we are equipped to produce special silver alloys to meet special requirements. Our engineering and research departments are always ready to cooperate in solving your particular problems.

Write us if you want information about the uses of silver and its alloys.

- Fine silver (wire, strip & foil)
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- Silver contact alloys
- Silver powders
- Silver flakes and paints
- Silver brazing alloys
- Special electronic solders
- Solder-flushed silver alloys
- Silver chloride and oxide
- Special silver alloys to your requirements

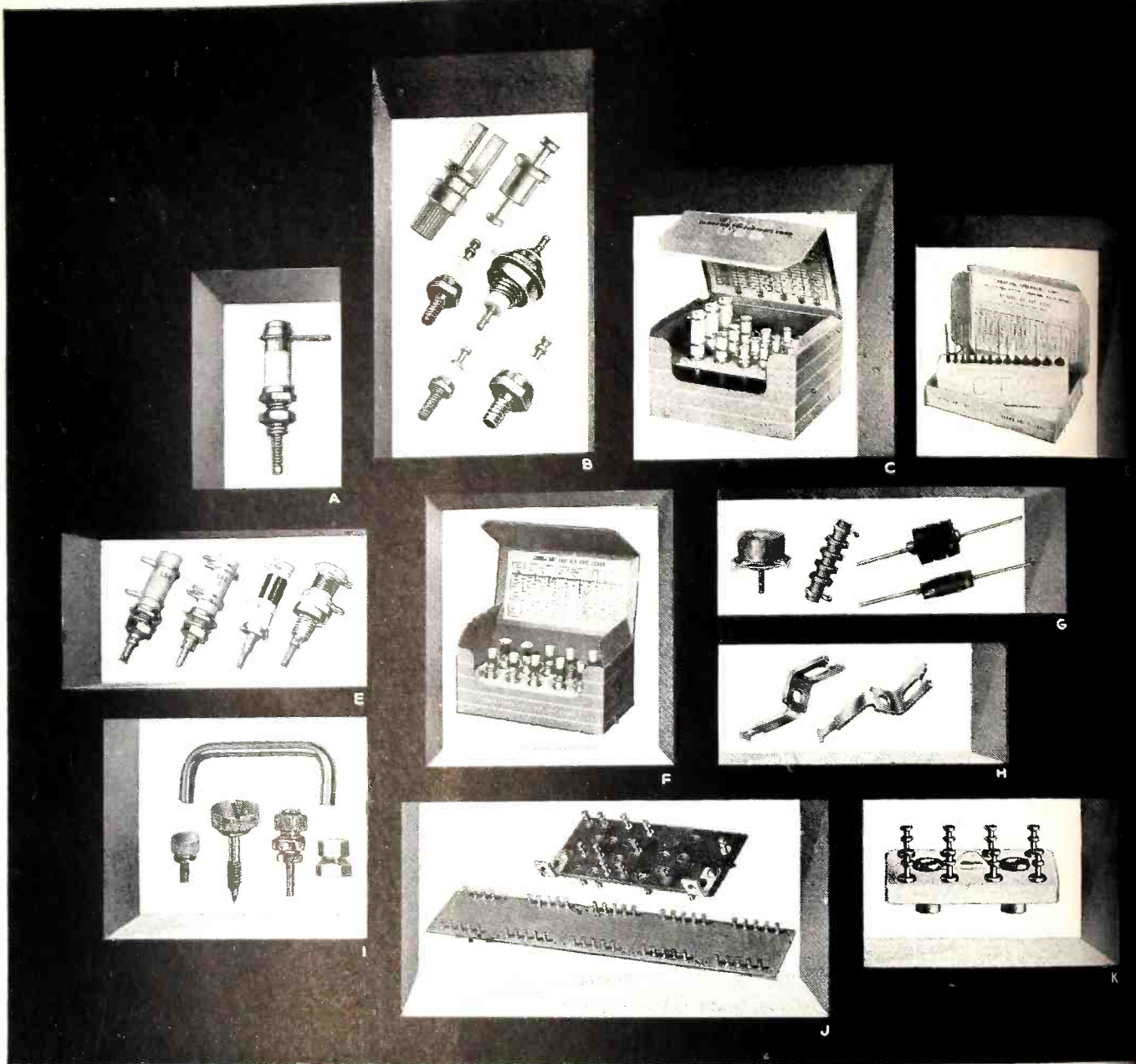


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CTC Components shown include: A. capacitor; B. standard and insulated terminals; C. coil form kit; D. RF choke kit; E. coil forms

and coils; F. coil kit; G. RF chokes; H. diode clips; I. panel hardware; J. standard and custom terminal boards; K. ceramic board.

One big family with a single thought

Whether you need terminals, clips, coils, chokes, capacitors — or any of a number of electronic components — you can be sure they're right if they're made by CTC.

One continuing basic idea governs the manufacture of every CTC product. And that idea is: *quality control*. We could not guarantee our products as we do without a constant check of numerous details that determine reliable performance. Our quality control engineers see to it that these manufacturing standards are consistently maintained — right through to periodic microscopic inspection.

Pictured here are a number of components available at CTC including our three kits. These items come in standard forms and are also custom engineered to meet your particular require-

ments. We would be glad to give you complete details, including specifications and prices, on any or all CTC units — as well as information on how CTC components can be specially designed to solve your individual electronic components problems.

You will find it well worthwhile to

use components that are *guaranteed*. Write to Cambridge Thermionic Corporation, 438 Concord Avenue, Cambridge 38, Mass. West Coast manufacturers contact: E. V. Roberts, West Washington Blvd., Los Angeles 16 and 988 Market Street, San Francisco, California.

CTC

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*makers of guaranteed electronic components,
custom or standard*



G U D E M A N

CAPACITORS

Paper-dielectric, plastic-film dielectric, metalized paper, dry electrolytic and ceramic capacitors are manufactured for commercial and military use. Among these types are high-temperature miniature paper-dielectric capacitors to meet the requirements of Specification MIL-C-25A. Other types manufactured are high-voltage paper-dielectric glass-cased capacitors, paper-dielectric capacitors in cardboard tubing, dry electrolytic capacitors in metallic or cardboard case, plastic-film dielectric capacitors in rectangular case and disc-type ceramic capacitors. Special capacitors are also designed and manufactured to meet individual requirements.

NOISE SUPPRESSION FILTERS

Low-pass, high-pass and band-pass filters are designed and manufactured to meet specifications for military and commercial applications. In addition, R-F Interference Filters for screen-booth application to handle high current with negligible voltage drop are manufactured.

PULSE TRANSFORMERS

Miniature pulse transformers are designed and manufactured to meet individual requirements for high-temperature applications. They are hermetically sealed in either metallic containers or encapsulated in epoxy resin. Metallic case types are furnished with either pig-tail or plug-in terminals. Encapsulated resin types are made with pig-tail terminals only.

DELAY LINES

Fixed, continuously variable, and decade delay lines are designed with either lumped or distributed parameters for operation over temperature ranges of -65°C to $+125^{\circ}\text{C}$. Gudeman delay lines possess low attenuation and low coefficient of thermal delay. Encased in fibre tubing, hermetically sealed containers, or encapsulated in epoxy resin.

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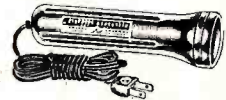
To house circuits using up to 2 miniature tubes. Model 19-P. Tenite half-shells octal base and two Noval sockets. Model 19-P

LABTRANS PULSE TRANSFORMER



| Mod. | Imp. | Rise Time | Percent D |
|---|------|-----------|-----------|
| PT-1 | 100 | .04μs | 20 50 80 |
| PT-2 | 100 | .04μs | 20 30 70 |
| PT-3 | 120 | .03μs | 20 40 75 |
| PT-4, hermetically sealed version of PT-3 | | | |

BERKSHIRE LABSTROBE



For checking speed of motion machines, turntables, flashers, times a second.

Chromed case, reflector, 6 ft. cord

BERKSHIRE GERMANIUM DIODE

as used in Berkshire Labmarkers. Model GCD-1

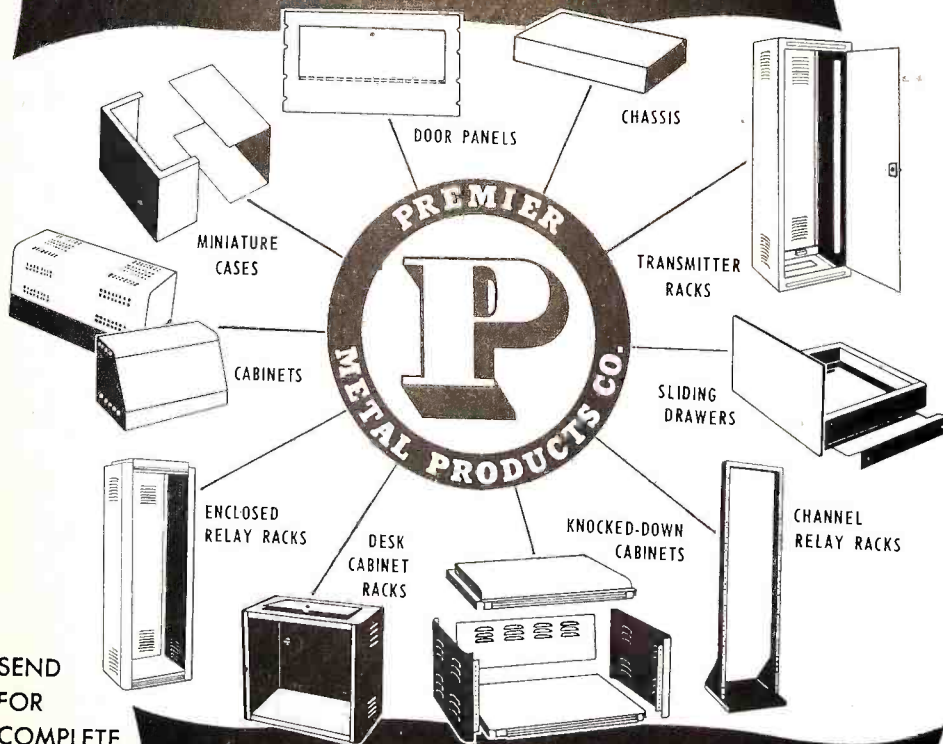
BERKSHIRE METALS TESTER

For sorting, grading, and comparing metal parts by rapid check of critical magnetic of electrical properties. Model 44

BERKSHIRE LABORATORIES

710 Beaver Pond Road
 Lincoln, Massachusetts

ALL FROM ONE SOURCE!



SEND FOR COMPLETE CATALOG

PREMIER METAL PRODUCTS CO.
3160 WEBSTER AVE., BRONX 67, N.Y.

a plus feature

Immediately following the Product Listings in the **DIRECTORY SECTION**

of this Issue is a list of more than

3400

TRADE NAMES

of electronic and allied products.

They are intended for your use in determining the manufacturer's name when only a trade name is known.

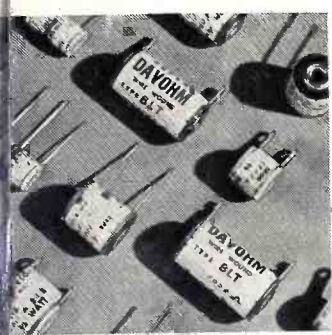
FIRST CALL ON DAVEN

Prime Supplier of Electronic Instruments of Unparalleled Quality, Accuracy and Dependability

In the manufacturing of sensitive, accurate instruments, the reputation of the Daven organization is world wide. For substantially more than a generation, specialization in electronics, coupled with unexcelled development and engineering personnel, has thrust the Daven Company far in the forefront of producers of instruments of notable quality.

Shown on this page is only a small part of the Daven line. When writing for more complete information on the units illustrated, please identify by name and model number.

ATTENUATION BOX TYPE 750



WIRE WOUND RESISTORS



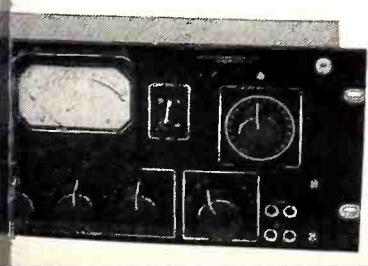
INDICATOR SERIES 910-911



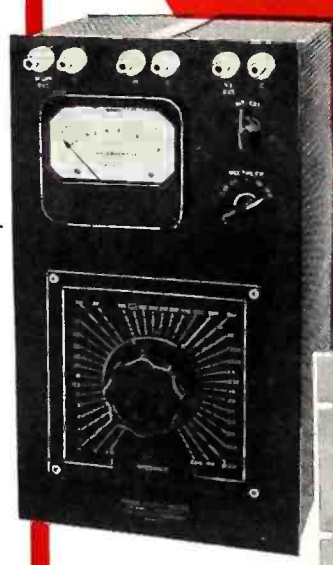
ATTENUATION BOX TYPE 650



FREQUENCY METER TYPE 838A



MAIN SET TYPE 11A



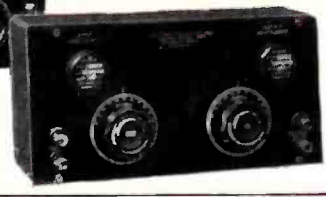
OUTPUT POWER METER TYPE OP-962



DISTORTION & NOISE METER TYPE 35-A



ATTENUATION BOX SERIES 690



Precision equipment demands the finest components. Always specify Daven Attenuators.

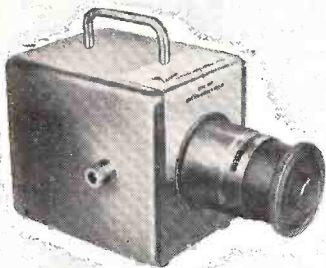
THE DAVEN CO.
 191 CENTRAL AVENUE • NEWARK 4, NEW JERSEY

When you *TEST*, use the *BEST*

THE SYMBOL OF QUALITY, ACCURACY, DEPENDABILITY

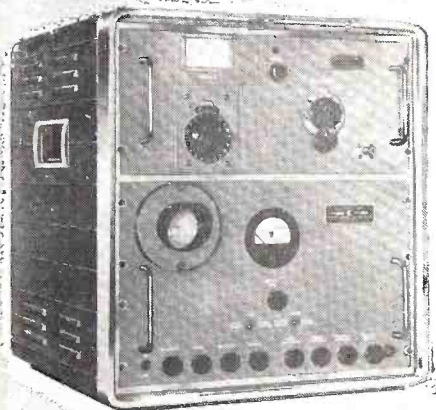
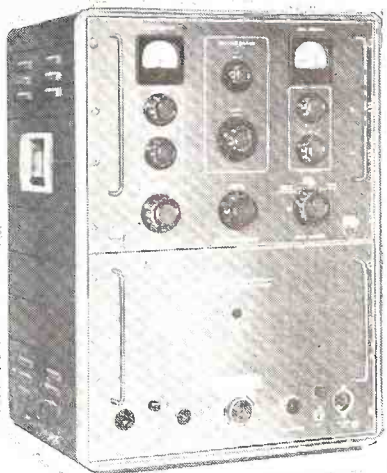


The equipments illustrated are typical examples of the complete line of PRD quality test components. Rigorously engineered and meticulously manufactured to the highest attainable standards, these units are now standard equipment in many of the leading research and development laboratories throughout the world. In addition to the widely diversified standard equipments offered, PRD maintains a highly qualified staff for special products development. This staff is at your service at all times for consultation.



**Type 587
UHF
FREQUENCY
METER**
470-900 mc/s

**Type 801-A
UNIVERSAL
KLYSTRON
POWER
SUPPLY**
300-1500 V
at 65 ma;
1.5-3.6 KV
at 25 ma



**Type 854
UNIVERSAL
SPECTRUM
ANALYZER**
8.5-9.6 kmc/s



**Type 907
BROADBAND
SWEEP
FREQUENCY
GENERATOR**
40-900 mc/s

FREQUENCY MEASURING DEVICES

| Frequency Meters | Frequency Range (kmc/sec) | Type No. | Transmission Line Size (Nominal O.D.—inches) | R—T—T |
|------------------|---------------------------|----------|--|-------|
| General Purpose | 0.47—0.95 | 587 | 3/8 | |
| | 2.40—3.70 | 583-D | 3/8 | |
| | 5.30—6.50 | 588-A | 1 1/2 x 3/4 | |
| | 3.95—5.85 | 574 | 2 x 1 | |
| | 5.85—8.20 | 575 | 1 1/2 x 3/4 | |
| | 7.05—10.0 | 576 | 1 1/4 x 3/8 | |
| | 8.2—10.0 | 585-A | 1 x 1/2 | |
| | 8.2—10.0 | 585-B | 1 x 1/2 | |
| | 8.2—10.0 | 586-A | 1 1/4 x 3/8 | |

In addition to the General Purpose Frequency Meters listed above, PRD manufactures a complete line of Precision Frequency Meters covering the entire frequency range from 0.55 to 39.0 kmc/s. Transmission line sizes include 3/8" coaxial line and standard wave guide sizes from 0.280" x 0.140" I.D. to 2" x 1" O.D. All types are available in Reaction and Transmission styles.

The Type 500 Frequency Standard Multiplier is available to generate standard frequency signals in the UHF and microwave regions when used with the Type 417 Tunable Crystal Mount.

SIGNAL SOURCES AND RECEIVERS

| | |
|---|---|
| TUBE MOUNTS Type 701 Type 702 Type 703 Type 704 | For type 2K28 klystrons, 2.400—3.445 kmc/sec For type 2K25 klystrons, 8.50—9.60 kmc/sec, 1 1/4 x 3/4 waveguide For type 2K25 klystrons, 8.50—9.60 kmc/sec, 1x1/2 waveguide For type 2K22 klystrons, 4.24—4.91 kmc/sec, 2 x 1 waveguide |
| OSCILLATORS Type 705 Type 706 | Covering the frequency range from 7.0 to 11.0 kmc/sec Covering the frequency range from 3.6 to 7.3 km/sec |
| POWER SUPPLIES Type 801-A | Providing all required electrode voltages to operate a wide range of klystrons, plus internal modulators |
| SPECTRUM ANALYZERS Type 853-A Type 854-A Type 855-A | Covering the frequency range from 2.40 to 3.40 kmc/sec Covering the frequency range from 8.50 to 9.60 kmc/sec Combining both of the above ranges in one instrument |
| GENERATORS Type 902 Type 903 Type 907 | Covering the frequency range from 3.65 to 7.30 kmc/sec Covering the frequency range from 7.00 to 10.5 kmc/sec Covering the frequency range from 40 to 900 mc/sec |
| NOISE GENERATORS Type 904 | For the direct measurement of noise factors in the range of 10 to 1000 mc/sec |



**Type 904
VHF-UHF
NOISE
GENERATOR**
.01—1.0 kmc/s

**Type 275
VOLTAGE STANDING
WAVE RATIO AMPLIFIER**
300—3000 cps



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—COMPLETELY ILLUSTRATED,
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Polytechnic

RESEARCH & DEVELOPMENT CO.

VHF through EHF

PRECISION RF TEST EQUIPMENT

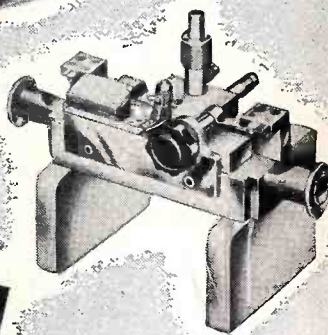
**Type 312
E/H TUNER**
26.5-40.0 kmc/s



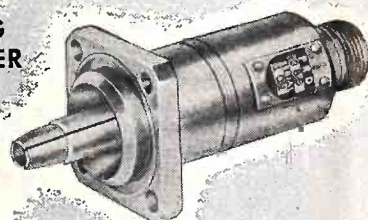
**Type 196-B
VARIABLE
ATTENUATOR**
8.20-12.4 kmc/s
0-40 db



**Type 211
PRECISION WAVEGUIDE
SLOTTED SECTION**
18.0-26.5 kmc/s

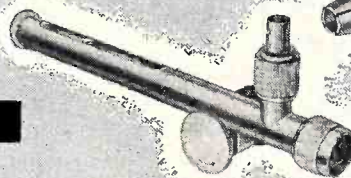


**Type 585
DIRECT READING
FREQUENCY METER**
8.20-10.0 kmc/s



**Type 389
COAXIAL
TRANSMISSION
LINE ADAPTER**
0-4.0 kmc/s

**Type 612-A
CRYSTAL BOLOMETER
MOUNT**
1.00-12.4 kmc/s



**Type 650-A
UNIVERSAL
POWER BRIDGE**
0.1, 1.0, 10, 100
mw full scale



PRD MAGNETIC AMPLIFIERS

Standard and Custom Units

- SERVO AMPLIFIERS
- LOW LEVEL AMPLIFIERS
- VOLTAGE AND FREQUENCY REGULATORS
- TORQUE AND SPEED REGULATORS
- REGULATED STATIC POWER SUPPLIES
- HIGH FREQUENCY AMPLIFIERS

TRANSMISSION LINE SIZE

| COAXIAL Nom. O.D.-in.) | WAVEGUIDE (Nominal O.D.-inches) | | | | | | | |
|---------------------------|---------------------------------|---------|-----|-------------|-------------|---------|----------------|----------------|
| | 3/4 | 3x1 1/2 | 2x1 | 1 1/2 x 3/4 | 1 1/4 x 3/4 | 1 x 1/2 | 0.622x I.D. | 0.420x I.D. | 0.280x I.D. |

ATTENUATORS AND TERMINATIONS

| | | | | | | | | |
|--------------|-----------------------------|-------|---------------|-------|----------------|---------------|-------|-------------|
| | 171 | 162 | 1156 161 | 160 | 154-A 159 | 189 | 190 | 191 |
| | 174-B | 169-B | 1177 177-B | 184-B | 196-C 196-D | 187-B | | |
| | 175-B | 170-B | 178-B | 185-B | 195-B | 188-B | 153-A | 192 |
| | 181,198 | | | | 180 | | | |
| 36 series | 130 series 1100-A,B,C | s | s | s | s | 140 series | s | |
| 5-A | 139 | 129 | 115 | 121 | 114-A | 116-A | 131-A | 132-A 133-A |

TRANSMISSION LINE COMPONENTS

| | | | | | | | | | |
|------------|--------------------|-------|-------|-------|-------|-------------------|------------|-------|-------|
| | | 365 | 357 | 356 | 355-A | 354-B | | | |
| 390 392 | 389,390 391,392 | | | | | | 402 408 | 405 | |
| | | | 400 | 404 | 401 | | | | |
| | | 375-A | 376-A | 377-A | 378-A | 379-B | 386-A | 387-A | 388-A |
| | | 369-A | 369-B | 369-B | 369-C | 369-D | 369-E | f | f |
| | | | s | s | s | 462 465 481 | s | s | s |

IMPEDANCE MEASUREMENT & TRANSFORMATION

| | | | | | | | | | |
|-------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 200-C | 205-A 215-A | 209-A | 201-A | 204-B | 202-B | 203-D | 210-A | 211-A | 212-A |
| | 306 | 309-A | 300-A | 305-A | 302-B | 303-A | 314-A | 313-A | 312-A |

250-A Broadband Probe is designed for use with Types 200-C through 212-A. Type 215-A Slotted Sections; Types 210-A and 212-A are supplied in tunable probes. The Type 361 R-F Adapter is available for use with 250-A Probe.

IMPEDANCE MEASUREMENT AND POWER MEASUREMENT

| | | | | | | | | | |
|-----|--------------|--|--|--|--|-----|------|------|-----|
| | 612-A | | | | | | 616A | 621A | |
| | 613 | | | | | 601 | | | 615 |
| (s) | 627-A, 628-A | | | | | | | 620 | 618 |
| | | | | | | 635 | | | |

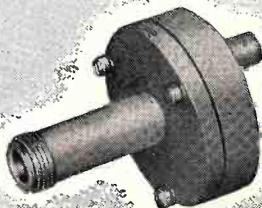
Type 650-A Universal Power Bridge for use with above mounts to measure absolute power level.

BOLOMETERS

| | |
|-------------------------------------|-------------------------------|
| USE WITH 250-A, 612-A, 613 | TYPE 631-C FOR USE WITH 627-A |
| USE WITH 210-A, 211-A, 616-A, 621-A | TYPE 631-D FOR USE WITH 628-A |
| USE WITH 212-A, 618, 620 | |

Applied with captive flange screws
Special order only

**Type 627-A
BROADBAND COAXIAL
BOLOMETER MOUNTS**
.5-10.0 kmc/s



FOR ELECTRONIC APPLICATIONS INSULATION BY IRVINGTON

FLEXIBLE TUBING

Extruded Plastic—Varnished—Coated

The Irvington line of insulating tubing includes extruded thermoplastic and varnished types, for all conductor sizes commonly used in electronic wiring. All are characterized by high dielectric and tensile strength, excellent flexibility, smooth surfaces and resistance to acids, alkalis and fumes.

| Application | Recommended Types | Dielectric Strength* (vpm) | Breakdown voltage | Tensile Strength† (psi) | Remarks |
|------------------|---|----------------------------|--|------------------------------|--|
| VHF | Polyethylene | 1350 | | 1600 | High resistance to ozone |
| Low-Temperature | Airflex† Hyflex† Ivi-Flex† Transflex† | 350 1000 650 1000 | | 1950 3000 1000 3000 | Flex. at —90°F. —70°F. to 167°F. Flex. at —80°F. Transparent: —58°F. to 167°F. |
| High Temperature | Temflex† 105 Braided Glass** Silicone Rubber-Coated Silicone Resin-Coated | 1200 | | 3000 | Cont. Oper. at 105°C. in air & 90°C. in oil Excep. flex., heat endurance High heat endurance |
| General Purpose | Irv-O-Lite† XTE-30 | 1000 | | 3000 | Rubber-like, flexible |
| | Varnished** Irv-O-Volt† Tubing—Cotton, rayon and glass, varnished inside and out; Sleeving—cotton, rayon and glass, saturated. IRVINGTON: Lacquer-coated, cotton, rayon and glass tubing. Special types. | | Grade A—7000 Grade B—4000 Grade C—1500 Grade A—7000 Grade B—4000 Grade C—1500 | | |

*Dry test, .020" wall **Meets NEMA VSI-1950 & ASTM Stds. D-372

INSULATING VARNISHES

The varnishes listed here represent a few of the many types developed by Irvington for a wide range of uses. All these varnishes offer good-to-excellent resistance to moisture and heat, and most of them also resist the effects of oil, acids and alkalis. Dielectric strength ratings in this table are based on average short-time tests for a film of varnish on paper in the case of baking varnishes; on U.S. Navy Specifications in the case of air drying types.

Write for Technical Data Sheets and Varnish Selector Chart

†Trademark ‡T.M. Reg. U.S. Pat. Off. §T.M. Reg. U.S. Pat. Off. by Du Pont ¶T.M. Reg. U.S. Pat. Off. by Dow-Corning

| Method of Drying | Varnish Type | Dielectric Strength | Chemical, Oil and Moisture Resistance |
|------------------|----------------|---------------------|---------------------------------------|
| Internal Baking | Harvel 612-C | 2300 | Excellent |
| | Harvel 912-C | 2200 | Excellent |
| | Irvington 100 | 2250 | Good |
| | Irvington 140 | 2600 | Excellent |
| | Irvington 500 | 2100 | Good |
| Air Drying | Irvington 1201 | 800 | Good |
| | Harvel 1301 | 1650 | Good |
| | Irvington 9 | 2000 | Good |
| | Harvel 902 | 1000 | Good |

IRVINGTON INSULATING TAPES AND YARD GOODS

Available in a wide range of formulations to meet such electronic requirements as: high dielectric strength; resistance to moisture and heat; flexibility at high and low temperatures. Table lists more commonly used types; consult our sales department for special requirements.

| Application | Recommended Types | Thicknesses | Dielectric Strength* (vpm) | Tensile Strength† (lbs./1" width) |
|----------------------|--|---|---|-----------------------------------|
| VHF | Temflex 105 Polyethylene | .007, .010, .012 .004-.020 | 2000-1600 3400-1600 | 19-27 7.9 |
| Compact Equipment | Varnished Silk Varnished Rayon Varnished Nylon Varnished Cambric Varnished Paper | .002-.008 .003-.008 .004-.008 .003-.005 .00075-.015 | 1700-1100 1200-1000 1200-1000 1200 2500-500 | 13 35 25-30 32 — |
| High Temperatures | Silicone Varnished woven glass | .002-.025 | 1500-900 | 100-525 |
| | Silicone Rubber-Coated Woven Glass | .005-.032 | 1100-500 | 50-400 |
| | Thin Silicone Coated Asbestos Paper | .003" | 350 | — |
| | Silicone Saturated Asbestos | .006-.007 | 200 | — |
| | Silicone Coated Asbestos | .010, .012 | 350 | — |
| | Teflon § Coated Woven Glass | .003-.010 | 500-350 | 80-250 |
| | Silastic ¶ Tape Irvington Plastic | .010, .015, .020 .008-.020 | 250-350 1000-750 | 50-90 40-47 |
| General Purpose | Varnished Woven Glass | .002-.030 | 1200-600 | 70-550 |
| | Varnished Cambric (straight cut) | .005-.015 | 1100-1200 | 38-50 |
| | Varnished Cambric (bias cut) | .005-.015 | 1100-1300 | 40-47 |
| Special Applications | Ivi-Bind (pressure-sensitive backing) | .005-.012 | 1050 | 38-44 |

*Av. Short Time

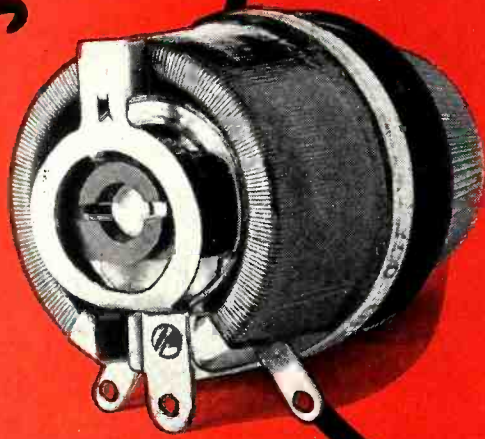
STANDARD WIDTHS AND LENGTHS
Straight cut supplied in 25 and 50 yard rolls. Bias cut supplied in 36 and 72 yard rolls, 36" wide or tapes from 3/8" up.

LAMINATED CONSTRUCTION
Polyester film (high dielectric strength 4000 v.p.m.), bonded in duplexed triplexed combinations to 100% or Kraft paper, asbestos paper woven glass cloth.

IRVINGTON VARNISH & INSULATOR

DIVISION OF MINNESOTA MINING & MANUFACTURING COMPANY
29 ARGYLE TERRACE, IRVINGTON 11, N. J. • PLANTS: IRVINGTON, N. J.; MONROVIA, CALIF.; HAMILTON, ONTARIO, CANADA

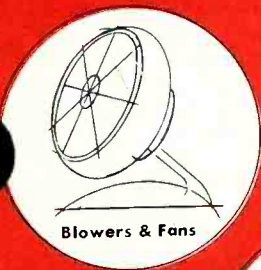
It's Time to Buy



Communication Equipment



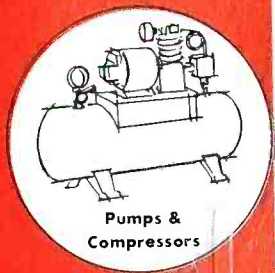
Aircraft



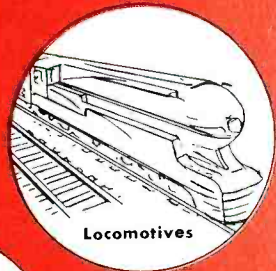
Blowers & Fans



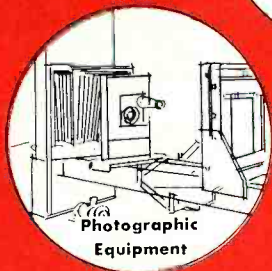
Electric Welding



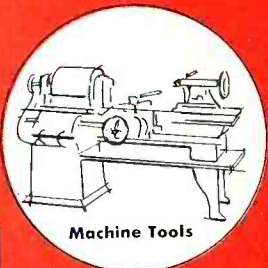
Pumps & Compressors



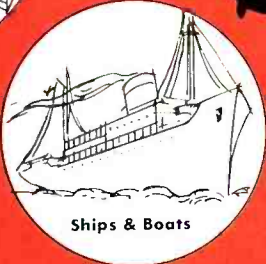
Locomotives



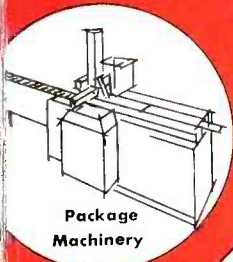
Photographic Equipment



Machine Tools



Ships & Boats



Package Machinery



motors & generators



Conveyors

TRU-OHM
RHEOSTATS

TRU-OHM PRODUCTS
Division of Model Engineering & Mfg., Inc.

For Original Equipment or Replacement Applications

TRU-OHM POWER RHEOSTATS are being specified by more and more manufacturers. We guarantee the finest RHEOSTATS . . . fastest delivery . . . smoothest variation of resistance under the most severe operating conditions.

Available in 50 watts . . . 75 watts . . . 100 watts . . . 150 watts and NOW in 25 watts . . . TRU-OHM POWER RHEOSTATS are universally interchangeable.

The next time it's time to buy RHEOSTATS . . . SPECIFY "TRU-OHM".

We invite your inquiry for our latest catalog featuring TRU-OHM RHEOSTATS and RESISTORS.

General Sales Office: 2800 N. Milwaukee Avenue, Chicago 18, Ill.
Factory: Huntington, Indiana

"Largest producers of wire-wound resistors in the U.S.A."

MANUFACTURERS: Power Rheostats, Fixed Resistors, Adjustable Resistors, "Econohm" Resistors, "Tru-rib" Resistors



international instruments

INCORPORATED

P.O. BOX 2954, NEW HAVEN 15, CONN.

1" and 1½" miniature panel meters

international instruments, specialists in the design and manufacture of miniature panel meters, **FIRST** in this country to design and manufacture a 1" barrel diameter meter, **FIRST** to produce 1" and 1½" illuminated meters, **FIRST** to produce 1½" DB and VU meters and **FIRST** to develop 1" long scale meters. This record of past achievement plus modern plant and test facilities, extensive experience and skilled personnel combine to make **international** the logical source for your miniature meter needs.

international panel meters are miniature D'Arsonval instruments housed in metal cases. Models for government or commercial applications are available. Accuracy is within $\pm 3\%$ of full scale deflection for DC readings, and $\pm 5\%$ for AC. Model 100 and 150 Meters are easily mounted by means of threaded barrel ring. Model 153 Meters supplied with mounting screws. A wide variety of ranges are available starting from 0-100 microamperes. Special scales, sensitivities, ranges, and other modifications can be produced. Consult our Engineering Department giving details of special requirements.



MODEL 150

1½" barrel diameter
Full 90° scale arc,
scale length 1.322".



MODEL 100

1" barrel diameter
Full 90° scale arc,
scale length .770".
Self-contained, ready for use.



MODEL 153

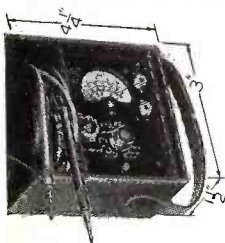
1½" barrel diameter
Designed to meet MIL-
M-3823 requirements.



**VU METER
DB METER**

Self-contained and ready for use. Available in Model 150 and 153. Also available in Model 100 with external accessory.

MINIATURE MULTITESTER



Compact combination voltohmmeter for testing resistances and AC or DC voltages. Meter has sensitivity of 8,000 ohms per volt on AC ranges, 10,000 ohms per volt on DC ranges. Accuracy $\pm 2\%$ of full scale deflection.



ILLUMINATED METER

Sealed meter has own external source of illumination. Lamps for 6, 14 and 28 volts. Easy bulb replacement. Available in Model 100, 150 and 153.

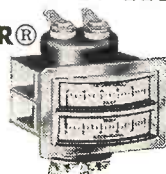
NEW MODEL 1120 SIDE INDICATOR®

Pat. Pend.

Single instrument panel opening only .516" x 1.605", scale 1.3" long. Horizontal or vertical mounting singly or with scales together. Dust-proof anodized aluminum case with clear plastic cover.



VERTICAL MOUNTING



DUAL HORIZONTAL MOUNTING

ENGINEERING DATA SHEETS COMPLETELY DESCRIBING THESE INSTRUMENTS ARE AVAILABLE. WRITE FOR YOUR COPIES TODAY.



international instruments

INCORPORATED

P.O. BOX 2954, NEW HAVEN 15, CONN.

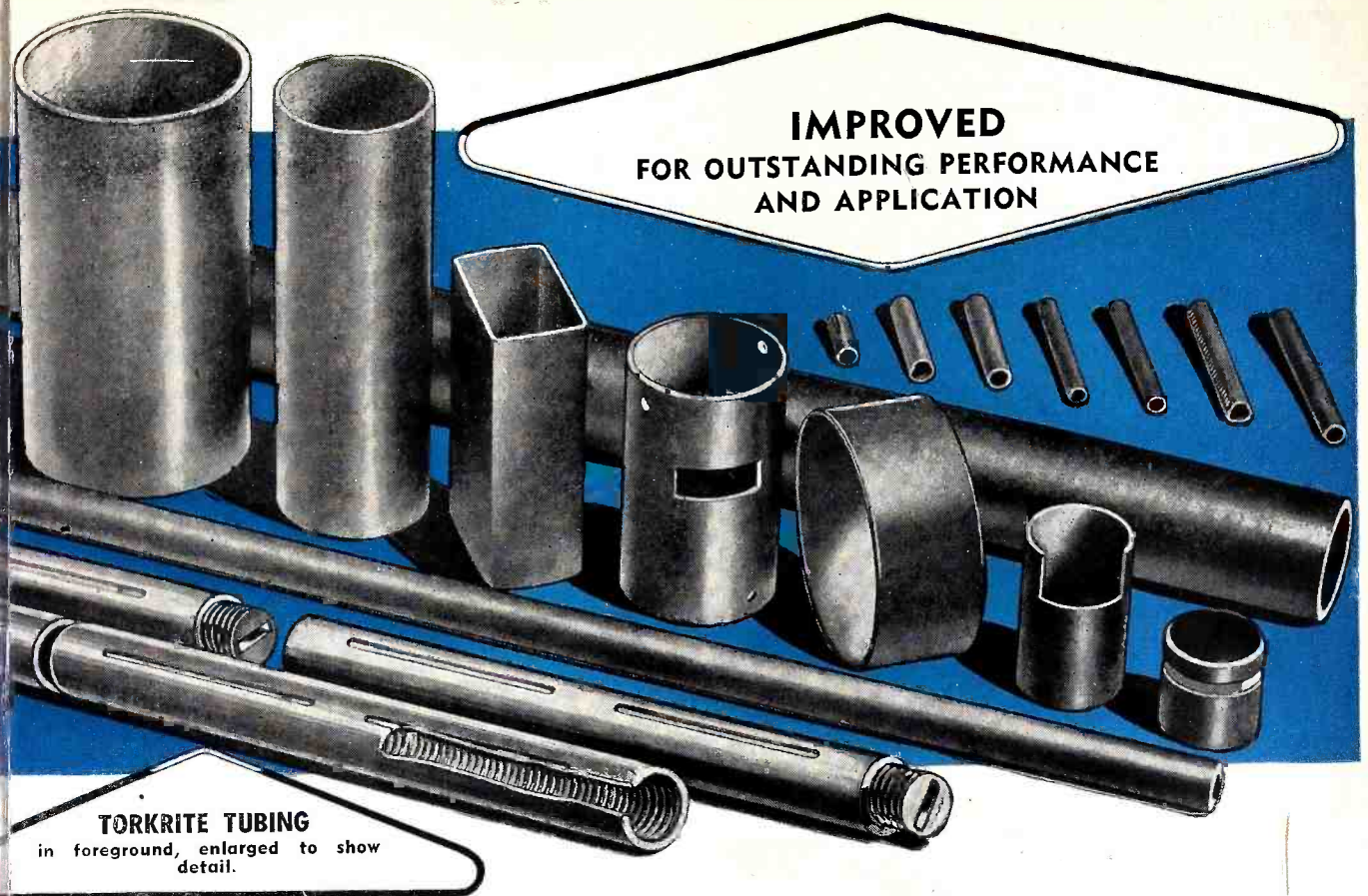
Ready reference throughout the year . . . this Mid-June issue of electronics serves the industry in the exacting manner that it requires.

The electronics BUYERS' GUIDE

provides users with the only accurate and reliable product source available in the electronic industry . . .

They refer **FIRST** to the "GUIDE."

**IMPROVED
FOR OUTSTANDING PERFORMANCE
AND APPLICATION**



TORKRITE TUBING
in foreground, enlarged to show detail.

★ ★ ★

**TORKRITE
POSSESSES MANY
ADVANTAGES**

affords unmatched recycling after a maximum diameter core recycled in a given form a number of times, a minimum core can be inserted and measured in oz. approximately.

has no hole or perforation in the tube wall. This eliminates possibility of cement leakage locking or cores.

permits use of lower torque as completely free of stripping pressure.

Torkrite, torque does not increase during, as the heavier wall acts to prevent collapse and core bind.

New Torkrite is now available in various diameter tubes. Lengths from 3 1/8", are made to fit 8-32, 10-28 and 5/16-24 cores.

★ ★ ★

**Dependable Delivery at
all times.**

**CLEVELITE*
LAMINATED PAPER BASE PHENOLIC TUBING**

In seven specific grades, Clevelite is one of the finest and most complete lines of tubing available to the electronic and electrical industries.

| Grade | Application |
|-----------|--|
| Grade E | Improved post-cure fabrication and stapling |
| Grade EX | Special grade for TV yoke sleeves |
| Grade EE | Improved general purpose |
| Grade EEX | Superior electrical and moisture absorption properties |
| Grade EEE | Critical electrical and high voltage application |
| Grade XAX | Special grade for government phenolic specifications |
| Grade SLF | Special for very thin wall tubing having less than .010 wall |

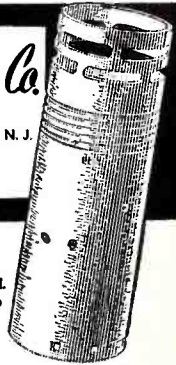
High performance factors, uniformity and inherent ability to hold to close tolerances, make Clevelite outstanding for Coil Forms, Collars, Bushings, Spacers and Cores. Competent Research and Engineering facilities are always available to aid in solving those tough and stubborn design and fabrication problems. May we help you?

WHY PAY MORE? For Good Quality . . . call CLEVELAND!

*Reg. U. S. Pat. Off.

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ABRASIVE DIVISION at Cleveland, Ohio
CANADIAN PLANT: The Cleveland Container, Canada, Ltd., Prescott, Ontario



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MAXSON

develops and manufactures systems, subsystems, and components in armament, navigation, electronics, and special devices.

MAXSON UHF WIDE-BAND POWER OSCILLATOR

Model 1141B Power Supply and Modulator



Model 1141A Cavity Oscillator

Model M1141 UHF Wide-band Power Oscillator:
200 to 2500 mc/sec. — consisting of

**Model 1141A Cavity Oscillator, and
Model 1141B Power Supply and Modulator:**

Frequency Range:200 — 1050 mc/sec.
.....1000 — 2500 mc/sec.

Power Output:50 watts to 400 mc/sec.
.....25 watts to 1000 mc/sec.
.....10 watts to 2500 mc/sec.

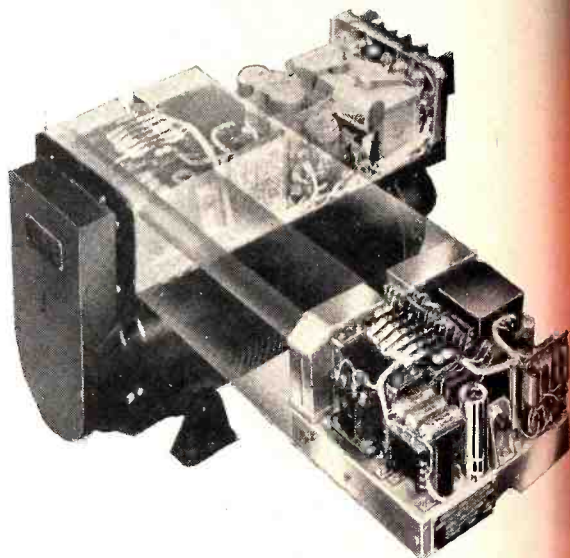
Modulation: Internal, Square Wave, 400 or 1000 cps
.....Internal, Sine Wave, 400 or 1000 cps
.....External
.....CW

Nominal Output Impedance:50 ohms

Output Connector:Type N Jack

Input Power Requirements: 115 VAC, 60 cps, 200 watts

MAXSON PRECISION FREQUENCY and VOLTAGE REGULATORS for aircraft inverters



model M-1087 Frequency Regulator

Size:Control — 22 x 5 x 7¾ inches
.....Inverter — Depends on unit used

Weight:Control — 28½ pounds
.....Inverter — Depends on unit used

Input voltage:26 to 29 volts d-c

Frequency control over entire range of input voltage and load: Instantaneous for steady-state input voltage and load, 400 ± 1 cps

Average over 30 or more minutes*, 400 ± 0.1 cps

Frequency excursion: Maximum for transient changes in d-c supply voltage 26 to 29 volts or output load from zero to full load, ± 20 cps

Recovery: After maximum transient change in d-c voltage supply or load; to 400 ± 2 cps within 1.5 seconds; to 400 ± 1 cps within 2.5 seconds

Power consumption: (control unit†): 200 watts max.

model M-1119 Voltage Regulator

Size:5½ x 6½ x 3½ inches

Weight:1.5 pounds net, 5.5 pounds gross

Input voltage:26 to 29 volts d-c

Output-voltage control over range of input voltage and load: ± 2 volts of selected voltage between 100-130

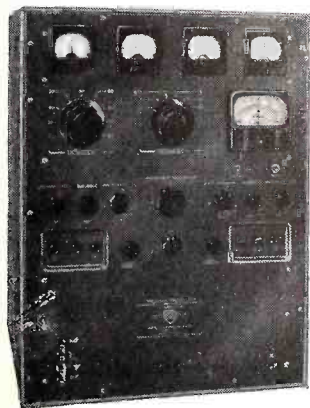
Voltage excursion: Maximum for transient changes in d-c supply voltage from 26 to 29 volts or output from zero to full load, ± 2 volts

Power consumption: (control unit†) 200 watts max.

*In certain applications, at extra cost, this precision can be improved to practically any degree desired.

†Power to operate the regulator is taken from the inverter.

MAXSON PRECISION PHASEMETER



model P-1060

Frequency Range:
30 cps to 20,000 cps

Phase Range:
0—360 degrees

Accuracy: 0.1 degrees

Signal Level:
0.5 to 10 volts rms

Input Impedance:
10 megohms shunted by 25 μf

Display:
Decade null system

Power Requirements:
200 watts at 105—
125 volts, 60 cycles

Size: 19½" wide x 16¼" deep x 25" high. **Wt.:** 110 lbs.

Cabinet: Internally shielded walnut cabinet. Equipment when removed from cabinet is suitable for standard 19" relay-rack mounting.

THE W. L. MAXSON CORP.

460 WEST 34TH ST. NEW YORK 1, N. Y.

Plants at Old Forge, Penn. and Long Island City and New York, N. Y.

BORG MICROPOTS

the
NEW STANDARD
of precision
multi-turn
potentiometers



Model 933SS

BORG 900 SERIES 3-TURN AND 10-TURN MICROPOTS

3-TURN MODELS 931-935



932BB

933SK

935SS

10-TURN MODELS 901-903



901SK

902B

903BK

903S

Standard models of Borg 900 Series Micropots offer such flexibility that they meet special design requirements. Borg has created a new standard for high-precision, multi-turn potentiometers.

Advantages of the Borg 900 Series include greater accuracy, finer resolution, lower torque, longer life, and better performance under severe and excessive

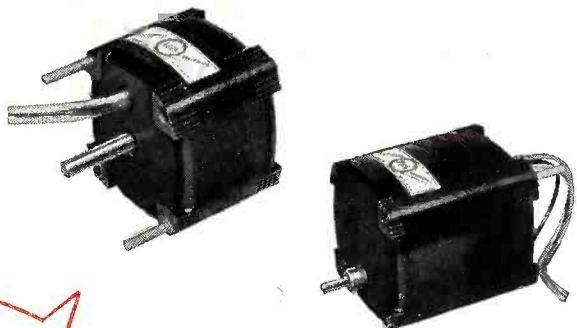
vibration, greater adaptability and versatility of application.

Standard models include: 10-turn precision Micropots in 1 to 3 gang models, 3-turn in 1 to 5 gang models, single or double shafts, servo or bushing mounts on either or both ends. Available to designers and engineers in any quantity.

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STANDARD SERIES 2 POLE AND 4 POLE MODELS With and Without Gear Trains

Borg-Motors were designed specifically for instrumentation, control and timing devices. They are recommended for all applications where low torque, constant speed and long life are positive requirements.



For Complete Engineering Data

SERVO-CONTROL Borg-Motors

Two phase, 115 volt, 400 cps induction type Borg-Motors for servo control applications. Approximate size 1½" diameter x 2" long with a locked rotor torque of 0.82 ounce-inch.

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BORG EQUIPMENT DIVISION
THE GEORGE W. BORG CORPORATION
JANESVILLE, WISCONSIN

NAME.....

TITLE.....

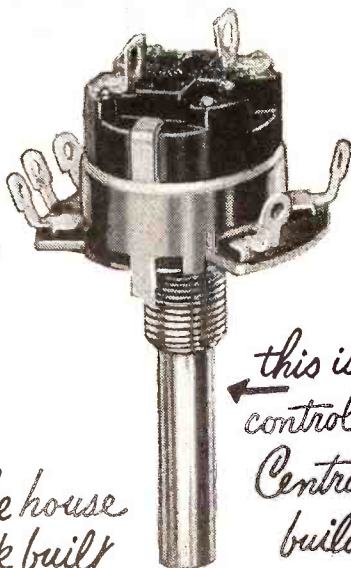
Please send complete information and engineering data on items checked.

- Precision Multi-Turn Potentiometers, 900 Series
- Borg Standard Potentiometer, 1100 Series
- Precision Multi-Turn Counting Dials
- Servo Control Motors
- Instrument Motors
- Frequency Standards
- Contract Manufacturing

BORG EQUIPMENT DIVISION
THE GEORGE W. BORG CORPORATION
JANESVILLE, WISCONSIN



*this is the house
that Jack built*

















*this is the
control that
Centralab
builds*

but FACTS... not fable

make the **Model 2 Radiohm[®]** industry's finest control

here's how it goes together...

SWITCH  ... COVER  ... STOP  it's positive. also provides superior switch shielding. Laminated phenolic SHOE  resists humidity. Double wiping CONTACT SPRING  for noiseless rotation. TERMINALS  ... velvet-smooth RESISTOR  available in 14 standard tapers. CENTER TERMINAL-COLLECTOR, specially treated for smooth take-off.  BASE  laminated phenolic for high humidity insulation. GROUND PLATE  ... BUSHING  accurately finished to close tolerances for smooth shaft rotation. RETAINING RING  ... SHAFT  available in round, flatted, slotted, split-knurrl, and finger-tip knurrl. ALL ASSEMBLED  the Model 2 is only 15/16" in diameter, rated at 1/2 watt.

VARIETIES AVAILABLE: single or twin, concentric shafts, plain or switch type, with or without taps; control and rotary tap switch combinations.

MANY SWITCH TYPES—Line switches rated 5 or 8 amps @ 125 volts a-c. Six switching combinations for real production flexibility.

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Get all the facts and you'll specify Centralab.*

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EXPERIENCE + RESEARCH + PERFORMANCE



LEADERSHIP

in



Servo Motor the size of a Penny

**SYNCHROS
SERVO MOTORS
RESOLVERS**



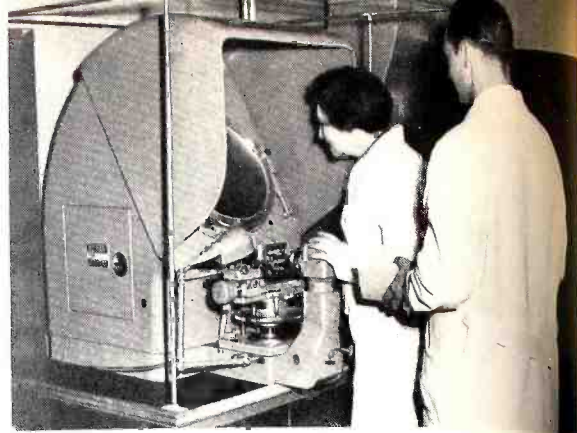
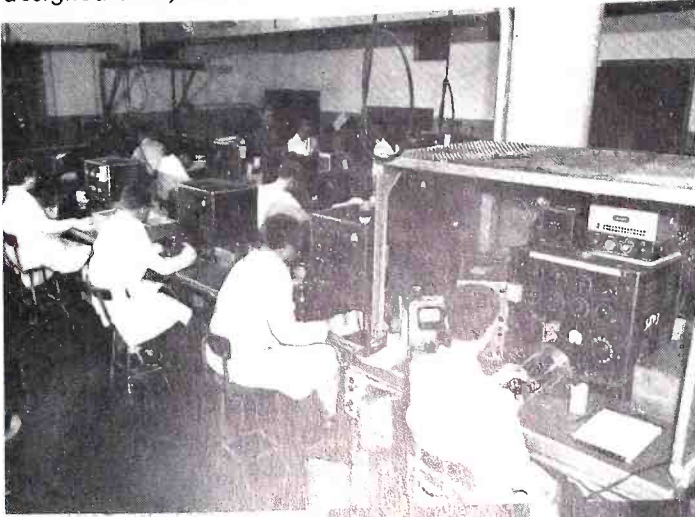
**PRODUCES THE
COMPLETE RANGE
OF SIZES AND TYPES
TABULATED ON THE
FOLLOWING PAGES...**

Ketay

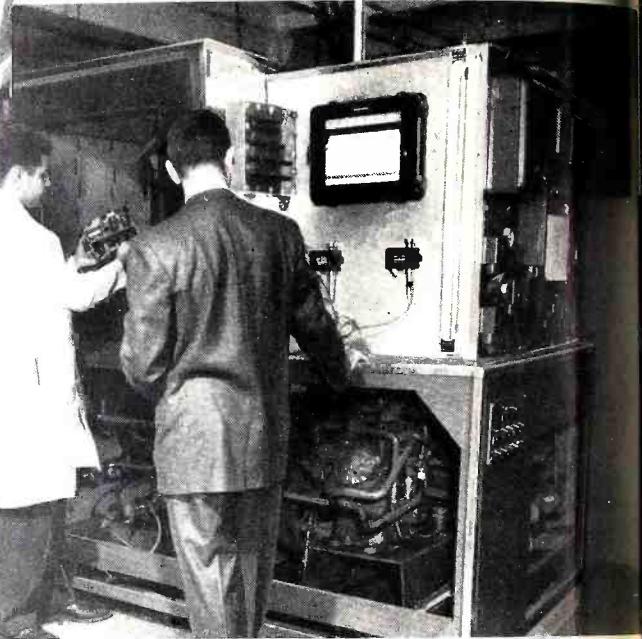


(2) i
(3) Ge.

Skilled technicians performing one of dozens of tests on size 23 Synchros. As design agent for Army Ordnance, Ketay designed all Synchros of this size.



Jones and Lamson optical comparator... one of hundreds of different methods (many of them original developments) used to insure precision.



Environmental test chamber can simulate altitudes up to 90,000 feet; produce temperatures to 100°F and controlled humidity to 98%. This chamber performs all environmental tests in accordance with MIL-E-5272.

EXPERIENCE + RESEARCH + PERFORMANCE = LEADERSHIP

The final test of leadership is the ability to deliver. Ketay offers:

- Original research to meet highly specialized requirements and unusual operating conditions;
- Application of this research to the economical manufacture of high quality products;
- Volume production to comply with stringent delivery schedules.

By providing a complete range of sizes and types... originality of design... facilities for volume produc-

tion... Ketay has established this kind of leadership.

Ketay's experience also includes: gyro components; automatic control devices for fire control and missile systems; computers and simulators; magnetic, resolver and synchro amplifiers; marine inter-communication equipment; ship's course, salinity and other remote indicators; and automatic control systems.

The Research and Development Division is staffed and equipped to participate in advanced studies during the design stage of applications involving Ketay electro-mechanical devices.

- SYNCHROS
- SERVO MOTORS
- RESOLVERS
- MAGNETIC AMPLIFIERS
- AUTOMATIC CONTROL SYSTEMS

Ketay

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Electronic Instrument Division • Research & Development Division

For further information or additional copies of this catalog sheet write directly to Ketay



Why we choose **Winco** DYNAMOTORS

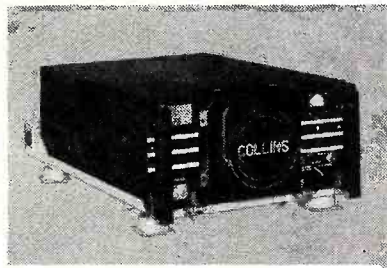
"Precision airborne communication equipment must have a dynamotor of consistently reliable quality . . . that's why we specify Winco."

says Mr. Paul Wulfsberg,
Ass't. Director Engineering and Research

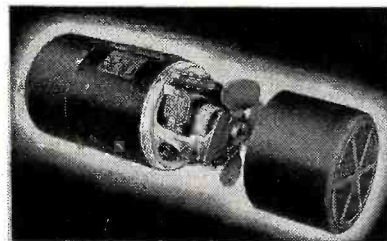
COLLINS RADIO CO.

Cedar Rapids, Iowa.

WINCO DYNAMOTORS are manufactured on a wide range of rugged frames that allow for a wide design applications. Winco engineers have a decade of experience in successfully designing dynamotors to rigid military and commercial specifications. They tackle each power conversion and/or supply problem individually, either modifying a standard Winco machine, or designing a special unit to meet your exact requirements. Winco specialists then plan its manufacture on a production basis to keep costs down and final performance quality at its best. Winco dynamotors are lightweight, compact and fully enclosed and ventilated. Precise static and dynamic balance is assured by the most modern machines — each dynamotor is thoroughly tested with periodically calibrated precision meters.



Collins 185 Transmitter/Receiver, used for reliable HF communications in major air-lines and executive aircraft uses a Winco-Engineered Frame 51 Dynamotor.



SEND THIS COUPON TODAY for complete information on how Winco can supply you with reliable, efficient dynamotors and power supplies produced in volume at low cost.

POWER for the Nation's Mobile Communications

WINCHARGER CORPORATION

Sioux City 2, Iowa

Subsidiary of ZENITH Radio Corporation

To Wincharger Corp., Sioux City 2, Iowa.

Send me the facts on Winco Dynamotors and Power Supplies

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Let HERMASEAL help you with HEADERS.. SEALED RELAYS.. END CAPS.. GLASS SEAL TUBES and Special Products to meet your Special Requirements

HEADERS... Kovar and Compression type ... standard or special



Simple or complex, standard or special, Hermaseal manufactures them all, 2-electrode crystal holder bases, standard and special headers up to 18-terminal headers available in a wide range of sizes, styles and patterns. Standard finish is hot solder dipped at 550° F. Hermaseal can do the wiring and supply enclosures, with either dry air fill or vacuum pumped and pressure-filled with dry nitrogen, for relays, transformers, choke coils, etc. Hermaseal hermetically sealed assemblies meet all specifications, are available in a wide range of sizes and adaptations to meet special requirements.

TERMINALS and END CAPS... Kovar and Compression type ... all kinds, all sizes



Hermaseal manufactures both Kovar and Compression Type Sealed Terminals and End Caps in an extremely wide range of sizes including miniature and sub-miniatures. Terminals for very low or very high voltage, tubular electrodes for high current-carrying capacity and with solid electrodes for moderate current requirements. Standard finish is hot solder dipped at 550° F. Hermaseal facilities are at your service for soldering terminals to your transformer covers ... evacuating and pressure filling enclosures.

METALLIZED GLASS APPLICATIONS... special or standard



Whether it be Metallized Glass Tubes or Metallized Glass Windows, you can count on Hermaseal. They are offered in hard or soft glass with platinum or silver metallizing. Hot solder dipped finish for ease in subsequent soldering operations. Hermaseal Tubes and Windows are available in a wide range of standard and special styles and sizes.

HERMASEAL can help you with any Hermetic Sealing problem

Hermaseal can help you gain improved performance characteristics and real economies in the application of hermetic seals to the production of switches, resistors, transistors, ger-

manium diodes, rectifiers, relays, coils, transformers, radio and TV parts, for the radio-electronics and allied industries. In addition to the manufacture of glass-to-metal seals

Hermaseal can help you with their installation in your product. Our development and production experience are at your service. Send specifications and sketches to Hermaseal today.



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1101 LAFAYETTE ST., ELKHART 50, INDIANA

DUTY, PRECISION-REGULATED POWER SUPPLIES

**Y MORE
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VER SUPPLY!**

ial survey, made
yers' Guide,
nningly was named
ly specified make
With an unlimited
ing engineers
% advantage over
e third brand.



Model 25



Model 28M



Bench Model 50

**T VOLTAGE REGULATION,
NCE, RIPPLE**

| Load to max) | Internal Impedance (ohms) | Ripple, rms (millivolts or %) | |
|-----------------|---------------------------------|-------------------------------------|-----------|
| | | Less than | Less than |
| 1% | 10 | 10 mv | |
| 1% | 10 | 5 mv | |
| 1% | 4 | 10 mv | |
| or 0.3V | 2 | 8 mv | |
| regulated | 3,300 | 2 mv | |
| regulated | 17,500 | 5 mv | |
| or 0.3V | 2 | 5 mv | |
| regulated | 500 | 0.1% | |

SIZES AND WEIGHTS

| D | WEIGHT | |
|--------|-------------|------------------|
| | Net (lb) | Shipping (lb) |
| 6 | 19 | 23 |
| 8 | 19 | 23 |
| 9 3/4 | 43 | 66 |
| 10 3/4 | 60 | 88 |
| 9 1/4 | 42 | 52 |
| 14 1/4 | 89 | 143 |
| 9 | 70 | 140 |
| 10 | 60 | 68 |
| 15 | 110 | 175 |

| Model | Style | Voltage Range (VDC) | Current Range (MA DC) | Regul'n Impedance Ripple (Table I) | 6.3 VAC Output (Amps) | Meters | Output Voltage Control | Output Terminals | Size Weight (Table II) | Price F.O.B. Factory Corona, N. Y. |
|-----------------------------------|-------|------------------------|------------------------------|------------------------------------|-----------------------|-------------|------------------------|------------------|------------------------|------------------------------------|
| REGULATED POWER SUPPLIES | | | | | | | | | | |
| 25 | Bench | 200-325 | 0-100 | A | 3A | None | Front | Front | S-1 | \$ 64.50 |
| 28 | Rack | 200-325 | 0-100 | A | 3A | None | Rear | Rear | S-2 | 57.50 |
| 28M | Rack | 200-325 | 0-100 | A | 3A | 3 1/2" Rect | Rear | Rear | S-2 | 87.50 |
| 29 | Rack | 100-200 | 0-100 | B | 3A | None | Rear | Rear | S-2 | 67.50 |
| 29M | Rack | 100-200 | 0-100 | B | 3A | 3 1/2" Rect | Rear | Rear | S-2 | 97.50 |
| 32 | Rack | 200-325 | 0-300 | C | 2 @ 5A | None | Rear | Rear | S-5 | 129.50 |
| 32M | Rack | 200-325 | 0-300 | C | 2 @ 5A | 3 1/2" Rect | Rear | Rear | S-5 | 159.50 |
| 32-C | Bench | 200-325 | 0-300 | C | 2 @ 5A | None | Rear | Rear | S-8 | 149.50 |
| 32M-C | Bench | 200-325 | 0-300 | C | 2 @ 5A | 3 1/2" Rect | Rear | Rear | S-8 | 179.50 |
| 33 | Rack | 100-200 | 0-300 | C | 2 @ 5A | None | Rear | Rear | S-5 | 144.50 |
| 33M | Rack | 100-200 | 0-300 | C | 2 @ 5A | 3 1/2" Rect | Rear | Rear | S-5 | 174.50 |
| 33-C | Bench | 100-200 | 0-300 | C | 2 @ 5A | None | Rear | Rear | S-8 | 164.50 |
| 33M-C | Bench | 100-200 | 0-300 | C | 2 @ 5A | 3 1/2" Rect | Rear | Rear | S-8 | 194.50 |
| 34 | Bench | 200-325 | 0-300 | C | 2 @ 5A | 4 1/4" Rect | Front | Fr & rear | S-8 | 199.50 |
| 34-R | Rack | 200-325 | 0-300 | C | 2 @ 5A | 4 1/4" Rect | Front | Fr & rear | S-5 | 179.50 |
| 35 | Bench | 100-200 | 0-300 | C | 2 @ 5A | 4 1/4" Rect | Front | Fr & rear | S-8 | 214.50 |
| 35-R | Rack | 100-200 | 0-300 | C | 2 @ 5A | 4 1/4" Rect | Front | Fr & rear | S-5 | 194.50 |
| 50 | Bench | 0-500 0-50 0-200 | 0-500 Bias High Imped. | D E F | 2 @ 5A | 4 1/4" Rect | Front | Fr & rear | S-9 | 415.00 |
| 50-R | Rack | 0-500 0-50 0-200 | 0-500 Bias High Imped. | D E F | 2 @ 5A | 4 1/4" Rect | Front | Fr & rear | S-6 | 395.00 |
| 62 | Rack | 245-305 | 0-600 | G | 20A | None | Rear | Rear | S-7 | 239.50 |
| 62M | Rack | 245-305 | 0-600 | G | 20A | 3 1/2" Rect | Rear | Rear | S-7 | 269.50 |
| 63 | Rack | 195-255 | 0-600 | G | 20A | None | Rear | Rear | S-7 | 239.50 |
| 63M | Rack | 195-255 | 0-600 | G | 20A | 3 1/2" Rect | Rear | Rear | S-7 | 269.50 |
| 64 | Rack | 100-200 | 0-600 | G | 20A | None | Rear | Rear | S-7 | 244.50 |
| 64M | Rack | 100-200 | 0-600 | G | 20A | 3 1/2" Rect | Rear | Rear | S-7 | 274.50 |
| 65 | Rack | 0-100 | 50-600 | G | 20A | None | Rear | Rear | S-7 | 249.50 |
| 65M | Rack | 0-100 | 50-600 | G | 20A | 3 1/2" Rect | Rear | Rear | S-7 | 279.50 |
| UNREGULATED POWER SUPPLIES | | | | | | | | | | |
| 41 | Bench | 0-500 | 0-200 | H | 6A | 2 1/2" Rnd | Front | Fr & rear | S-4 | 149.50 |
| 41-R | Rack | 0-500 | 0-200 | H | 6A | 2 1/2" Rnd | Front | Fr & rear | S-3 | 134.50 |

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

GENERAL SPECIFICATIONS

(Applicable to all models)

INPUT: 105-125 V, 50-60 C, single phase

DC OUTPUT:

Voltage Range: Continuously variable over ranges specified, except for Models 62, 63, 64 and 65. The voltage ranges for the latter models are completely covered in four continuously variable segments.

Current Range: The current ranges given apply to the entire DC output voltage range, and for input voltages from 105 to 125 VAC. No "derating" is necessary.

Polarity: Either positive or negative terminal may be grounded.

AC OUTPUT: The AC output is unregulated, isolated and ungrounded. It has a value of slightly higher than 6.3 V (when fully loaded) at an input of 115 VAC. This value allows for voltage drop in connecting leads. Dual outputs may be connected in series or parallel.

DUTY CYCLE: Continuous duty at full load

METERS: Where meters are indicated, a separate voltmeter and milliammeter are provided.

OVERLOAD PROTECTION: Ample protection is provided against external overload and internal failure conditions by means of fuses.

Circuit breakers of the magnetic, "trip-free" type are employed in Models 50 and 50-R as protection against external overloads.

STYLE:

Rack Models are designed for mounting on standard 19" relay racks.

Bench Models are provided with compact, specially-designed, ventilated cabinets equipped with carrying handles. The power supply units may be removed from their cabinets for mounting in standard relay racks (except Model 25).

RATINGS AND COMPONENTS: All components used are of the highest quality and are operated well within manufacturers ratings. Hermetically-sealed, oil-filled capacitors are used exclusively. Ample safety factors are provided in the design to insure the long life, and the dependable, trouble-free operation so desirable in industrial and laboratory applications.

LAMBDA



ELECTRONICS CORP.

103-02 NORTHERN BLVD.

CORONA 08, NEW YORK

Y, TIME, INCONVENIENCE — CHEAPER THAN BUILDING POWER SUPPLIES YOURSELF

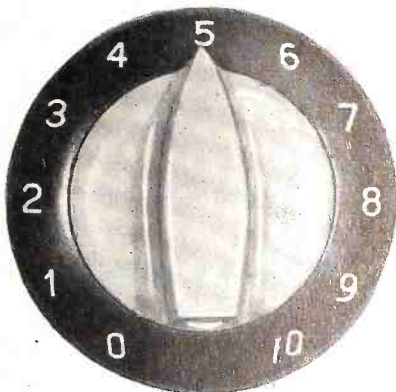
Save Time and Money

Use

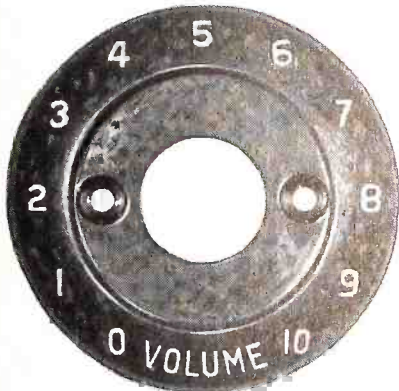
ROGAN COMBINATION KNOBS

(From Stock Molds)

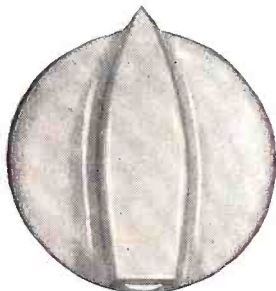
- No Tool Charge
- No Tooling Wait



RB-1000 Combined with RB-31



RB-1000 ESCUTCHEON



RB-31 KNOB

Ideal for a wide range of products. Molds and assorted marking dies already made up. No tooling charge, no tooling wait. Special knobs and branding to specifications at nominal cost. Send for Bulletin 104.

ROGAN BROTHERS
8031 N. Monticello • Skokie, Illinois

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In addition to the usual open and enclosed types of transformers used for standard electronic applications, Acme Electric has complete manufacturing and processing facilities for building special units to meet exacting requirements. It's good business to depend upon Acme Electric as your source of supply for specials as well as standard transformers.

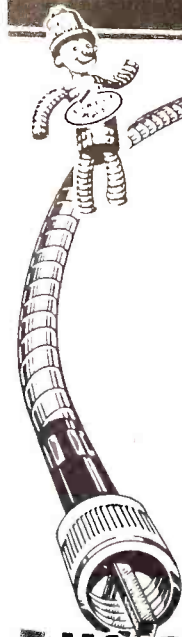
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316GB WATER ST. • CUBA, N. Y.

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50 Northline Road, Toronto, Ontario



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check list

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- HERMETICALLY SEALED
- GAS-FILLED CASES
- PLASTIC ENCAPSULATED
- VOLTAGE STABILIZERS
- VOLTAGE REGULATORS
- CUSTOM BUILT DESIGNS
- LARGE SIZE ELECTRONIC DESIGNS



FLEXIBLE SHAFTS

make for simple grouping of working units and insure quiet, smooth trouble-free operation.

Flexible shafts offer a more economical construction and lower maintenance cost.

Direct alignment in remote control or power transmission around corners is a saving in space and operation.

Write on your letterhead for our
Flexible Shaft Manual EBG

F. W. STEWART MFG. CORP.

4311-13 RAVENSWOOD AVENUE • CHICAGO 13, ILL.

WEST COAST PLANT: 1638 So. FLOWER STREET • LOS ANGELES 15, CALIFORNIA



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(For Years a Standard for Radio and TV)

Get Your FULL RANGE of Finest Quality Laminates

St. Regis Panelyte Industrial Laminates, with phenolic, melamine and silicone resins, have excellent insulating properties for radio, TV and other electronic purposes. Available in sheets, rods, tubes, molded specialties and fabricated parts. Included in this range are metal-clad laminates for the printed circuit industry.

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| SHEET STOCK | | | |
|----------------|------------|---|---------------------|
| Panelyte Grade | Nema Grade | DESCRIPTION | GOVERNMENT SPEC. |
| 750 | X | Paper Base, Phenolic Resin, Mechanical | (PBM) |
| 550 | XX | Paper Base, Phenolic Resin, Mechanical & Electrical | MIL-P-3115B (PBG) |
| 520 | XXX | Paper Base, Phenolic Resin, Electrical | MIL-P-3115B (PBE) |
| 770 | P(XP) | Paper Base, Phenolic Resin, Cold Punching, General Electrical | ..... |
| 772 | PC | Paper Base, Phenolic Resin, Cold Punching, Secondary Electrical | ..... |
| 774 | XXP | Paper Base, Phenolic Resin, Hot Punching, Good Electrical | ..... |
| 776 | XXXP | Paper Base, Phenolic Resin, Hot Punching, High Frequency | MIL-P-3115B (PBE-P) |
| 790 | XXXP | Paper Base, Phenolic Resin, Copper-Clad Printed Circuits | ..... |
| 900 | C | Fabric Base, Phenolic Resin, Mechanical | MIL-P-15035B (FBM) |
| 910 | CE | Fabric Base, Phenolic Resin, Good Electrical, Fair Mechanical | MIL-P-15035B (FBG) |
| 940 | L | Fabric Base (Fine Weave), Phenolic Resin, Fine Machinability | MIL-P-15035B (FBI) |
| 950 | LE | Fabric Base (Fine Weave), Phenolic, Good Electrical, Fair Mechanical | MIL-P-15035B (FBE) |
| 580 | A | Asbestos Paper, Phenolic Resin, Heat Resistance, Low Voltage | (PBH) |
| 980 | AA | Asbestos Cloth, Phenolic Resin, Very High Impact | (FBH) |
| 130 | G7 | Continuous Glass Cloth, Silicone Resin, High Heat Resistance | MIL-P-997B (GSG) |
| 135 | G6 | Staple Glass Cloth, Silicone Resin, High Heat Resistance | ..... |
| 140 | G5 | Continuous Glass Cloth, Melamine Resin, Arc Resistance, High Strength | MIL-P-15037B (GMG) |
| 170 | G3 | Continuous Glass Cloth, Phenolic Resin, Highest Strength | ..... |
| 190 | N1 | Nylon Cloth, Phenolic Resin, Lowest dielectric & loss factor | MIL-P-15047B (NPG) |
| 784 | .... | Paper Base, Phenolic Resin, Good Insulation Resistance | MIL-P-3115B (PBE-P) |
| 9101 | .... | Fabric Base, Phenolic Resin, Low Water Absorption | Navy Spec 33B4 |
| 920 | | Fabric Base (Medium Weave), Phenolic, Good Impact, Good Machinability | MIL-P-15035B (FBM) |

ALL ROD AND TUBE TO SPECIFICATION MIL-P-79B.

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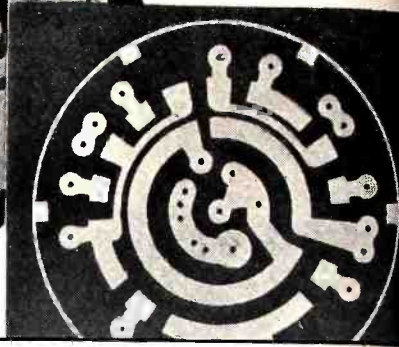
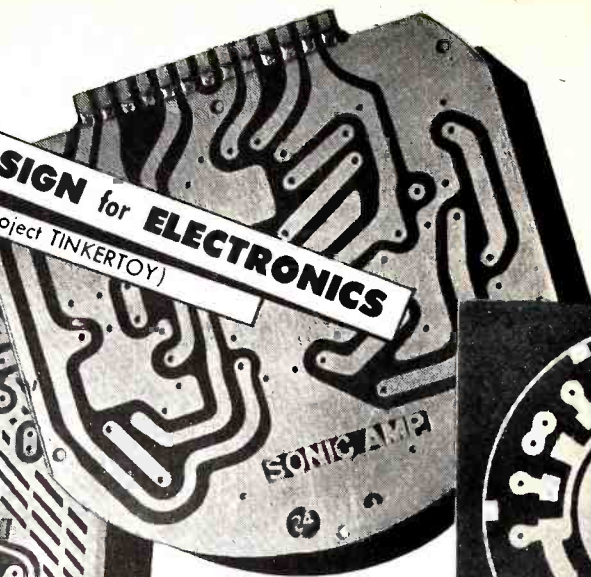
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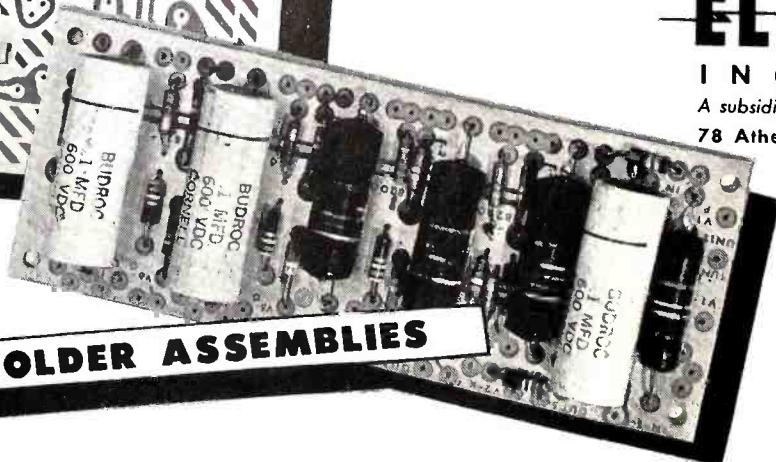
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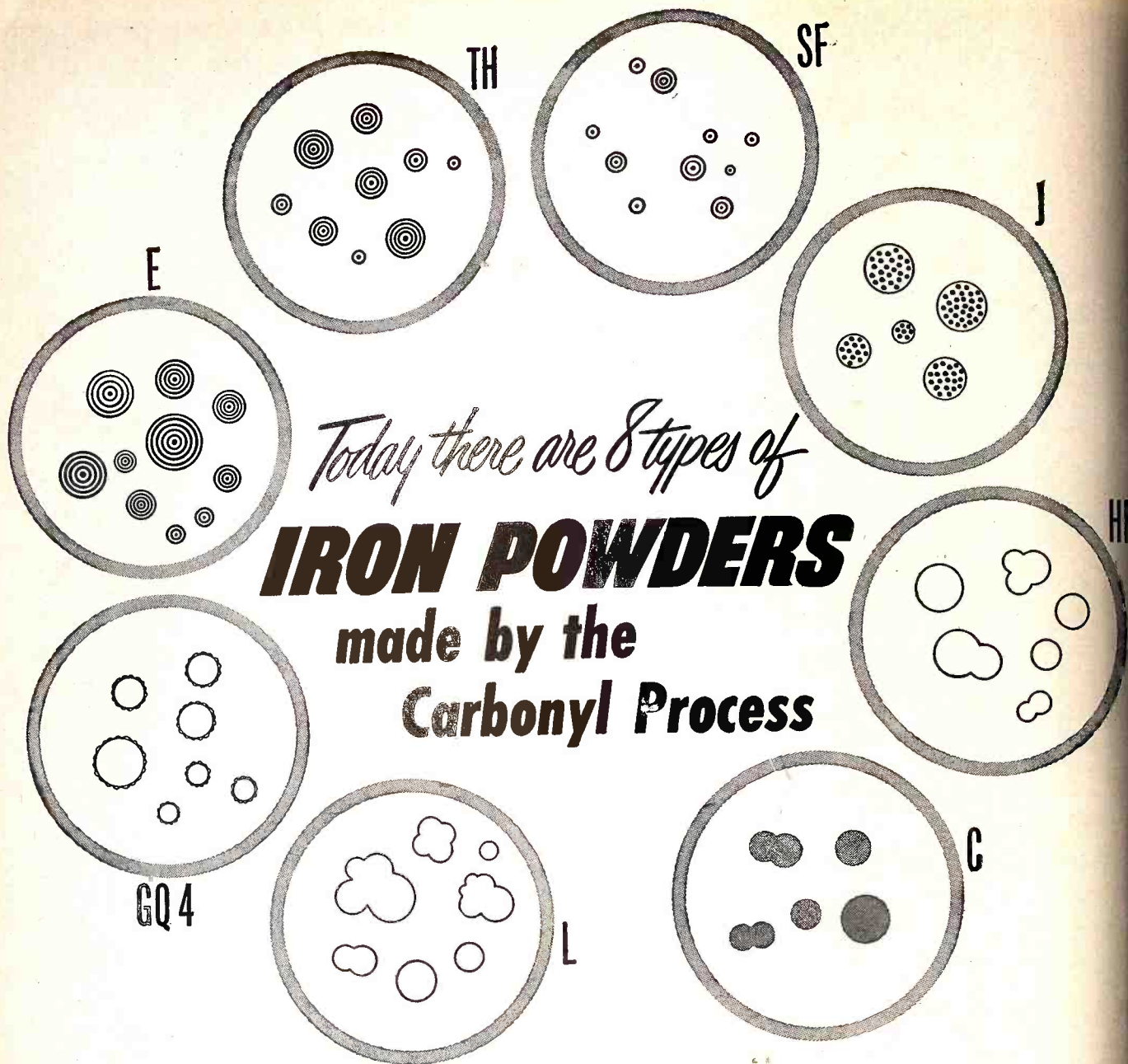
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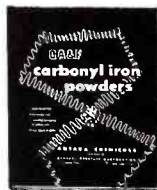
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- E** Steel-like, concentric shell structure, weight average diameter 5 microns
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- SF** Steel-like, concentric shell structure, weight average diameter 3 microns
- J** Alloy, face-centered cubic crystal structure, higher resistivity, weight average diameter 8 microns
- HP** Soft, pure iron, high magnetism, weight average diameter 10 microns
- G** Soft, low hysteresis, weight average diameter 10 microns
- L** Soft, larger particles, many agglomerates, weight average diameter 20 microns, pure iron
- GQ 4** Soft, refractory coating on particle surface, weight average diameter 8 microns

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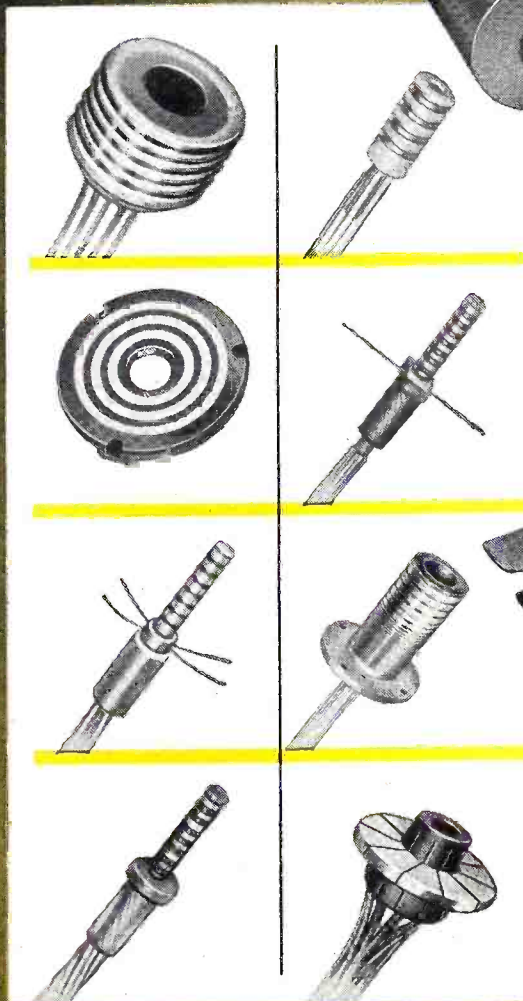
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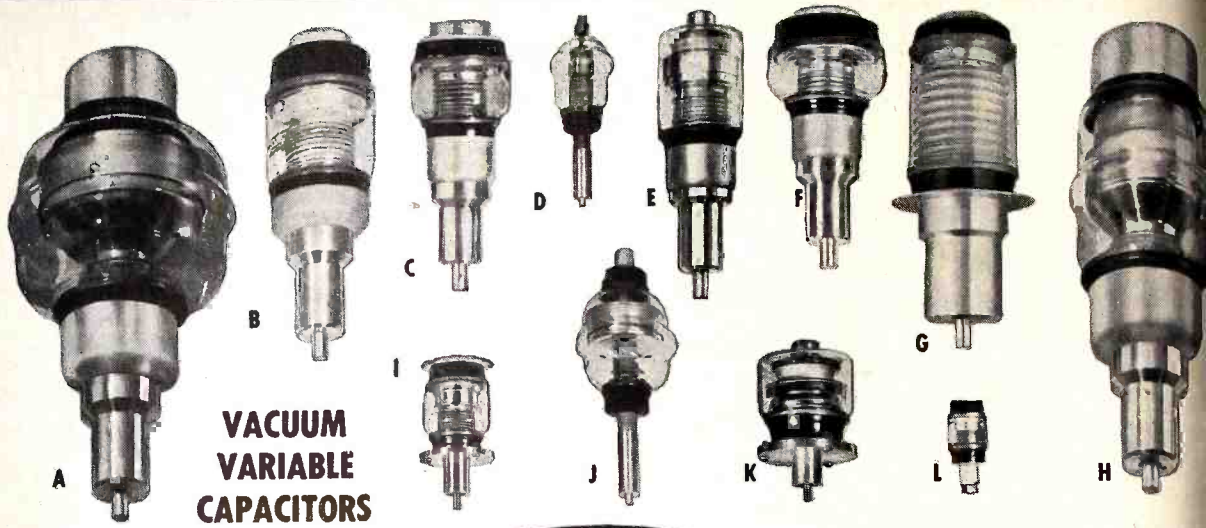
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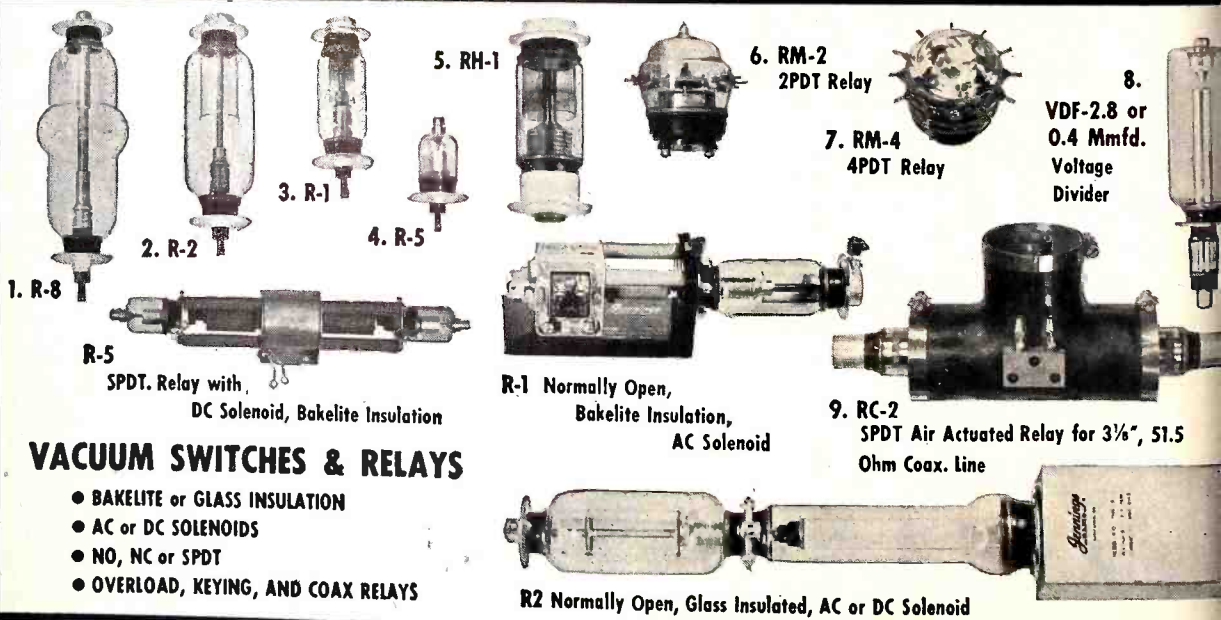
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| FIGURES | NICKEL TYPES | COPPER TYPES | CAPACITY MMFD. | PEAK VOLTAGE KILOVOLTS | RMS AMPERES NCKL. CPPR. | OVERALL LENGTH | MAX. O. D. | CONTACT DIA. | MOUNTING CENTERS |
|----------------------------|--------------|--------------|------------------------|------------------------|-------------------------|--------------------------------|--------------------------------|---|-------------------------------|
| VARIABLE CAPACITORS | | | | | | | | | |
| NOMINAL DIMENSIONS | | | | | | | | | |
| D | T | | 5-25 | 20 | 10.5 | 6 ³ / ₈ | 2 ¹ / ₄ | 1 ¹ / ₂ x ³ / ₈ | 4 ¹ / ₈ |
| J | | TC | 5-25 | 20 | 20 | 6 ⁵ / ₈ | 2 ¹ / ₈ | 5 ³ / ₈ | 4 ³ / ₈ |
| L | | ECS | 2-8, 3-30 | 10, 15 | 20 | 2 ⁷ / ₈ | 1 ³ / ₈ | 1 | 2 ¹ / ₈ |
| D | AT | | 10-50, 15-75 | 20, 25, 30 | 10.5 | 6 ³ / ₄ | 3 | 1 ¹ / ₂ x ³ / ₈ | 4 ³ / ₈ |
| J | | ATC | 10-50 | 20, 30 | 20 | 7 | 3 ¹ / ₈ | 3 ³ / ₈ x ³ / ₈ | 4 ³ / ₈ |
| J | | ATCS | 10-150, 15-190 | 7.5, 10, 15 | 20 | 7 | 3 ¹ / ₈ | 3 ³ / ₈ x ³ / ₈ | 4 ¹ / ₂ |
| K | | VAC | 4-40 | 10 | 42 | 4 ⁵ / ₈ | 2 ³ / ₄ | 1 ¹ / ₂ x ⁷ / ₈ | ..... |
| I | | GCS | 5-100 | 7.5, 10, 15 | 30 | 4 ⁵ / ₈ | 2 ¹ / ₈ | 2 ¹ / ₈ | 3 ³ / ₈ |
| E | | UCS | 5-200, 10-300 | 7.5, 10, 15 | 42 | 8 ³ / ₄ | 2 ⁵ / ₈ | 7 ¹ / ₈ x2 | 4 ⁵ / ₈ |
| E | | UCS | 10-375, 10-400, 25-500 | 7.5, 10, 15 | 42 | 9 | 3 ¹ / ₈ | 7 ¹ / ₈ x2 | 4 ⁷ / ₈ |
| F | | UCSF | 5-250, 12-500 | 7.5, 10, 15 | 60 | 7 ³ / ₄ | 3 ⁵ / ₈ | 2 | ..... |
| I | | UCSL | 4-250 | 3, 5 | 30 | 4 | 2 ¹ / ₄ | 2 ¹ / ₈ | 2 ¹ / ₂ |
| C | | UCSL | 4-500, 5-750, 7-1000 | 3, 5 | 42 | 7 ⁵ / ₈ | 3 ¹ / ₈ | 2 | 3 ¹ / ₂ |
| C | | UCSL | 20-2000 | 2, 3 | 42 | 8 ³ / ₈ | 3 ¹ / ₈ | 2 | 4 ¹ / ₄ |
| K | | UCSV | 8-110 | 7.5, 10, 15 | 60 | 4 ³ / ₄ | 3 | 7 ¹ / ₈ | ..... |
| K | | UCSV | 100-250 | 7.5, 10, 15 | 60 | 5 ¹ / ₄ | 3 | 7 ¹ / ₈ | ..... |
| K | | UCSVH | 8-35 | 25, 35 | 60 | 4 ³ / ₄ | 3 | 7 ¹ / ₈ | ..... |
| G | | UCSM | 4-500 | 7.5, 10, 15 | 80 | 10 ⁵ / ₈ | 3 ⁵ / ₈ | 2x ³ / ₈ | 6 |
| B | | UCSX | 25-700, 25-1000 | 7.5, 10, 12 | 60 | 9 ³ / ₄ | 3 ³ / ₄ | 2x3 ¹ / ₈ | 5 |
| F | | UCSXF | 10-1000, 20-1500 | 7.5, 10, 12 | 60 | 9 ³ / ₄ | 5 ¹ / ₈ | 3 ¹ / ₈ | 4 ⁷ / ₈ |
| F | | UCSXF | 50-2000, 50-2300 | 5, 7.5, 10 | 60 | 10 | 5 ¹ / ₈ | 3 ¹ / ₈ | 5 ¹ / ₈ |
| B | | UCSXH | 10-200 | 35, 45 | 60 | 10 ³ / ₄ | 4 ¹ / ₂ | 2 | 5 ¹ / ₂ |
| F | | UCSXH | 20-450 | 35, 40 | 60 | 10 | 5 ¹ / ₈ | 3 ¹ / ₈ | 5 ¹ / ₈ |
| A | U | UC | 50-250 | 10, 15, 20 | 21 | 60 | 11 ¹ / ₂ | 5 | 2 |
| A | UH | UHC | 10-75, 75-150 | 35, 45, 55, 60 | 21 | 60 | 12 | 5 | 2 |
| H | UX | UXC | 25-500 | 10, 15, 20 | 21 | 60 | 14 | 5 | 3 ¹ / ₈ |
| H | UXH | UXHC | 25-150 | 35, 45, 55 | 21 | 60 | 14 ⁵ / ₈ | 5 | 3 ¹ / ₈ |
| A | VMM | VMMC | 50-1000, 100-2000 | 10, 15 | 35 | 125 | 15 ⁷ / ₈ | 6 ¹ / ₈ | 4 ¹ / ₈ |
| A | | VMMC | 100-5000 | 5, 7.5, 10 | 125 | 125 | 19 ¹ / ₂ | 9 ¹ / ₄ | 4 ¹ / ₈ |
| A | VMMH | VMMHC | 10-250, 25-450 | 35, 45, 55 | 21 | 125 | 16 | 8 ¹ / ₈ | 4 ¹ / ₈ |
| A | | VMMHC | 60-1000 | 35, 40, 45 | 125 | 125 | 19 ¹ / ₂ | 9 ¹ / ₄ | 4 ¹ / ₈ |

NOTE: Adjustable Capacitors are available to cover range of 8 mmfd to 1000 mmfd at 10 KV.

| FIXED CAPACITORS | | | | | | | | | | |
|-------------------------|-----|-------|-----------------------------|----------------|------|-----|--------------------------------|-------------------------------|-------------------------------|--------------------------------|
| O | VC | VCC | 6, 12, 25, 50, 75, 100, 150 | 20, 30 | 14 | 60 | 6 ¹ / ₂ | 2 ⁵ / ₈ | 7 ¹ / ₈ | 5 ¹ / ₈ |
| O | VC | VCC | 200, 250 | 20, 30 | 14 | 60 | 6 ¹ / ₂ | 2 ³ / ₄ | 7 ¹ / ₈ | 5 ⁷ / ₈ |
| R | W | | 6, 12, 25, 50, 100 | 20 | 10.5 | | 4 ¹ / ₄ | 2 ¹ / ₄ | 3 ³ / ₈ | 3 ⁷ / ₈ |
| W | X | | 5, 10, 15, 20, 25 | 17 | 7 | | 3 ¹ / ₄ | 1 ¹ / ₈ | 3 ³ / ₈ | 2 ⁷ / ₈ |
| W | Y | | 1, 2, 3, 4, 5 | 17 | 7 | | 3 ¹ / ₄ | 3 ¹ / ₄ | 3 ³ / ₈ | 2 ⁷ / ₈ |
| X | | JCS-1 | 25, 50, 75, 100, 150 | 7.5, 10, 15 | 42 | | 3 ³ / ₄ | 2 ¹ / ₈ | 7 ¹ / ₈ | 3 ¹ / ₄ |
| S | | JCS-2 | 10, 20, 25, 50 | 7.5, 10, 15 | 20 | | 2 ³ / ₄ | 1 ¹ / ₂ | 3 ³ / ₈ | 2 ¹ / ₄ |
| X | | JCS | 250 | 7.5, 10, 15 | 42 | | 3 ³ / ₄ | 2 ⁵ / ₈ | 7 ¹ / ₈ | 3 ¹ / ₈ |
| X | | JCS | 500 | 7.5, 10, 15 | 42 | | 4 | 3 ¹ / ₈ | 7 ¹ / ₈ | 3 ¹ / ₂ |
| Q | | JCS | 1000 | 7.5, 10, 12 | 42 | | 4 ⁵ / ₈ | 3 ³ / ₈ | 2 | 3 ⁷ / ₈ |
| X | | JCSH | 75 | 35, 45, 55, 60 | 42 | | 4 | 2 ⁷ / ₈ | 7 ¹ / ₈ | 3 ³ / ₈ |
| S | | JCSL | 100 | 3, 5 | 20 | | 2 ⁵ / ₈ | 1 ¹ / ₂ | 3 ³ / ₈ | 2 ¹ / ₄ |
| S | | JCSL | 250 | 3, 5 | 20 | | 2 ⁵ / ₈ | 1 ⁷ / ₈ | 3 ³ / ₈ | 2 ¹ / ₈ |
| X | | JCSL | 500, 750 | 3, 5 | 42 | | 3 ⁷ / ₈ | 2 ¹ / ₈ | 7 ¹ / ₈ | 3 ³ / ₈ |
| X | | JCSL | 1000, 1500 | 3 | 42 | | 3 ³ / ₄ | 2 ⁷ / ₈ | 7 ¹ / ₈ | 3 ¹ / ₄ |
| X | | JCSL | 2000 | 2 | 42 | | 4 | 2 ⁷ / ₈ | 7 ¹ / ₈ | 3 ¹ / ₂ |
| N | | JC-2 | 25, 50, 75, 100 | 20, 30 | 42 | | 4 | 3 ¹ / ₄ | 7 ¹ / ₈ | 3 ¹ / ₄ |
| P | | JC-3 | 20, 40, 50, 60 | 35, 45, 55, 60 | 140 | | 8 ¹ / ₄ | 3 ¹ / ₂ | 2 | 6 ¹ / ₄ |
| U | | JC-4 | 75, 100, 125 | 35, 45, 55, 60 | 175 | | 9 ¹ / ₄ | 5 | 3 ¹ / ₈ | 7 |
| U | | JC-5 | 200 | 35, 45, 55, 60 | 225 | | 11 ¹ / ₄ | 7 | 4 ¹ / ₈ | 8 ³ / ₄ |
| T | M | MC | 500, 750, 1000 | 10, 15, 20 | 21 | 120 | 8 ³ / ₈ | 5 | 2 | 6 ¹ / ₄ |
| T | ML | MLC | 500, 750, 1000 | 25, 30 | 21 | 120 | 9 ¹ / ₄ | 5 | 2 | 7 ¹ / ₄ |
| M | MM | MMC | 1500, 2000 | 10, 15 | 35 | 125 | 9 ¹ / ₄ | 6 ¹ / ₈ | 4 ¹ / ₈ | 6 ³ / ₄ |
| M | | MMC | 5000 | 5, 7.5, 10 | 125 | 125 | 15 ¹ / ₂ | 9 ¹ / ₄ | 4 ¹ / ₈ | 11 ⁷ / ₈ |
| M | MMH | MMHC | 450 | 35, 45, 55 | 21 | 125 | 9 ¹ / ₄ | 6 ¹ / ₈ | 4 ¹ / ₈ | 6 ³ / ₄ |
| M | | MMHC | 1000 | 35, 40, 45 | 125 | 125 | 15 ¹ / ₂ | 9 ¹ / ₄ | 4 ¹ / ₈ | 11 ⁷ / ₈ |
| V | | MC-1 | 500, 750, 1000 | 10, 15 | 75 | | 4 ¹ / ₈ | 4 ¹ / ₈ | 2 | 3 |
| V | | MMC-1 | 2000 | 10, 15 | 125 | | 5 | 6 ¹ / ₈ | 3 ¹ / ₈ | 4 |

NOTE: Feed-thru Capacitors and glass standoff insulators are available on special order.

| VACUUM SWITCHES & VOLTAGE DIVIDER | | | | | | | | | |
|--|------|---|----------------|----------|--------------------------------|-------------------------------|--|--|--|
| FIGURE | TYPE | DESCRIPTION | PEAK KILOVOLTS | RMS AMPS | | | | | |
| 3 | R-1 | Vacuum Switch | 50, 60 | 55 | 6 ⁵ / ₈ | 1 ⁷ / ₈ | 2 ¹ / ₈ | | 5 |
| 2 | R-2 | Vacuum Switch | 50, 60, 70 | 50 | 8 ¹ / ₂ | 2 ⁵ / ₈ | 2 ¹ / ₈ | | 6 ³ / ₄ |
| 4 | R-5 | Vacuum Switch | 20 | 50 | 4 | 1 ¹ / ₂ | 3 ³ / ₈ x2 ¹ / ₈ | | 2 ⁵ / ₈ |
| 1 | R-8 | Vacuum Switch | 40, 70, 85 | 100 (RF) | 10 ¹ / ₄ | 3 ³ / ₈ | 2 ¹ / ₈ | | 8 ³ / ₈ |
| 5 | RH-1 | Vacuum Switch | 40, 50 | 200 | 7 ¹ / ₈ | 3 | 3 | | 6 |
| 6 | RM-2 | 2PDT Vacuum Relay | 12 | 10 (RF) | 3 ¹ / ₂ | 3 ¹ / ₂ | | | |
| 7 | RM-4 | 4PDT Vacuum Relay | 12 | 10 (RF) | 3 ¹ / ₂ | 3 ¹ / ₂ | | | |
| 9 | RC-2 | SPDT for 51.5 ohm, 3 ¹ / ₈ " Coax. Line | 20 | 50 (RF) | | | | | |
| 8 | VDF | Vac. Capacitor Voltage Divider | 40, 50, 60 | ..... | 9 ¹ / ₂ | 2 ¹ / ₂ | 5 ³ / ₈ | | 6 ¹ / ₂ x2 ⁵ / ₈ |

NOTE: Switch current ratings approximately 50% at 10 megacycles. ALL CURRENT RATINGS BASED ON 75° F. TEMPERATURE RISE.

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JENNINGS RADIO VACUUM ELECTRONIC COMPONENTS

EIMAC - 20 years



TETRODES

- | | |
|---------|----------|
| 4-65A | 4W20000A |
| 4-125A | 4X150A |
| 4-250A | 4X150D |
| 4-400A | 4X150G |
| 4-1000A | 4X500A |
| 4PR60A | 4X500F |



TRIODES

- | | |
|-----------|-------------|
| 2C39A | 100TL |
| 3W5000A3 | 152TH |
| 3W10000A3 | 152TL |
| 3X2500A3 | 250TH |
| 3X2500F3 | 250TL |
| 3X3000A1 | 304TH |
| 3X3000F1 | 304TL |
| 6C21 | 450TH |
| 25T | 450TL |
| 35T | 592/3-200A3 |
| 35TG | 750TL |
| 75TH | 1000T |
| 75TL | 1500T |
| 100TH | 2000T |

PENTODE

- 4E27A/5-125B



DIODES AND RECTIFIERS

- | | |
|---------|-------------|
| 2-01C | RX21A |
| 2-25A | 250R |
| 2-50A | 253 |
| 2-150D | 866A |
| 2-240A | 872A |
| 2-2000A | 8020 (100R) |
| KY21A | |



KLYSTRONS

- | |
|---------------|
| 3K20, 000LA |
| 3K20, 000LF** |
| 3K20, 000LK** |
| 3K50, 000LA |
| 3K50, 000LF |
| 3K50, 000LK |
| 1K015XA |
| 1K015XG |

TETRODES

TRIODES

PENTODE

KLYSTRONS

| EIMAC TUBE TYPE | MAXIMUM RATINGS | | | | | | ELECTRICAL CHARACTERISTICS | | | |
|-----------------|-------------------------|-----------------------------|----------------------------|------------------------|--|--------------------------|----------------------------|-------------------|----------------------|------------------------|
| | Plate Dissipation Watts | Plate Voltage | Plate Current Milliamperes | Grid Dissipation Watts | Screen Voltage | Screen Dissipation Watts | Filament, Volts | Filament, Amperes | Amplification Factor | Transconductance umhos |
| 4-65A | 65 | 3000 | 150 | 5 | 400 | 10 | 6.0 | 3.5 | 5 | 4000 |
| 4-125A | 125 | 3000 | 225 | 5 | 400 | 20 | 5.0 | 6.5 | 5.5 | 2450 |
| 4-250A | 250 | 4000 | 350 | 10 | 600 | 35 | 5.0 | 14.5 | 5.1 | 4000 |
| 4-400A | 400 | 4000 | 350 | 10 | 600 | 35 | 5.0 | 14.5 | 5.1 | 4000 |
| 4-1000A* | 1000 | 6000 | 700 | 25 | 1000 | 75 | 7.5 | 21 | 7.0 | 10,000 |
| 4PR60A* | 60 | 20,000 | † | † | 1500 | 8 | 26 | 2.25 | † | † |
| 4W20,000A** | 20,000 | 8000 | 15,000 | 60 | 1500 | 200 | 10 | 30 | 5.5 | 75,000 |
| 4X150A* | 150 | 1250 | 250 | 2 | 300 | 12 | 6.0 | 2.6 | 5 | 12,000 |
| 4X150D* | 150 | 1250 | 250 | 2 | 300 | 12 | 26.5 | .57 | 5 | 12,000 |
| 4X150G* | 150 | 1250 | 250 | 2 | 300 | 15 | 2.5 | 6.25 | 5.0 | 12,000 |
| 4X500A* | 500 | 4000 | 350 | 10 | 500 | 30 | 5.0 | 13.5 | 6.2 | 5200 |
| 4X500F* | 500 | 4000 | 350 | 10 | 500 | 30 | 5.0 | 13.5 | 6.2 | 5200 |
| 2C39A* | 100 | 1000 | 125† | 2 | ... | ... | 6.3 | 1.0 | 100 | 22,000 |
| 6C21 | 300 | 30,000 | † | † | ... | ... | 8.2 | 17.0 | 30 | 6100 |
| 3W5000A3** | 5000 | 6000 | 2500 | 150 | ... | ... | 7.5 | 51 | 20 | 20,000 |
| 3W5000F3** | 5000 | 6000 | 2500 | 150 | ... | ... | 7.5 | 51 | 20 | 20,000 |
| 3W10,000A3** | 10,000 | 5000 | 10,000 | 100 | ... | ... | 10 | 30 | 20 | 55,000 |
| 3X2500A3* | 2500 | 6000 | 2500 | 150 | ... | ... | 7.5 | 51 | 20 | 20,000 |
| 3X2500F3* | 2500 | 6000 | 2500 | 150 | ... | ... | 7.5 | 51 | 20 | 20,000 |
| 3X3000A1* | 3000 | 6000 | 2500 | 50 | ... | ... | 7.5 | 51 | 5 | 11,000 |
| 3X3000F1* | 3000 | 6000 | 2500 | 50 | ... | ... | 7.5 | 51.0 | 5 | 11,000 |
| 25T | 25 | 2000 | 75 | 7 | ... | ... | 6.3 | 3.0 | 24 | 2500 |
| 35T | 50 | 2000 | 150 | 15 | ... | ... | 5.0 | 4.0 | 39 | 2850 |
| 35TG | 50 | 2000 | 150 | 15 | ... | ... | 5.0 | 4.0 | 39 | 2850 |
| 75TH | 75 | 3000 | 225 | 16 | ... | ... | 5.0 | 6.25 | 20 | 4150 |
| 75TL | 75 | 3000 | 225 | 13 | ... | ... | 5.0 | 6.25 | 12 | 3350 |
| 100TH | 100 | 3000 | 225 | 20 | ... | ... | 5.0 | 6.3 | 38 | 4500 |
| 100TL | 100 | 3000 | 225 | 15 | ... | ... | 5.0 | 6.3 | 14 | 3000 |
| 152TH | 150 | 3000 | 450 | 30 | ... | ... | 5 or 10 | 12.5 or 6.25 | 20 | 8300 |
| 152TL | 150 | 3000 | 450 | 25 | ... | ... | 5 or 10 | 12.5 or 6.25 | 12 | 7150 |
| 250TH | 250 | 4000 | 350 | 40 | ... | ... | 5.0 | 10.5 | 37 | 5600 |
| 250TL | 250 | 4000 | 350 | 35 | ... | ... | 5.0 | 10.5 | 14 | 2650 |
| 304TH | 300 | 3000 | 900 | 60 | ... | ... | 5 or 10 | 25 or 12.5 | 20 | 16,700 |
| 304TL | 300 | 3000 | 900 | 50 | ... | ... | 5 or 10 | 25 or 12.5 | 12 | 16,700 |
| 450TH | 450 | 6000 | 600 | 80 | ... | ... | 7.5 | 12.0 | 38 | 6650 |
| 450TL | 450 | 6000 | 600 | 65 | ... | ... | 7.5 | 12.0 | 18 | 5000 |
| 592/3-200A3 | 200 | 3500 | 250 | 25 | ... | ... | 10.0 | 5.0 | 25 | 3600 |
| 750TL | 750 | 10,000 | 1000 | 100 | ... | ... | 7.5 | 21.0 | 15 | 3500 |
| 1000T | 1000 | 7500 | 750 | 80 | ... | ... | 7.5 | 15.5 | 35 | 9050 |
| 1500T | 1500 | 8000 | 1250 | 125 | ... | ... | 7.5 | 24.0 | 24 | 10,000 |
| 2000T | 2000 | 8000 | 1750 | 150 | ... | ... | 10.0 | 23.5 | 23 | 11,000 |
| 4E27A/5-125B | 125 | 4000 | 200 | 5 | 750 | 20 | 5.0 | 7.5 | 5.0 | 2150 |
| | Frequency Range Mc. | Collector Dissipation Watts | Beam Voltage | Beam Current Amperes | TV Peak Synchronizing CW Power Amplifier Level | | | | | |
| 3K20,000LA** | 470-580 | 20,000 | 14,000 | 1.7 | 5500 | 3000 | | | | |
| 3K20,000LF** | 580-720 | 20,000 | 14,000 | 1.7 | 5500 | 3000 | | | | |
| 3K20,000LK** | 720-890 | 20,000 | 14,000 | 1.7 | 5500 | 3000 | | | | |
| 3K50,000LA** | 470-580 | 50,000 | 19,500 | 2.56 | 12,000 | 6000 | | | | |
| 3K50,000LF** | 580-720 | 50,000 | 19,500 | 2.56 | 12,000 | 6000 | | | | |
| 3K50,000LK** | 720-890 | 50,000 | 19,500 | 2.56 | 12,000 | 6000 | | | | |
| | D-C Resonator Voltage | D-C Resonator Dissipation | D-C Cathode Current | D-C Repeller Voltage | Heater Voltage | Heater Current | Frequency Range | | | |
| 1K015XA | 350 | 15 | 45 | 0 to -500 | 6.3 | 0.80 | 8700-9400 | | | |
| 1K015XG*** | 350 | 15 | 45 | 0 to -500 | 6.3 | 0.80 | 8700-9400 | | | |

*Requires forced-air cooling

**Water-cooled

***Waveguide Output Connections

†Cathode Current

‡Pulse Modulator

SEE NEXT PAGE

EITEL-McCULLOUGH, INC.
San Bruno, California

of Leadership!

1934 Eimac electron-power tubes have been specified by leading users for all types of military and commercial application. The incomparable performance, reliability and quality of Eimac tubes enabled Eitel-McCullough, Inc. to become the world's largest manufacturer of transmitting tubes in just two decades.

DIODES AND RECTIFIERS

| HIGH VACUUM TYPES | | | | | |
|---------------------|------------------|------------------------|----------------------|--------------------------|---------------------------|
| TYPE | FILAMENT VOLTAGE | FILAMENT CURRENT AMPS. | PEAK INVERSE VOLTAGE | CURRENT AMPS. PEAK PLATE | AVERAGE PLATE CURRENT MA. |
| 2-01C | 6.3 | 0.4 | 1,000 | 0.010 | |
| 2-25A | 6.3 | 3.0 | 25,000 | 1.0 | 50 |
| 2-50A | 5.0 | 4.0 | 30,000 | 1.0 | 75 |
| 2-150D | 5.0 | 13.0 | 30,000 | 3.0 | 250 |
| 2-240A | 7.5 | 12.0 | 40,000 | 4.0 | 500 |
| 2-2000A | 10.0 | 25.0 | 75,000 | 12.0 | 750 |
| 250R | 5.0 | 10.5 | 60,000 | 2.5 | 250 |
| 253 | 5.0 | 10.0 | 15,000 | 2.5 | 275 |
| 8020(100R) | 5.0 | 6.5 | 40,000 | 1.5 | 100 |
| MERCURY VAPOR TYPES | | | | | |
| *KY21A | 2.5 | 10.0 | 11,000 | 3 | 750 |
| RX21A | 2.5 | 10.0 | 11,000 | 3 | 750 |
| 866A | 2.5 | 5.0 | 10,000 | 1 | 250 |
| 872A | 5.0 | 7.5 | 10,000 | 5 | 1250 |

VACUUM CAPACITORS

| TYPE | VARIABLE CAPACITY | RATING RF PEAK | FIXED | | |
|-------------|-------------------|----------------|---------------|---------------|----------------|
| | | | TYPE | PRICE | RATING RF PEAK |
| VVC60-20 | 10-60 mmfd | 20-KV | VC6-20 | \$15.00 | 6 mmfd 20-KV |
| VVC2-60-20 | Split Stator | 40-KV | VC6-32 | 17.25 | 6 mmfd 32-KV |
| | | | VC12-20 | 16.50 | 12 mmfd 20-KV |
| | Parallel | 20.00 | 12 mmfd 32-KV | | |
| VVC4-60-20 | 20-120 mmfd | 20-KV | VC12-32 | 20.00 | 12 mmfd 32-KV |
| | | | VC25-20 | 20.00 | 25 mmfd 20-KV |
| | Split Stator | 40-KV | VC25-32 | 23.25 | 25 mmfd 32-KV |
| | | | Parallel | 24.25 | 50 mmfd 20-KV |
| 40-250 mmfd | 20-KV | VC50-20 | 24.25 | 50 mmfd 20-KV | |
| | | | VC50-32 | 27.50 | 50 mmfd 32-KV |

SYSTEM SOCKETS

| TYPE | FOR USE WITH TUBE TYPE |
|--------------|------------------------|
| 4X150A/4000 | 4X150A or 4X150D |
| 4X150A/4010 | 4X150A or 4X150D |
| 4-400A/4000 | 4-400A |
| 4-1000A/4000 | 4-1000A |

HEAT DISSIPATING CONNECTORS

| TYPE | HOLE DIA. |
|-------|-----------|
| HR-1 | .052 |
| HR-2 | .0625 |
| HR-3 | .070 |
| HR-4 | .1015 |
| HR-5 | .125 |
| HR-6 | .360 |
| HR-7 | .125 |
| HR-8 | .570 |
| HR-9 | .570 |
| HR-10 | .500 |

IONIZATION GAUGE

100 IG
An electronic vacuum pressure gauge. Filament voltage 3.5 to 7.5 volts.

VACUUM SWITCH

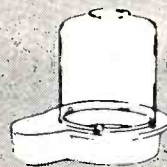
VS-2
Single pole double throw switch within a high vacuum adaptable for high voltage switching.

VS-6
For high peak current, high voltage pulse service.

PERFORMED CONTACT FINGER STOCK

WIDTH
17/32"
31/32"
1-7/16"

A prepared strip of spring material slotted and formed into a series of fingers designed to make sliding contact.



AIR SYSTEM SOCKETS

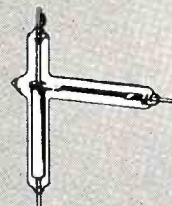
4-400A/4000 4-1000A/4006*
4-400A/4006* 4X150A/4000
4-1000A/4000 4X150A/4006*
4X150A/4010
4X150A/4011*

*Replacement Chimneys



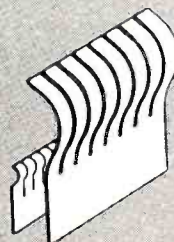
ACCESSORIES

HR Heat dissipating connectors
Performed Contact Finger Stock



VACUUM SWITCH

VS-2
VS-6



CONTACT FINGER STOCK

17/32"
31/32"
1-7/16"

VARIABLE VACUUM CAPACITORS

VVC60-20
VVC2-60-20
VVC4-60-20

ION GAUGE

100 IG ion gauge

VACUUM CAPACITORS

VC6-20 VC25-20
VC6-32 VC25-32
VC12-20 VC50-20
VC12-32 VC50-32

TUBE EXTRACTOR

4X150

Controlled

Eimac
TUBES

EITEL-McCULLOUGH, INC.
San Bruno, California

Export Agents: Frazer & Hansen, 301 Clay St., San Francisco, Calif.

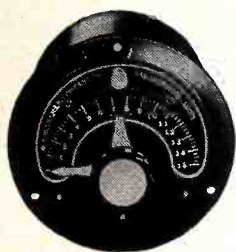


Cramer

TIMING DEVICES

SPECIALISTS IN TIME CONTROL

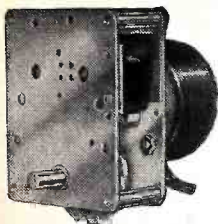
TYPE IE



INTERVAL TIMER

Turning knob to desired time setting starts time cycle. Progress indicated by pointer traveling towards zero. Built-in push button, to initiate timing cycle, available as optional feature.

INTERVAL TIMER TYPE IG



Similar to IE above, but without front plate and housing. Designed for built-in applications, where timer is mounted behind panel and shaft protrudes thru panel. Dial and pointer optional extras.

RESET TIMER TYPE RE



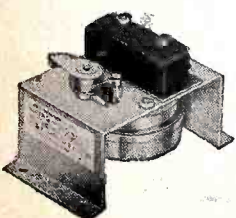
Pressing built-in start button switches circuits and starts timer. Progress indicated by independent pointer traveling towards zero. At end of cycle circuits switch back and timer resets, ready for a new cycle.

TIME DELAY RELAYS TYPES TE — TEC



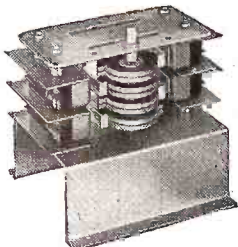
Highest accuracy for precision timing. Timing cycle initiated by external means. Micrometer knob on range pointer for extremely precise setting. Progress pointer indicates time remaining.

TIME DELAY RELAY TYPE TF



For built-in applications. Provides fixed time delay between closing of external contact and switching of load circuits. Enclosed snap-type switch mechanism.

CYCLE TIMER TYPE CF



Permits automatic control of 1 to 8 circuits. Single or multiple cam units permit adjustment to any desired time sequence. May be arranged to stop at the end of one complete cycle or repeat cycle continuously.

PULSE TIMER TYPE V



Repeats electrical impulse of predetermined duration at the end of any desired time interval which may be set upon the dial. Ideal for such applications as automatic lubricators, conveyors, sludge pumps, bar screens, feed water controls, etc.

PERCENTAGE TIMER TYPE PE



Adjustable automatic timer to control percentage of time in which an electrical circuit is closed or open out of a definite time cycle. Ideal to control operating time of an oil burner, furnace, etc.

RUNNING TIME METER TYPE E



An elapsed time indicator to register total operating or idle time of any machine or system. Excellent for indicating usage time of vacuum tubes or machine tool cutter, etc., in conjunction with a preventive maintenance program.

TIME TOTALIZER TYPE ET



A highly accurate stop clock to measure and to indicate elapsed time intervals. Used wherever precise measurement of time is required. Accuracy of better than .02 of 1%.

HERMETICALLY SEALED TIME DELAY RELAY TYPE HTI



Retains high accuracy of standard Cramer timers, but is miniaturized for airborne or mobile applications. Hermetically sealed in steel case and tested to meet most rigid military applications.

SYNCHRONOUS TIMING MOTOR



Small synchronous motor for any application requiring constant speed. Exceptionally high torque for its size (30 in. ozs. at 1 rpm stall torque). Instantaneous start and stop. Wide range of speeds from 60 rpm to 1 rpm.

TYPE K

CLUTCH UNIT MOTOR



KX motor with differential gear-type clutch. Used where reset is needed or where extremely accurate clutching is required.

SPECIAL TIMERS AND ENCLOSURES



In addition to the standard panel mounting timers illustrated above, Cramer manufactures a complete line of special purpose timers, timers in special enclosures, hermetically sealed devices, etc.



Write for complete information about your timing requirements or for advice on special problems.

the R. W. CRAMER CO., INC.

Box 27, Centerbrook, Conn.

◀ "KEL-F" trifluorochloroethylene polymer:
How it would appear, greatly magnified. Dark gray
indicates chlorine atoms that make this polymer
unique.

KEL-F

Reg. U. S. Pat. Off.

WHEN ELECTRICAL AND PHYSICAL "SPECS" ARE HIGH for Structural and Component Parts

Check these Advantages of
KEL-F® . . . TRI-FLUORO-CHLORO-ETHYLENE POLYMER

- | | |
|---|--|
| <ul style="list-style-type: none"> ✓ HIGH DIELECTRIC properties ✓ ZERO WATER ABSORPTION, fungus inert, non-porous, non-wetting ✓ WIDE TEMPERATURE UTILITY — minus 320°F to plus 390°F ✓ HIGH IMPACT strength 3 to 4 ft. lbs./in.—compressive strength up to 80,000 psi ✓ CHEMICALLY INERT to <i>all</i> acids, alkalis, solvents . . . inert to metals ✓ DIMENSIONALLY STABLE — unaffected by moisture, age, heat cycling | <ul style="list-style-type: none"> ✓ READILY MOLDED, FABRICATED, APPLIED — using standard equipment ✓ USED IN HARD, RIGID, SOFT, FLEXIBLE and dispersion forms to suit application ✓ VARIABLE OPTICAL PROPERTIES . . . wide color range ✓ AVAILABLE FROM leading molders, extruders and fabricators as film, sheet, rod, tubing and as finished products . . . available from Kellogg as molding powders, dispersions, oils, greases and waxes |
|---|--|

TYPICAL PROVEN APPLICATIONS

ELECTRICAL

- switch parts
- insulated wire & cable
- insulators
- terminals
- coil forms
- molded components
- tube sockets
- resistors

OTHER

- anti-hesive coatings
- instrument parts
- porous filters
- valve seats, liners
- solid & core "O" rings
- hose assemblies
- flexible containers
- medical goods
- pump & valve diaphragms
- "U", "V" & chevron packings
- gauges and gauge glasses
- low temp. valve seats
- bearings
- drum plugs & machined fittings
- pipe & equipment liners

LOWER PRICES MAKE MANY NEW APPLICATIONS ECONOMICAL

Fourth important price reduction by Kellogg since the commercial introduction of "KEL-F" polymers in 1948 cuts the price up to 25% in ton lots, 43% in quantities less than 100 pounds. The reduction is the result of the rapidly expanding acceptance of "KEL-F" polymers and economies in Kellogg's new large-volume production facilities. Price schedule is available on request.

al Manufacturing Division
M. W. KELLOGG COMPANY



SUBSIDIARY OF
PULLMAN
INCORPORATED

Jersey City 3, N. J.

Box 469

KEL-F

TRIFLUORO
CHLORO
ETHYLENE
POLYMERS

KEL-F

MOLDING
POWDERS

KEL-F

FLUORO
CHLORO
CARBON
PLASTIC

KEL-F

DISPERSION
COATINGS

KEL-F

TRIFLUORO
CHLORO
ETHYLENE
POLYMERS

KEL-F

OILS
WAXES
GREASES

ELECTRICAL PROPERTIES OF "KEL-F" POLYMER

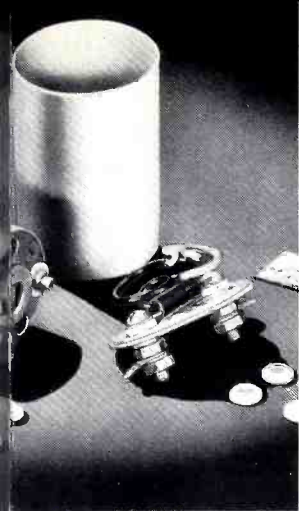
| Properties | ASTM Test Method | Unit of Measure | Results |
|---|------------------|---------------------------|-----------------------------|
| Volume resistivity (50% relative humidity and 25°C.) Dielectric strength | D257-46 | ohm-cm short-time 1/8" | 1.2x10 ¹⁸ 530 |
|  | ..... | v/mil | |
| | D149-44 | Step by step 1/8" | 390 |
| | D149-44 | Step by step 0.030" | 1200 |
| Arc resistance | ..... | v/mil | 5000 |
|  | ..... | Step by step 0.005" | |
| | D495-42 | v/mil sec. | > 360 |
| Dielectric Constant | 100 cps | | 2.72 |
| | 1000 cps | | 2.63 |
| | 1 MC | | 2.43 |
| Power Factor | 100 cps | | 0.008 |
| | 1000 cps | | 0.024 |
| | 1 MC | | 0.0082 |

GENERAL PROPERTIES — UNPLASTICIZED "KEL-F" POLYMER

(Similar data on plasticized polymers available on request)

| Properties | ASTM Test Method | Unit of Measure | Results |
|--|-------------------------------------|--------------------------------|---|
| Molding qualities | ..... | ..... | Excellent |
| Transition temperature | ..... | °F. | 410-414 |
| Compression ratio | ..... | ..... | 2.0 |
| Mold shrinkage | ..... | in. per in. | 0.005-0.010 |
| Specific gravity | D792-48T | ..... | 2.1 |
| Apparent bulk factor | ..... | cu. in./lb. | 28.8-91.0 |
| Refractive index | D542-42 | n _D ²⁵ | 1.43 |
| Tensile strength, 77°F. | D638-46T | psi | 4,600-5,700 |
| 248°F. | D638-46T | psi | 460-570 |
| Tensile strength (oriented film and fibre) | ..... | psi | 30,000-50,000 |
| Yield strength, 0.2% offset, 77°F. | D638-46T | psi | 3640 |
| Elongation | D638-46T | % | 28-36 |
| Modulus of elasticity, 77°F. | ..... | ..... | ..... |
| Tensile | D638-46T | psi | 192-226x10 ³ |
| Flexural | D790-45T | psi | 182x10 ³ |
| Compressive | D695-44T | psi | 177-191x10 ³ |
| Compressive strength, 77°F. | D695-44T | psi | 32,000-80,000 |
| Flexural strength, 77°F. | D790-45T | psi | 8200 |
| 158°F. | D790-45T | psi | 1500 |
| Stiffness, #300 NST Grade | ..... | ..... | ..... |
| minus 257°F. | D747-48T | psi | 810x10 ³ |
| minus 148°F. | D747-48T | psi | 500x10 ³ |
| 32°F. | D747-48T | psi | 250x10 ³ |
| 212°F. | D747-48T | psi | 22,000 |
| 392°F. | D747-48T | psi | 4,500 |
| Impact strength, Izod, notched, 77°F. | D256-47T | ft. lb./in. of notch | 3.62 |
| Outdoor aging, one year | ..... | ..... | No detectable change |
| Rockwell hardness | D785-48T | R scale | 111-115 |
| Durometer hardness | D676-47T | D scale | 80 |
| Abrasion resistance | ..... | ..... | ..... |
| 59.9946 gm. heat treated | Fed. Spec. L-P-406-a method 1091 | loss in gm/1000 cycles | 0.0048 |
| 57.3753 gm. quenched | Fed. Spec. L-P-406-a method 1091 | loss in gm/1000 cycles | 0.0175 |
| Thermal conductivity | ..... | cal/cm ² /sec/°C/cm | 1.44x10 ⁻⁴ |
| Thermal conductivity | ..... | btu/ft ² /hr/°F/in | 0.418 |
| Specific heat | ..... | cal/gm/°C | 0.216 |
| Thermal coefficient of linear expansion | ..... | ..... | ..... |
| -80° to 20°C. | D696-44 | in/in/°C. | 4.5x10 ⁻⁵ |
| 20° to 150°C. | D696-44 | in/in/°C. | 7x10 ⁻⁵ |
| Resistance to heat (continuous) | ..... | °F. | 390 |
| Water absorption | D570-42 | % | 0.00 |
| Burning rate | ..... | ..... | Nil |
| Effect of sunlight | ..... | ..... | None |
| Effect of strong and weak acids | ..... | ..... | None |
| Effect of strong and weak alkalis | ..... | ..... | None |
| Effect of organic solvents | ..... | ..... | None |
| Effect on metal inserts | ..... | ..... | Generally unaffected. generated compounds cause slight swelling. Inert |
| Machining qualities | ..... | ..... | ..... |
| Clarity | ..... | ..... | Excellent |
| Color possibilities | ..... | ..... | Transparent to translucent Unlimited |

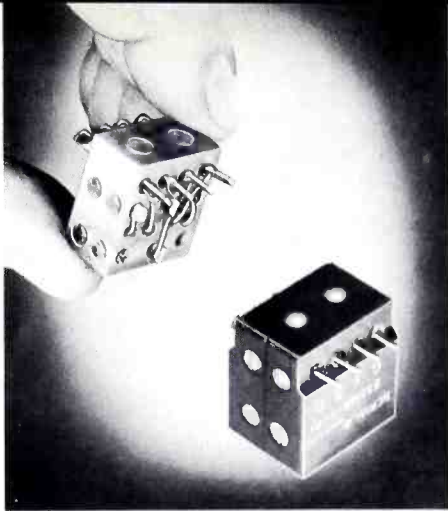
FOR MORE COMPLETE DATA ON CHEMICAL, ELECTRICAL, MECHANICAL AND OPTICAL PROPERTIES OF "KEL-F" polymer write for Technical Bulletin # 1-3-53, which describes KEL-F fluorocarbons and includes data on film, effects of plasticizers, and the specifics of the material's resistance to more than 125 chemicals.



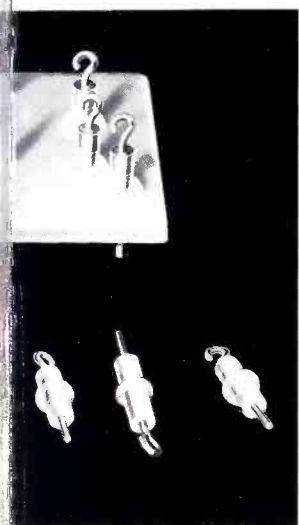
Brush holders and insulators . . . keep their shape, maintain insulation resistance in extreme temperatures and current. Thinner, lighter insulators because of high strength polymer.



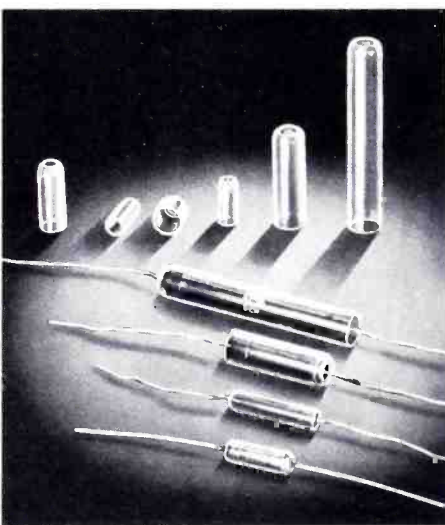
Cosmotron Insulators of KEL-F plastic take high electrical loads without carbonizing or shorting. Plastic's high compressive strength, low "cold flow" prevents damage from heavy magnet loads. Low "gassing" rate helps maintain vital vacuum.



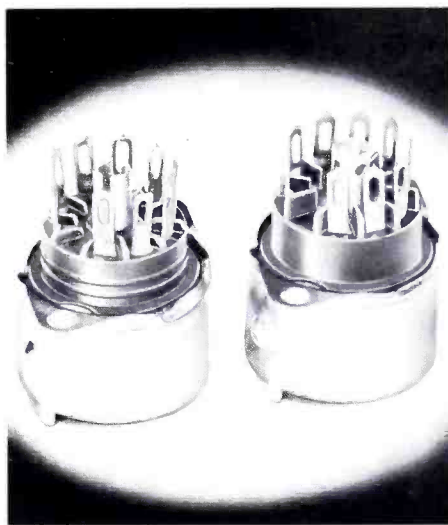
Miniature components, such as this instrument rectifier, are tougher and more efficient when insulated with KEL-F plastic. High dielectric and zero water absorption permits use of less insulation. High strength provides resistance to shock up to 100 G's.



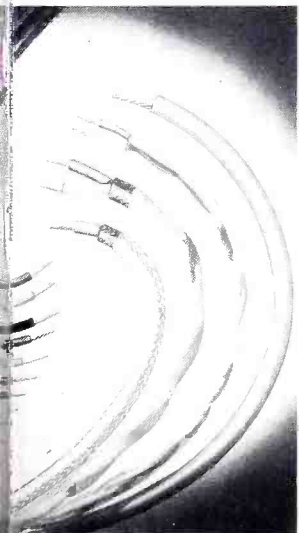
Terminals handle up to 7500 volts without flash-over . . . under high voltage. Tough plastic insulation provides positive hermetic seal. Prohibitive to other materials, plastic defies aging.



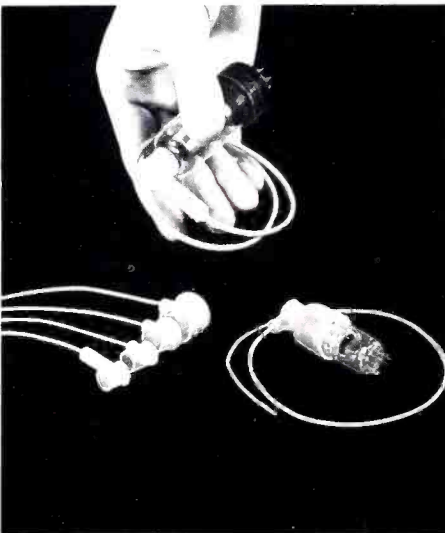
Resistor sleeving is "flame-proof" and resists damage from tools. Non-absorbent and fungus-inert, insulation remains high under extreme environmental conditions. Sleeving remains transparent, simplifying maintenance.



Tube sockets have high insulation resistance, prevent ionization and flash-over at high altitudes or under high humidity conditions. High compressive and impact strength of plastic prevents deformation under high shock loads.



Plastic is ideal for totally "hot" wiring jobs, insulating stable up to 375°F. High strength, low loss under high voltage. Inert to highly corrosive. Non-flammable.



Tube cap connectors of KEL-F plastic permit one-piece molding of cap, resistor and lead, preventing high altitude and moisture shorts. Non-carbonization at elevated temperatures prevents tracking and shorting.



Switch rotors insulated with injection-molded KEL-F plastic give positive RF insulation without attenuation. Dimensionally stable plastic provides smooth switch action under severe thermal and humidity conditions.

KEL-F
 TRIFLUORO CHLORO ETHYLENE POLYMERS
KEL-F
 MOLDING POWDERS
KEL-F
 FLUORO CHLORO CARBON PLASTIC
KEL-F
 DISPERSION COATINGS
KEL-F
 TRIFLUORO CHLORO ETHYLENE POLYMERS
KEL-F
 OILS WAXES GREASES

KEL-F

KEL-F® Polymer... Unique, Versatile Material

... Has gained wide acceptance by meeting critical "specs" where other materials have failed. Designers and engineers find it convenient and economically sound as well as technically superior for most critical and semi-critical applications.

KEL-F trifluorochloroethylene polymers are extruded, compression, transfer and injection molded using standard equip-

ment operating at 450°F to 650°F temperatures. Molded plastic is dimensionally stable, unaffected by moisture and is readily machined, punched, drilled, stamped, polished or ground to precision tolerances.

Fluid dispersions are readily applied by spray or dip-coating for superior "baked-on" protective coatings. Finished coatings retain the properties of KEL-F polymer.

Molding, Fabricating and Coating Services Available Throughout the Country...

More than 80 companies are now qualified to render designing services and to manufacture products of KEL-F plastic. Write for "BUY-

ERS GUIDE" listing these molders, extruders, fabricators and applicators and their principal products and services.

KEL-F is available in these "stock" forms

(See BUYERS GUIDE listing sources of supply)

- **Molded Sheet**
Thickness — to specification
Diameter — to specification
- **Molded Rod**
Diameter — to specification
Length — to specification
- **Extruded Strip**
Thickness — to specification
Width — to specification
Length — to specification
- **Extruded Wire**
To Specification
- **Extruded Rod**
Diameter — up to 1"
Length — to specification
- **Extruded Tubing and "Spaghetti"**
Diameter — up to 2"
Wall thickness — to specification
Length — to specification
- **Thin Film**
(EXTRUDED AS LAY-FLAT TUBING)
Thickness — .002" to .010"
Width — lay-flat up to 20"
(Total width to 40")

KEL-F plastic is also available in standard electrical and electronic components; chemical fittings; trays, caps and containers; porous filter media; and many other forms for varied applications.

ORDER these basic KEL-F fluorocarbons from—

CHEMICAL MANUFACTURING DIVISION, The M. W. Kellogg Company

MOLDING POWDERS
(in High or Low Density Powder)

- Unplasticized**
- #300 For high temperature service
 - #270 For less severe temperatures
- Plasticized**
- #300-P25 For greater flexibility and toughness
(Other plasticized compositions to order)

DISPERSIONS

- N-1 Routine spray, dip coating
- NW-25 Flows more readily at fusion temperatures

OILS, WAXES and GREASES

- #1 Light Oil
 - #3 Medium Oil
 - #10 Heavy Oil
 - #40 Waxy Oil (pour point 80-90°F)
 - #150 Hard Wax at 70°F
- (Greases compounded to order)

© Registered trade mark for The M. W. Kellogg Company's fluorocarbon polymers.

Full-Scale Research and Applications Laboratory—for trifluorochloroethylene polymers—now in operation in Jersey City

With the building of the new Kellogg polymer plant, facilities for development and applications work have been considerably expanded.

Modern scientific research apparatus and production molding equipment are teamed with an increased staff of experienced scientists and technicians . . . to work exclusively on the development of new, improved fluorochloro-carbon materials . . . developing improved methods of fabrication . . . and new uses for KEL-F polymers.

Here, problems encountered by molders, fabricators and end-users are investigated under controlled conditions. Methods for economical utilization of unique fluorocarbon properties are studied, improved, more efficient production methods for plastics fabricators are developed and tested. Product quality and performance problems are investigated.

Technical Information Available on KEL-F Polymers:

- Bulletin #1-3-53 Physical, Electrical, Chemical and Mechanical Properties
- Bulletin #5-1-52 Properties of KEL-F (Plasticizers, Greases and Waxes)
- Bulletin #4-10-50 Dispersions
- Bulletin #3-10-50 Molding Techniques
- Bulletin #2-10-50 Modification of Properties by Heat Treatment

ALSO: Detailed application reports on products and processes in the electrical, chemical, and equipment fields which utilize KEL-F plastic are available.

For further information write:

Technical Service CHEMICAL MANUFACTURING DIVISION

THE M. W. KELLOGG COMPANY

P. O. Box 469, Jersey City, N. J.
or offices in Boston, Chicago, Detroit,
Los Angeles and New York



TRIFLUORO
CHLORO
ETHYLENE
POLYMERS

KEL-F

MOLDING
POWDERS

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FLUORO
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PLASTIC

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DISPERSION
COATINGS

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ETHYLENE
POLYMERS

KEL-F

OILS
WAXES
GREASES

PRECISION

Laboratory Equipment

by EMPIRE DEVICES

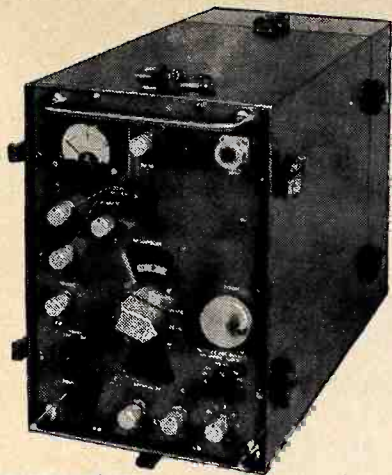


20 MC to 1000 MC

NOISE AND FIELD INTENSITY METER MODEL NF-105

(Commercial equivalent of AN/URM-7)

Three quick-change tuning heads.
Single knob tuning for easy scanning.
Built-in impulse generator serves as calibrator.
Carrier and peak reading VTVM.
Aural slideback.
Coaxial step attenuators.
Regulated "A" and "B" supply.



150 KC to 80 MC

NOISE AND FIELD INTENSITY METER, MODEL NF-114

(Commercial equivalent of
AN/PRM-14)

Eight band turret switch.
Two tuned RF amplifiers on all bands.
Built-in impulse generator.
Carrier and peak reading VTVM.
Aural slideback.
Dry batteries or 115 Volts AC operation.
Subminiature construction.

IMPULSE GENERATOR MODEL IG-115

PULSE WIDTH: 0.0005 microseconds (5×10^{-10}
seconds).

FREQUENCY SPECTRUM: 10 KC to 1000 MC,
within $\pm 1/2$ DB.

AMPLITUDE LEVEL: 100,000 microvolts per megacycle
width adjustable over a 100 DB range.



AT-60

UHF ATTENUATORS MODELS AT-50, AT-60

50 ohm resistive T-networks of concentric line
construction.

FREQUENCY RANGE:

AT-50: DC to 4000 MC.

AT-60: DC to 3000 MC.

VSWR: Better than 1.2 at all frequencies.

ACCURACY: $\pm 1/2$ DB.

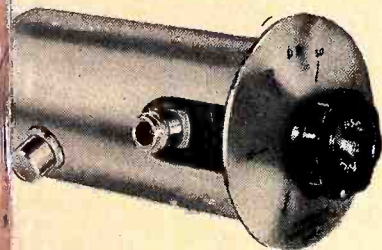
RATED POWER:

AT-50: 1 W continuous

1 KW peak

AT-60: 2 W continuous

2 KW peak



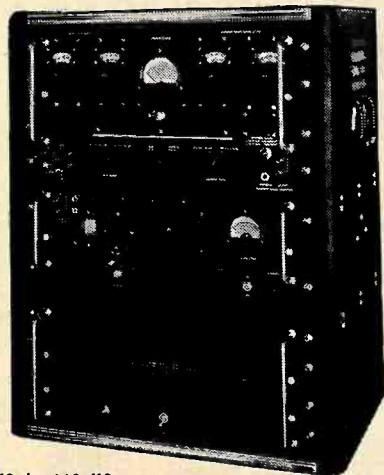
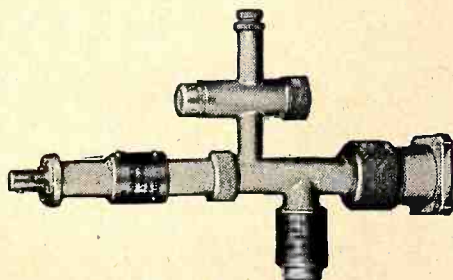
STEP ATTENUATOR MODEL AT-101

Uses AT-50 pads in a six-step coaxial
turret arrangement.

CRYSTAL MIXER MODEL CM-107

Fixed Tuned.
Frequency range to 5600 MC in 8 models.
V.S.W.R. better than 2

Isolation at 1F output better than
30 dB.
Compatible with Type "N" or UG-46/U
Type Connector.



4 KC to 110 KC

NOISE AND DISTORTION ANALYZER MODEL ND-110

BROAD BAND SENSITIVITY: -80 DBM.

NARROW BAND SENSITIVITY: -110 DBM.

Narrow band uses crystal lattice network for

proper band pass characteristics.

Measures true RMS power of sine wave or
complex signals.

Write for detailed engineering data to:

EMPIRE DEVICES

PRODUCTS CORPORATION

38-15 Bell Boulevard, Bayside 61, New York

Manufacturers of

NOISE METERS

DISTORTION ANALYZERS

IMPULSE GENERATORS

COAXIAL ATTENUATORS

CRYSTAL MIXERS



Delay Lines

by Brew

accuracy
dependability
uniformity



Here is the one place where all types of delay lines are available to meet your needs . . . *distributed constant, lump constant, and solid.* The advanced design of Brew delay lines and the special manufacturing techniques assure you of the greatest possible accuracy and dependability. The large number of companies that depend on Brew for delay lines is proof of their superiority. Today you find Brew Delay Lines on many types of equipment in both commercial and government applications.

Distributed constant delay lines

Highly consistent. Attenuation as low as 1 db per microsecond. Rise times to 0.035 microsecond are possible for short delays. Characteristic impedance from 500 ohms to 2500 ohms. Standard delay tolerances 0.05 microsecond, closer if required. Hermetic seal mountings and miniaturized design.

Lumped constant delay lines

Lumped constant lines are designed and produced to meet the customer's most stringent electrical characteristics. Size, weight and mounting techniques are consistent with the electrical requirements. All lines exhibit excellent thermal and shock resistant qualities. Hermetically sealed mountings are available. Quick delivery on prototypes.

Solid delay lines

Frequency ranges from 5 to 100 MC. Bandwidth 5 MC at 20 center frequency to 14 MC at 50 MC center. Delays accurate to .1%. Low attenuation of delayed pulse. Spurious responses 40 DB below delayed pulse. Triple travel at least 30 DB below delayed pulse.

Consult Brew about your next delay line requirement and you'll get the answer you want. Yours for the asking . . . a new Brochure covering Brew Delay Lines and also describing the technique used by Richard D. Brew Co. for the measurement of delay lines.

BREW

Airport Rd., Concord, N. H.

Richard D. Brew and Company, Inc.
design • development • manufacture

PICKERING solenoids



for DC Circuits



Pickering engineering service is available for special applications where Pickering standard Solenoids do not apply.

PICKERING & CO., Inc.



Manufacturers of world-famous electro-magnetic phonograph cartridges and audio equipment.
Oceanside, L. I., New York

For details and literature address Department

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* Over 35,000 subscribers including engineers, designers, specifiers, purchasing agents, maintenance and production personnel.

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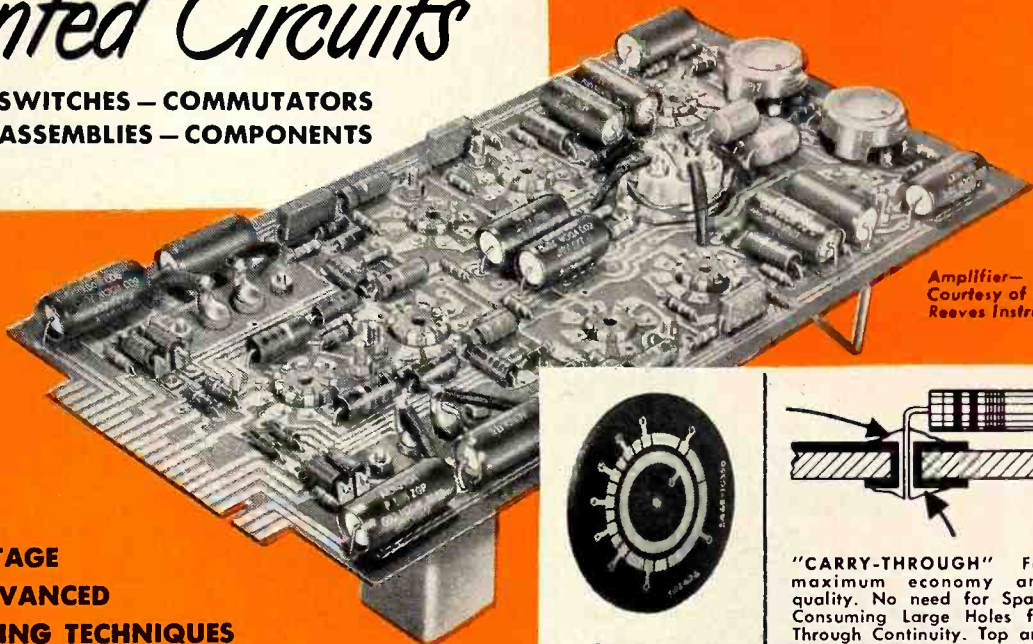
ABC

MAKE



YOUR "Quality" SOURCE FOR
Carry Through
Printed Circuits

SWITCHES — COMMUTATORS
 ASSEMBLIES — COMPONENTS

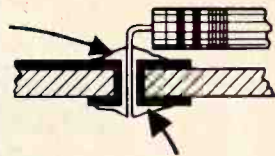


Amplifier—
 Courtesy of
 Reeves Instrument Corp.

I. C. I.'s complete and unequalled facilities are devoted entirely to the design, development and production of quality printed circuits which deliver the utmost in efficiency, economy and long life. They are finding increasingly widespread applications in the mass production of electronic devices, and in new designs for miniaturization. Wherever they are used, up to 50% savings in manufacturing costs are reported. Typical of I. C. I. design initiative is the exclusive process of plating through holes which leads to more efficient higher quality products.



Commutator—
 Courtesy of
 Remington-Rand, Inc.



"CARRY-THROUGH" For maximum economy and quality. No need for Space Consuming Large Holes for Through Continuity. Top and bottom soldering with selective dip-soldering of the bottom side only is an advantage, as shown.

"MICRO-STRIP"—I. C. I. is an approved licensee of International Telephone & Telegraph Co. for the manufacture of Printed Circuit Micro-Wave Components.

I. C. I. PLATING OF CONDUCTIVE PATTERNS facilitates dip soldering.

1. Solder, electro-plated — 60/40 alloy — permits extended shelf-life and the use of mild fluxes. When electroplating is carried through holes, dip-soldering is necessary only on one side.
2. Silver immersion is a soldering aid with short term protection against corrosion.

You will want to know more about I. C. I. Printed Circuits. Write us for detailed information and plan to take advantage of the advice and suggestions of our engineering staff.

- N. Y. C. WAtkins 4-7940
- Belleville..... PLymouth 9-0700
- Chicago..... AUstin 7-7292
- Boston..... WEllesley 5-5296
- Syracuse..... SYracuse 73-4280
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TAKE ADVANTAGE
 OF I. C. I. ADVANCED
 MANUFACTURING TECHNIQUES

I. C. I. "CARRY-THROUGH" eliminates the need for large holes for through continuity from one side of the insulating base to the other, and makes unnecessary the use of eyelets or other hardware. Top and bottom soldering with selective dip soldering of the bottom side only is a further advantage.

I. C. I. SWITCH AND CONTACT PATTERNS are highly efficient. Flush or Raised Switches—

1. Nickel-Rhodium provides a non-corrosive wiping contact surface with excellent wear resistance. It is recommended for both continuous and intermittent operation.
2. Silver-Rhodium has excellent non-corrosive resistance. It is recommended wherever RF rules out the use of nickel because of its ferromagnetic properties.



Insulated Circuits

INCORPORATED

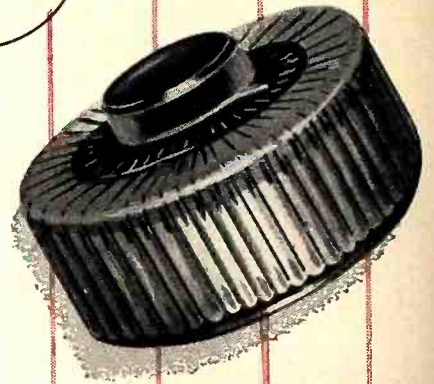
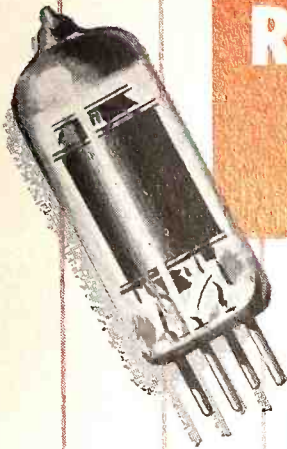
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dependable
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ALLOYS**
for electronics



EVANOHM® (NICKEL CHROME) — For high specific resistance (800 ohms c.m.f.) — low temperature coefficient and low thermal e.m.f. vs. copper.

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GRID WIRE — MANGRID®, SILVER PLATED MANGRID®

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All wires available with insulations of Enamel, Cotton, Silk, Nylon and Glass. Call or write for engineering assistance — the Wilbur B. Driver engineering staff welcomes an opportunity to work with you on special alloys for electronic applications.

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NEWARK, 4, NEW JERSEY



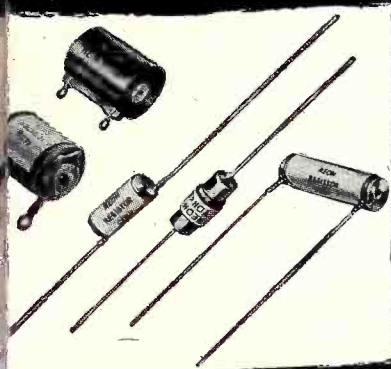
REON RESISTOR CORPORATION

RESISTORS: Precision Wire Wound
Varnish and Encapsulated
Hermetically Sealed Networks
Vitrious Enamel Power Resistors
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REON for Service, Quality, Reliability and Dependability

PRECISION WIRE WOUND RESISTORS



MILITARY TYPE

| REON TYPE | MIL-R-93A TYPE | JAN-R-93A TYPE | WATTS | | MAX. RES. (Megs.) | | DIMENSIONS (Inches) | | LEAD |
|-----------|----------------|----------------|-------|-----|-------------------|------|---------------------|--------|------|
| | | | MH | Com | MH | Com | D. D. | Length | |
| RJ | RB15 | RB10 | 1/4 | 1/2 | .185 | 1.00 | 9/16 | 15/32 | Lug |
| RJA | RB15 | RB10 | 1/4 | 1/2 | .185 | 1.00 | 5/8 | 15/32 | Lug |
| RJE | RB15 | RB10 | 1/4 | 1/2 | .185 | 1.00 | 5/8 | 15/32 | Lug |
| RK | RB16 | RB11 | 1/2 | 1 | .300 | 1.5 | 5/8 | 5/8 | Lug |
| RKE | RB16 | RB11 | 1/2 | 1 | .300 | 1.5 | 5/8 | 5/8 | Lug |
| RL | RB17 | RB12 | 1/2 | 1 | .300 | 3.0 | 5/8 | 1 | Lug |
| RLE | RB17 | RB12 | 1/2 | 1 | .300 | 3.0 | 21/32 | 1 | Lug |
| RM | RB18 | RB13 | 1/2 | 1 | .750 | 4.0 | 11/16 | 1-1/4 | Lug |
| RME | RB18 | RB13 | 1/2 | 1 | .750 | 4.0 | 3/4 | 1-1/4 | Lug |
| RN | RB19 | RB14 | 1 | 2 | 4.0 | 8.0 | 1 | 2-1/16 | Lug |
| RNE | RB19 | RB14 | 1 | 2 | 4.0 | 8.0 | 1 | 2-1/16 | Lug |

Central Axial

| REON TYPE | MIL-R-93A TYPE | JAN-R-93A TYPE | WATTS | MAX. RES. (Megs.) | DIMENSIONS (Inches) | LEAD |
|-----------|----------------|----------------|-------|-------------------|---------------------|--------|
| CA11 | — | — | .15 | .15 | 1/4 | 1/2 |
| CA11E | — | — | .15 | .15 | 3/8 | 1/2 |
| CA12 | RB52 | RB51 | 1/4 | .100 | 1/4 | 7/8 |
| CA12E | RB52 | RB51 | 1/4 | .100 | 3/8 | 7/8 |
| CA22 | RB52 | RB51 | 1/4 | .100 | 1.0 | 7/8 |
| CA22E | RB52 | RB51 | 1/4 | .100 | 1.0 | 7/8 |
| CA32 | — | — | 1.0 | — | 3/8 | 1-3/16 |
| CA32E | — | — | 1.0 | — | 1/2 | 1-5/16 |

Sub Miniature and Miniature

| REON TYPE | MIL-R-93A TYPE | JAN-R-93A TYPE | WATTS | MAX. RES. (Megs.) | DIMENSIONS (Inches) | LEAD |
|-------------|----------------|----------------|-------|-------------------|---------------------|--------|
| SMT or SM1E | — | — | .10 | .150 | 1/4 | 1/4 |
| SM2 or SM2E | — | — | .15 | .200 | 1/4 | 13/32 |
| SM3 or SM3E | — | — | .25 | .250 | 1/4 | 1/2 |
| SM4 or SM4E | — | — | .5 | .400 | 1/4 | 3/4 |
| M1 or M1E | — | — | .15 | .200 | 3/8 | 1/4 |
| M2 or M2E | — | — | .25 | .400 | 3/8 | 7/16 |
| M3 or M3E | — | — | .5 | 1.0 | 3/8 | 3/4 |
| M4 or M4E | — | — | 1.0 | 1.5 | 3/8 | 1 |
| M5 or M5E | — | — | 1.0 | 2.00 | 3/8 | 1-3/16 |
| M6 or M6E | — | — | 1.0 | 2.15 | 3/8 | 1-3/8 |
| M7 or M7E | — | — | 1.5 | 2.5 | 3/8 | 1-3/4 |

| ENVIRONMENTAL | VARNISH TYPE | ENCAPSULATED |
|-------------------|---------------------------------|-------------------------------|
| Humidity | High humidity proof | Salt water immersion proof |
| Temperature range | Vacuum impregnated "Plasticote" | Homogenous hermetic seal |
| Spec. | Mil-R-93A | Mil-R-93A |
| Construction | Key locked | Embedded (Seal bonded to lug) |
| Temp. for load | 85°C | 105°C |
| Temp. rate to | 105°C | 125°C |

- 1—Suffix E to Part Number designates hermetic seal by encapsulation.
- 2—Tolerances down to $\pm .02\%$.
- 3—"E" type wire for close Temp. Coef. 20 PPM/0°C.

REON POWER RESISTORS FOR UTMOST DEPENDABILITY

TEMPERATURE DERATING: Conservatively rated to operate at full load continuously at ambient temperature up to 40°C. Linearly derated to 0% power at 350°C.

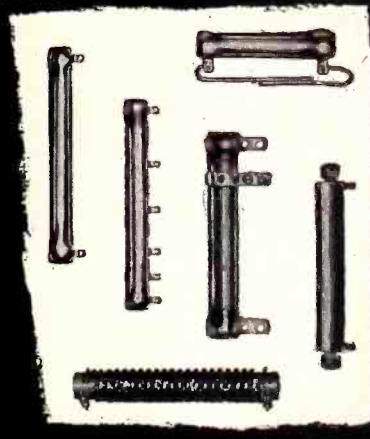
LOAD LIFE: Guaranteed conservatively for intermittent or continuous operation for a minimum of 1000 hours. Actual life expectancy exceeds many times this.

OVERLOAD: Will withstand 10 times normal rating for 5 seconds. A safety factor allows continuous overload of twice rating.

REON

VITREOUS ENAMEL POWER RESISTORS

| A TYPES | | | | | MIL-R-268 TYPES | | | | | | | |
|---------|----------------|---------------------|--------------------------|--------------|-----------------|-------|-------|---------------------|---------------|--------------|--------------|------------|
| WATTS | MAX. RES. OHMS | MAX. RES. FULL LOAD | MAX. LENGTH VOLTS INCHES | O. D. INCHES | I. O. INCHES | TYPE | WATTS | MAX. RES. FULL LOAD | LENGTH INCHES | O. D. INCHES | I. O. INCHES | |
| 5 | 5 | 10,000 | 10,000 | 220 | 1 | 5/16 | 3/16 | RW29 | 8 | 5,600 | 1 3/4 | 1/2 3/16 |
| 10 | 10 | 50,000 | 10,000 | 500 | 1 3/4 | 5/16 | 3/16 | 30 | 8 | 2,500 | 1 | 19/32 5/16 |
| 20 | 20 | 100,000 | 15,000 | 840 | 2 | 9/16 | 3/8 | 31 | 10 | 6,300 | 1 1/2 | 19/32 5/16 |
| 25 | 25 | 100,000 | 15,000 | 700 | 2 1/2 | 9/16 | 3/8 | 32 | 12 | 10,000 | 2 | 19/32 5/16 |
| 50 | 50 | 250,000 | 20,000 | 1500 | 4 1/2 | 9/16 | 3/8 | 33 | 18 | 18,000 | 3 | 19/32 5/16 |
| 75 | 75 | 100,000 | 20,000 | 1360 | 6 1/2 | 3/4 | 1/2 | 34 | 30 | 28,000 | 3 | 29/32 9/16 |
| 100 | 100 | 100,000 | 25,000 | 1500 | 6 1/2 | 1-1/8 | 3/4 | 35 | 38 | 40,000 | 4 | 29/32 9/16 |
| 160 | 160 | 100,000 | 25,000 | 2100 | 8 1/2 | 1-1/8 | 3/4 | 36 | 60 | 56,000 | 4 | 1-5/16 3/4 |
| 200 | 200 | 150,000 | 30,000 | 2500 | 10 1/2 | 1-1/8 | 3/4 | 37 | 78 | 90,000 | 6 | 1-5/16 3/4 |
| | | | | | | | | 38 | 110 | 0.14 meg. | 8 | 1-5/16 3/4 |
| | | | | | | | | 39 | 166 | 0.20 meg. | 12 | 1-5/16 3/4 |
| | | | | | | | | 40 | 146 | 0.18 meg. | 10 1/2 | 1-5/16 3/4 |



Complete delivery on engineering samples, emergency requests and production requirements. Write for additional information.



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serves the electronics industry **2** ways

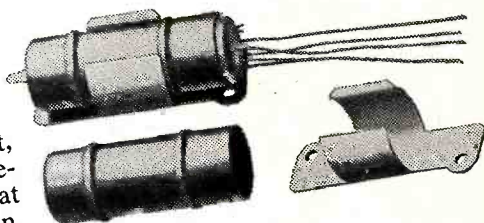
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STAVER
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electronic
specialties



mini-shield* and clip
Types to fit *all* miniature tubes. Locks tube in socket, prevents vibration. Engineered to accommodate variations in diameter.

sub-mini-shield

Combination shield, clip and mount, for sub-miniature tubes. Close tube-to-shield contact for maximum heat dissipation. Firm clamping action. Easy to mount.



mini-spring*

A vibration-proof tube guard that keeps a steady axial downward pressure and provides sideway support in vertical or horizontal mounting position. Locks or releases tube at touch of a finger.

precision parts
and
components
manufactured
to
customer
specifications

- Write for complete information on our products and facilities.

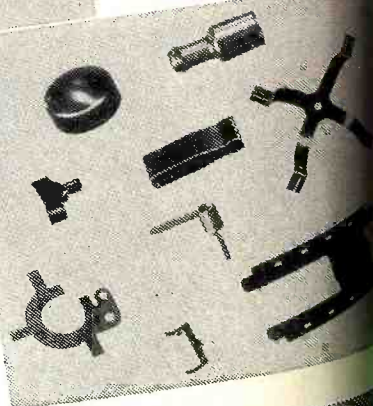


stampings

Simple or intricate... large or small quantities. Automatic equipment—close tolerances. Non-ferrous metals a specialty.

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Special electronic assemblies—to your specifications—controls, relays, connectors, switches, terminal boards, etc. Design assistance when required.



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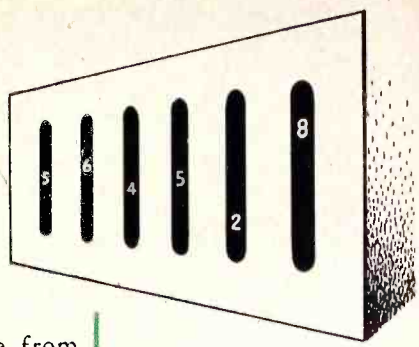
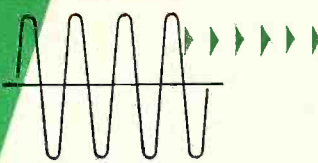
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speed, accuracy and reading ease

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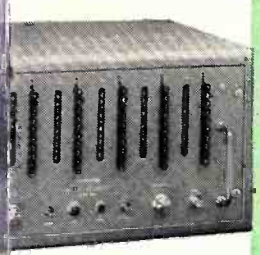
DIRECT READING DIGITAL INSTRUMENTS!



BERKELEY ELECTRONIC COUNTERS operate from closing contacts, photocells, magnetic or stylus pickups, or any means that will produce a positive potential of at least 1 v. Model 5001, in ruggedized industrial case with tamperproof transparent cover, handles up to 100 counts per second and lists at \$148.00; Model 410, 10,000 counts per second, \$330.00. Units with count rates to 1,000,000 per second available.

Applications:

Counting of manufactured objects, stacked sheets, motions; electrical, mechanical, physical or optical events.



BERKELEY PRESET COUNTERS produce an output signal when the desired number of counts have accumulated. Presetting is accomplished by depressing the desired pushbutton in each column of digits; manual or automatic reset. Maximum count rate is 40,000 per second. Standard models range from the 2-column Model 5422 at \$375.00 to the 6-column Model 5426 at \$795.00. Double pre-set models available.

Applications:

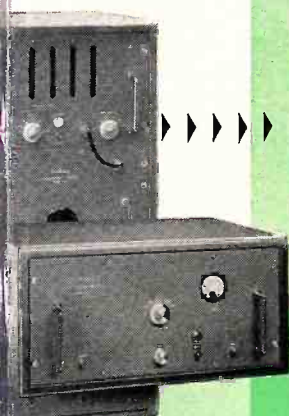
Counting and control of objects for packaging; coil winders; cutting stock to length; overspeed control; time delay generator; etc.



BERKELEY UNIVERSAL COUNTER AND TIMER multi-purpose instruments provide direct reading of elapsed time with accuracy to ± 1 microsecond, frequency-measurement to 1 megacycle with accuracy of ± 1 cycle, period measurement from 0 cycle upward with accuracy to ± 1 microsecond, and counting to 1 megacycle. Model 5510, \$1,100.00.

Applications:

Precision tachometry, measurement of pressure, flow, frequency, velocity, viscosity, elasticity, time interval measurement, timer calibration, timing relay, shutter action, etc.



BERKELEY FREQUENCY MEASURING EQUIPMENT covers the full range of frequency measurement applications, and includes the first complete monitoring and recording system commercially available. This system indicates in digital form frequencies to 515 mc. having input levels of 100 millivolts or more. Accuracy is ± 1 cycle \pm crystal stability. Frequency meter prices range from \$560.00 for the 20 cycle-100 KC Model 5556 to \$1,785.00 for the 0-42 mc. Model 5570. Prices of complete systems, including converters to 515 mc., selective amplifier and printed readout, on request.

Applications:

Filter and crystal testing, oscillator calibration and testing, design and testing of telemetering, transmitter and receiver equipment, transmitter monitoring, etc.

BERKELEY Nuclear Instruments

BERKELEY's complete line of nuclear instruments includes decimal scalars, count rate meters and computers, complete scintillation counting systems, and a full line of accessories.

BERKELEY BASE* Computer

*Electronic Analog Simulating Equipment
Precision computer — simulator equipment for the rapid solution of problems involving differential equations, and for the simulation of complete dynamic systems. Low in cost, compact, easy to operate.

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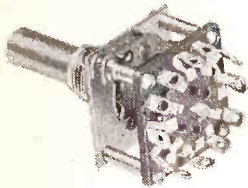
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ACTUAL SIZE $\frac{3}{4}$ INCH SQUARE
BABY SWITCH

with the new
12-position
Brown-Hill
**SUB-MINIATURIZED
SWITCHES**

*Smallest switch of its type
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Where space is a factor and you require minimum size with maximum stability — use the new 12-position Brown-Hill sub-miniaturized switches . . . reduce size, weight and cost of your equipment. The "Baby," illustrated above, is only $\frac{3}{4}$ of an inch square — smallest switch of its type ever produced commercially. Built to exacting military specifications, these new Brown-Hill switches have high-grade phenolic for the dielectric . . . bushing mounting . . . low contact resistance . . . inductance . . . and capacitance that remains constant.



**18-POSITION
STANDARD**



**24-POSITION
STANDARD**

All our switches, both miniaturized and standard, are built to the most exacting specifications. Wiper blades on standard size models are made of solid fine silver laminated to phosphor bronze for long lasting springiness and positive contact.

- Only $\frac{3}{4}$ inch square! Smallest 12-position switch of its type ever produced commercially.
- Rotor blades and stator contacts are stamped of solid silver alloy, insuring constant low resistance and high current rating.
- High-grade, military specification phenolic is used as the dielectric throughout . . . for lowest loss and minimum moisture absorption.
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- Sections may be ganged to fit any engineering specification.

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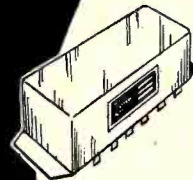
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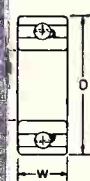
RADIAL TYPES

Retainer



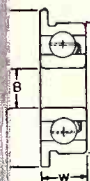
| BRG. No. | B | D | W |
|----------|--------------|--------------|--------------|
| R0 | 3/64 (.0469) | 5/32 (.1562) | 1/16 (.0625) |
| R1 | (.0550) | 3/16 (.1875) | 5/64 (.0781) |
| R1-4 | 5/64 (.0781) | 1/4 (.2500) | 3/32 (.0937) |
| R1-5 | 3/32 (.0937) | 5/16 (.3125) | 7/64 (.1094) |
| R2-5 | 1/8 (.1250) | 5/16 (.3125) | 7/64 (.1094) |
| R2 | 1/8 (.1250) | 3/8 (.3750) | 5/32 (.1562) |

Retainer Extra Light



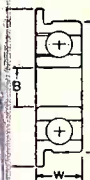
| BRG. No. | B | D | W |
|----------|--------------|--------------|--------------|
| R133 | 3/32 (.0937) | 3/16 (.1875) | 1/16 (.0625) |
| R144 | 1/8 (.1250) | 1/4 (.2500) | 3/32 (.0937) |
| R155 | 5/32 (.1562) | 5/16 (.3125) | 7/64 (.1094) |
| R156 | 3/16 (.1875) | 5/16 (.3125) | 7/64 (.1094) |
| R166 | 3/16 (.1875) | 3/8 (.3750) | 1/8 (.1250) |
| R168 | 1/4 (.2500) | 3/8 (.3750) | 1/8 (.1250) |
| R188 | 1/4 (.2500) | 1/2 (.5000) | 1/8 (.1250) |
| R613M | 6mm. | 13mm. | 3.5mm. |

Flanged Retainer



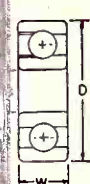
| BRG. No. | B | D | W |
|----------|--------------|--------------|--------------|
| FR1 | (.0550) | 3/16 (.1875) | 5/64 (.0781) |
| FR1-4 | 5/64 (.0781) | 1/4 (.2500) | 3/32 (.0937) |
| FR1-5 | 3/32 (.0937) | 5/16 (.3125) | 7/64 (.1094) |
| FR2-5 | 1/8 (.1250) | 5/16 (.3125) | 7/64 (.1094) |
| FR144 | 1/8 (.1250) | 1/4 (.2500) | 3/32 (.0937) |
| FR155 | 5/32 (.1562) | 5/16 (.3125) | 7/64 (.1094) |
| FR156 | 3/16 (.1875) | 5/16 (.3125) | 7/64 (.1094) |
| FR166 | 3/16 (.1875) | 3/8 (.3750) | 1/8 (.1250) |
| FR188 | 1/4 (.2500) | 1/2 (.5000) | 1/8 (.1250) |

Flanged Full



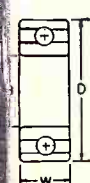
| BRG. No. | B | D | W |
|----------|--------------|--------------|--------------|
| F13 | (.0550) | 3/16 (.1875) | 5/64 (.0781) |
| F14 | 5/64 (.0781) | 1/4 (.2500) | 3/32 (.0937) |
| F15 | 3/32 (.0937) | 5/16 (.3125) | 7/64 (.1094) |
| F154 | 1/8 (.1250) | 5/16 (.3125) | 7/64 (.1094) |
| F155 | 5/32 (.1562) | 5/16 (.3125) | 7/64 (.1094) |
| F156 | 3/16 (.1875) | 5/16 (.3125) | 7/64 (.1094) |

Full



| BRG. No. | B | D | W |
|----------|--------------|--------------|--------------|
| 10 | (.0250) | (.1000) | 1/32 (.0312) |
| 12 | (.0400) | 1/8 (.1250) | 3/64 (.0469) |
| 12½ | 3/64 (.0469) | 5/32 (.1562) | 1/16 (.0625) |
| 13 | (.0550) | 3/16 (.1875) | 5/64 (.0781) |
| 14 | 5/64 (.0781) | 1/4 (.2500) | 3/32 (.0937) |
| 15 | 3/32 (.0937) | 5/16 (.3125) | 7/64 (.1094) |
| 16 | 1/8 (.1250) | 3/8 (.3750) | 5/32 (.1562) |

Full Extra Light



| BRG. No. | B | D | W |
|----------|--------------|--------------|--------------|
| 144 | 1/8 (.1250) | 1/4 (.2500) | 3/32 (.0937) |
| 154 | 1/8 (.1250) | 5/16 (.3125) | 7/64 (.1094) |
| 155 | 5/32 (.1562) | 5/16 (.3125) | 7/64 (.1094) |
| 156 | 3/16 (.1875) | 5/16 (.3125) | 7/64 (.1094) |
| 157 | 7/32 (.2187) | 5/16 (.3125) | 7/64 (.1094) |
| 168 | 1/4 (.2500) | 3/8 (.3750) | 1/8 (.1250) |
| 1810 | 5/16 (.3125) | 1/2 (.5000) | 5/32 (.1563) |

Spring Separator



| BRG. No. | B | D | W |
|----------|--------------|--------------|--------------|
| R1-4Z | 5/64 (.0781) | 1/4 (.2500) | 3/32 (.0937) |
| R1-5Z | 3/32 (.0937) | 5/16 (.3125) | 7/64 (.1094) |
| R2-5Z | 1/8 (.1250) | 5/16 (.3125) | 7/64 (.1094) |
| R2Z | 1/8 (.1250) | 3/8 (.3750) | 5/32 (.1562) |
| R168Z | 1/4 (.2500) | 3/8 (.3750) | 1/8 (.1250) |

► By SIZE, TYPE, and MATERIAL • MICRO provides the widest selection of small ball bearings made to precision quality.

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► TOLERANCES are ABEC5 or BETTER.

NEW • • • • • Flanged Shielded

| BRG. No. | B | D | W |
|-----------|--------------|--------------|---------|
| FR1-P,PP | (.0550) | 3/16 (.1875) | (.1094) |
| FR1-4P,PP | 5/64 (.0781) | 1/4 (.2500) | (.1406) |
| FR1-5P,PP | 3/32 (.0937) | 5/16 (.3125) | (.1406) |
| FR2-5P,PP | 1/8 (.1250) | 5/16 (.3125) | (.1406) |
| FR2-P,PP | 1/8 (.1250) | 3/8 (.3750) | (.1562) |
| FR144P,PP | 1/8 (.1250) | 1/4 (.2500) | (.1094) |
| FR155P,PP | 5/32 (.1562) | 5/16 (.3125) | (.1250) |
| FR156P,PP | 3/16 (.1875) | 5/16 (.3125) | (.1250) |
| FR166P,PP | 3/16 (.1875) | 3/8 (.3750) | (.1562) |
| FR168P,PP | 1/4 (.2500) | 3/8 (.3750) | (.1250) |
| FR188P,PP | 1/4 (.2500) | 1/2 (.5000) | (.1875) |



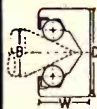
Shielded Radial



| BRG. No. | B | D | W |
|----------|--------------|--------------|---------|
| R0P,PP | 3/64 (.0469) | 5/32 (.1562) | (.0937) |
| R1P,PP | (.0550) | 3/16 (.1875) | (.1094) |
| R1-4P,PP | 5/64 (.0781) | 1/4 (.2500) | (.1406) |
| R1-5P,PP | 3/32 (.0937) | 5/16 (.3125) | (.1406) |
| R2-5P,PP | 1/8 (.1250) | 5/16 (.3125) | (.1406) |
| R2P,PP | 1/8 (.1250) | 3/8 (.3750) | (.1562) |
| R144P,PP | 1/8 (.1250) | 1/4 (.2500) | (.1094) |
| R155P,PP | 5/32 (.1562) | 5/16 (.3125) | (.1250) |
| R156P,PP | 3/16 (.1875) | 5/16 (.3125) | (.1250) |
| R166P,PP | 3/16 (.1875) | 3/8 (.3750) | (.1562) |
| R168P,PP | 1/4 (.2500) | 3/8 (.3750) | (.1250) |
| R188P,PP | 1/4 (.2500) | 1/2 (.5000) | (.1875) |

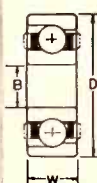
OTHER TYPES

Pivot



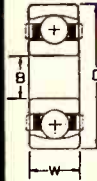
| BRG. No. | B | D | W |
|----------|--------|-------------|-------------|
| 22½M | (.040) | 4mm. | 2.4mm |
| 23M | (.050) | 5mm. | 3.2mm |
| 24 | (.085) | 1/4 (.2500) | 1/8 (.125) |
| 24H | (.085) | 1/4 (.2500) | 1/8 (.125) |
| 26 | (.165) | 3/8 (.3750) | 3/16 (.187) |
| 26H | (.165) | 3/8 (.3750) | 3/16 (.187) |

Angular Contact



| BRG. No. | B | D | W |
|----------|--------------|--------------|-------------|
| 113 | (.0550) | 3/16 (.1875) | 5/64 (.078) |
| 114 | 5/64 (.0781) | 1/4 (.2500) | 3/32 (.093) |
| 115 | 3/32 (.0937) | 5/16 (.3125) | 7/64 (.109) |
| 1154 | 1/8 (.1250) | 5/16 (.3125) | 7/64 (.109) |
| 116 | 1/8 (.1250) | 3/8 (.3750) | 5/32 (.156) |

Self Aligning



| BRG. No. | B | D | W |
|----------|--------------|--------------|-------------|
| 214 | 5/64 (.0781) | 1/4 (.2500) | 3/32 (.093) |
| 215 | 3/32 (.0937) | 5/16 (.3125) | 7/64 (.109) |
| 2154 | 1/8 (.1250) | 5/16 (.3125) | 7/64 (.109) |
| 216 | 1/8 (.1250) | 3/8 (.3750) | 5/32 (.156) |

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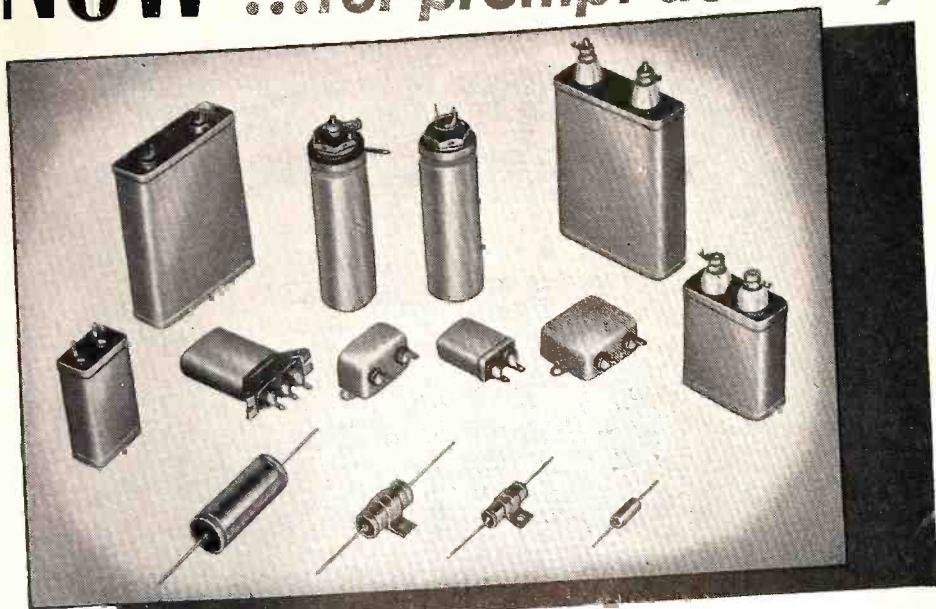
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| Conductor | { Aluminum Foil, Tin-Lead Foil, Metalized Paper, Metalized Plastic, Copper Foil. |
| Case | { Metal tubular, Bathtub, Deep drawn, Fab. case solder seam, Welded tank, Glass tubular, Paper tubular, Uncased. |
| Terminals | { Compression-type phenolic, Steatite standoff bushing, Silicone rubber, Glass seal, Glass, Teflon, Neoprene, Glass tubular. |
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Illustrated is National's Pulse-Forming Network NC-34. The original unit from which this was adapted was over five times this size. This illustration actual size.

Rated as follows:

3 KV DC; .005 microfarads;
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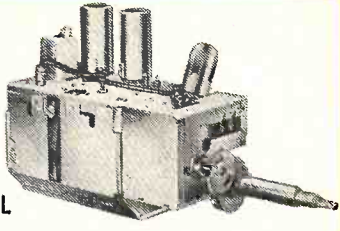
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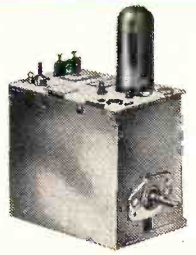
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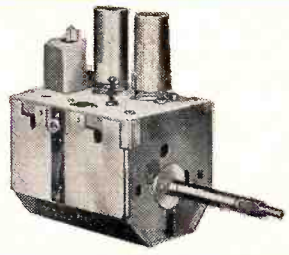
MODEL 66



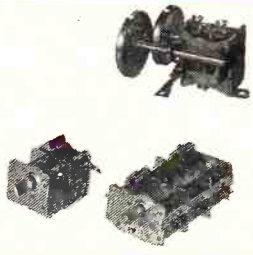
MODEL 80



MODEL 69



MODEL 78



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COMPONENTS

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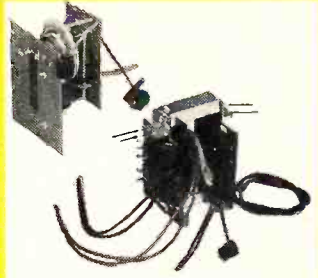
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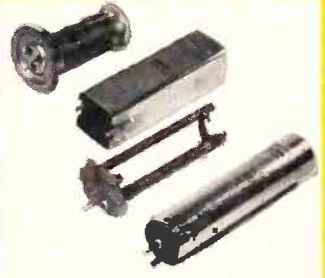
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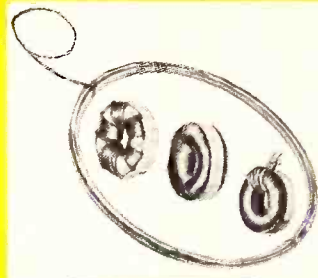
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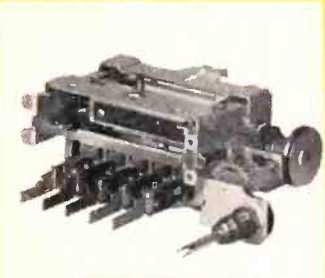
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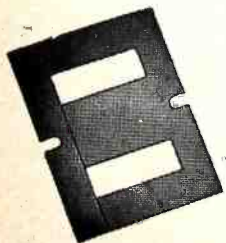
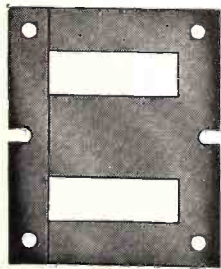
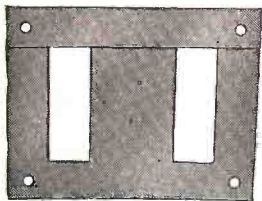
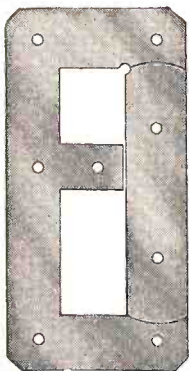
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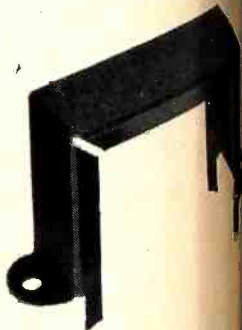
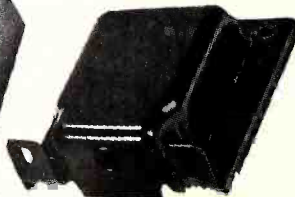
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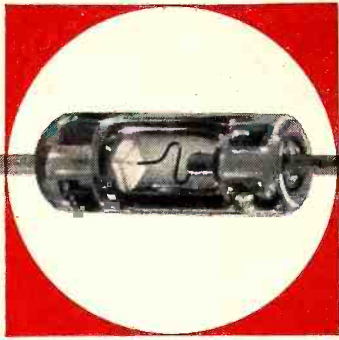
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ACTUAL DIMENSIONS
 DIODE BODY:
 0.265 by 0.130 inches (maximum)
 SHUNT CAPACITANCE:
 0.5 μ f (maximum)
 AMBIENT OPERATING
 TEMPERATURE RANGE:
 -78°C to $+90^{\circ}\text{C}$

Point-Contact Germanium Diodes
 fusion-sealed in a one-piece, gas-tight
 envelope . . . impervious to moisture,
 or other external contaminating agents.
 Flexible dumet leads are especially suit-
 able for spot-welding; or they can be iron-
 soldered as close as $\frac{1}{4}$ inch to the
 body—without special precautions.

The germanium crystal is permanently
 bonded to one lead, the cat whisker is
 welded to the other, and the point of
 the cat whisker is welded to the crystal.
 Hughes diodes are highly resistant to
 shock and vibration. Positive mechan-
 ical stability is achieved without risking
 contamination from fluxes, waxes or
 impregnants. And—each diode is thor-
 oughly tested to ensure the stability of

its electrical and physical characteristics.
 All this means: sturdy, highly reliable
 diodes.

TYPES—The Hughes line of diodes
 comprises standard RETMA, JAN, and
 many special types. Special types are
 produced according to customer speci-
 fications and are tested at high or low
 temperatures . . . for specific recovery
 time . . . for matching in pairs or quads.

ELECTRICAL SPECIFICATIONS AT 25°C unless otherwise indicated

| DESCRIPTION | RETMA or Hughes Type | Clip-In Hughes Type | Peak Inverse Voltage† (volts) | Absolute Maximum Inverse Working Voltage (volts) | Minimum Forward Current @ +1V (mA) | Maximum Inverse Current | | Other Characteristics |
|--------------------|-------------------------------|---------------------------|--|---|--|--|---------------------------|---|
| | | | | | | @ -50V (mA) | Other (mA) | |
| HIGH PEAK | 1N55B | HD 2052 | 190 | 150 | 5.0 | | 0.500 @ 150V | |
| | 1N68A | HD 2053 | 130 | 100 | 3.0 | | 0.625 @ 100V | |
| MEG TYPES | 1N67A | HD 2054 | 100 | 80 | 4.0 | 0.050 | 0.005 @ 5V | |
| | 1N99 | HD 2055 | 100 | 80 | 10.0 | 0.050 | 0.005 @ 5V | |
| | 1N100 | HD 2056 | 100 | 80 | 20.0 | 0.050 | 0.005 @ 5V | |
| 500K TYPES | 1N89 | HD 2057 | 100 | 80 | 3.5 | 0.100 | 0.008 @ 5V | |
| | 1N97 | HD 2058 | 100 | 80 | 10.0 | 0.100 | 0.008 @ 5V | |
| | 1N98 | HD 2059 | 100 | 80 | 20.0 | 0.100 | 0.008 @ 5V | |
| | 1N116 | HD 2060 | 75 | 60 | 5.0 | 0.100 | | |
| | 1N117 | HD 2061 | 75 | 60 | 10.0 | 0.100 | | |
| GENERAL PURPOSE | 1N90 | HD 2063 | 75 | 60 | 5.0 | 0.500 | | |
| | 1N95 | HD 2064 | 75 | 60 | 10.0 | 0.500 | | |
| | 1N96 | HD 2065 | 75 | 60 | 20.0 | 0.500 | | |
| JAN TYPES | 1N126* | | 75 | 60 | 5.0 | 0.850 | 0.050 @ 10V | Non-JAN equivalent, HD2070; clip-in, HD2066 |
| | 1N127** | | 125 | 100 | 3.0 | 0.300 | 0.025 @ 10V | Non-JAN equivalent, HD2071; clip-in, HD2067 |
| | 1N128*** | | 50 | 40 | 3.0 | | 0.010 @ 10V | Non-JAN equivalent, HD2072; clip-in, HD2068 |
| COMPUTER TYPES | 1N191 | HD 2077 | | § | 5.0 | 400K Ω min. between -10 and -50V @ 55°C § 200K Ω min. between -10 and -50V @ 55°C § | 0.120 @ -3V 0.60 @ -6V | Back resistance recovers to 50K Ω and 400K Ω (200K Ω for 1N192) in 0.5 μ sec and 3.5 μ sec max., respectively.† 0.2 μ sec recovery time.° 0.2 μ sec recovery time.° |
| | 1N192 | HD 2078 | | § | 5.0 | | | |
| | HD2013 | | | | 50 @ 1V & 1 @ 0.35V | | | |
| | HD2014 | | | | 50 @ 1V & 1 @ 0.35V | | | |
| UHF | HD2016A | | | | UHF MIXER DIODE | | | |
| ILLUSORY | HD2051 | | 125 | 100 | 4.0 | 0.050 | | 1N63 equivalent. |

† That voltage at which dynamic resistance is zero when back voltage rises linearly at 90v/sec.
 ‡ Back Recovery Time is measured with a forward pulse of 30mA, followed by a reverse pulse of 35 volts. Loop resistance of test circuit 2500 Ω max.
 § Recovery time is that point at which the diode voltage reaches -1V after the initiation of a 6V back pulse through 20K Ω from an initial 3 mA forward bias. Total shunt capacitance is 20 μ f.
 ° Tested at 55°C . Test voltage is a continuous 60 cps sine wave. Peak Reverse Voltage across the diode is 70V. Peak Forward Voltage not less than +2V or Peak Forward Current not less than 20 mA, whichever occurs first.
 * Formerly 1N69A. ** Formerly 1N70A. *** Formerly 1N81A.

Productive Bulletin SP2A is available on request.

Hughes

SEMICONDUCTOR SALES DEPARTMENT

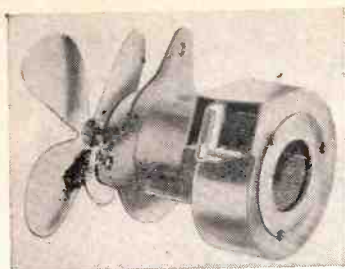
Aircraft Company, Culver City, Calif.



New York Chicago

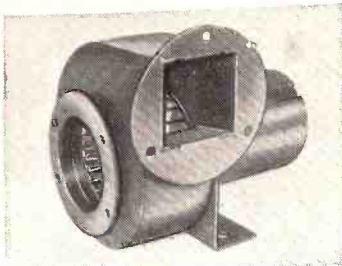
Manufacturers of Specialty Rotating Equipment Including Motors, Fans & Blowers

The features of all AIR MARINE motors include Stainless steel thru-bolts, Rigid die-cast aluminum housing and Riveted stator to insure Extra-Rigid Construction assuring positive bearing alignment and uniform air gap. Motors are protected against humidity and fungus growth—can be mounted in any position—are equipped with ball bearings using lubricants for high and low temperatures—meet all AN specifications.



A15ABF-1 115 Volt—400 cycle. Blower delivering 50 CFM at 8500 RPM. Propeller fan delivering approx. 300 CFM at 8500 RPM.

B20B3—115 Volt 400 cycle single phase centrifugal blower. Delivering 140 CFM of air against 2" of water operating at 6500 RPM minimum.



A08C1—2 phase control motor for operation on 60 cycle supply 115 Volt on one phase and 40 Volt on control phase. 3.0 oz/in starting torque on above voltages. 1500 RPM. No load speed.



A15AD3—Axial blower unit for operation on 115 Volt 60 cycle single phase supply at 3300 RPM delivering 35 CFM at 0.2 S.P. This unit has special mounting bracket.

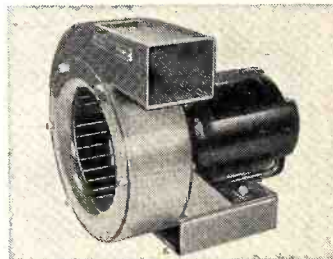


A15HF—115 Volt 60 cycle single phase capacity start & run synchronous motor running at 3600 RPM. This unit has special terminal block mounted on end of motor.



A11A-2—115 Volt 400 cycle single phase axial vane blower delivering 70 CFM at 1" static pressure at 11,000 RPM.

631 x 35 115 Volt, 60 cycle or 220 Volt, 60 cycle, 1 or 3 phase. 3450 RPM continuous duty. 250 CFM at 2 1/2" water gauge. Used in microwave generators; unattended repeater stations. Fits in space 13 1/2" long, 8 3/4" wide, 7 3/4" high.



631 x 1—115 Volt, 60 cycle motor 100 CFM @ 2 1/2" water gauge. Fits in space 9 1/2" long, 8 3/4" wide, 7 3/4" high.

450C-1—115 Volt 400 cycle phase axial—vane type blower delivering 200 CFM at 6 S.P. Weight approx. 5 lb.

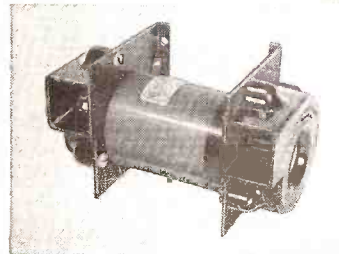


Variable frequency blower for operation on 115 Volt single phase. Available with axial fan or centrifugal blower.

A15BF-15—50 to 800 cycles—single winding available with axial fan or centrifugal blower.

A15AB-2—50-60 cycle and 400 cycle operation single winding.

A15CF10—50-60 and 320-1000 cycle operation dual winding.



A15BD—115 Volt 400 cycle single phase double blower delivering 26 CFM total at 0 static. This unit has special mounting brackets.

Showing comparison between our large and small blowers



The motors and blowers on this page are representative of many varied models available. Detailed information specifications and performance data on all the above units available on request.

A11A-1—115 Volt 400 cycle single phase propeller type blower using 4" 4 blade fan.



Constantly developing to meet your exacting needs . . .

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MODEL D1
Counts up to 20 units per second.
Other models up to 5000 UPS

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SPECIFICATIONS

| NO. | MAX. SPEED | REGISTER RECORDS ON EVERY | RESET |
|-----|-------------|-------------------------------|-----------|
| | 20/second | 10 counts | by hand |
| | 20/second | 12 counts | by hand |
| | 200/second | 100 counts | by hand |
| | 200/second | 144 counts | by hand |
| | 5000/second | 1000 counts | by hand |
| | 60/second | number set | automatic |
| | 60/second | number set | except |
| | 60/second | number set | register |
| | 60/second | number set on upper control | automatic |
| | 60/second | knobs (warns on | except |
| | 60/second | number set on lower controls) | register |

Reliability in all kinds of counting operations . . . The Post Decitron eliminates costly production oversights and allows a continuous check of product total.

Available models cover every counting need from slow speed direct counting — to amazing totals of 6000 units per second.

Preset counters permit desired total counts i.e. dozens, fifties, gross lots, etc. Warning systems can be energized by special preset models to slow down or stop machinery, sound buzzers and perform a variety of helpful functions. Lineal footage counters measure production of paper, cloth etc.

You can save production losses with compact, inexpensive, Decitron electronic counters.

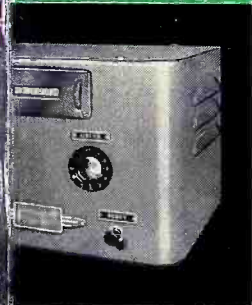
Category also adaptable as lineal footage counters. Development stages is a new type of electronic relay which will only pass, but will permit slow range counts up to 2 per second. The total count on direct impulse as the objects pass through the photo head.

D-2-144
Decitron with 12 place
counts gross lots

MODEL P2
Counts in any desired total 1-100
Other models 1-1,000,000

MODEL P3
Preset counting any number
1-1000 inclusive

MODEL PW4
Desired count from 1-10,000 plus
wired in warning system



ELECTRONIC PRODUCTS DIVISION

POST MACHINERY COMPANY

Beverly, Massachusetts



DC MOTOR OR GENERATOR
This small permanent magnet, ball-bearing unit—As a motor: 1/125 H.P. at 6000 RPM continuous duty. As a generator: output 4 watts at 6000 RPM—5 volts per 1000 RPM. Dimensions: 1-29/32" x 1-1/2" x 1-15/100".

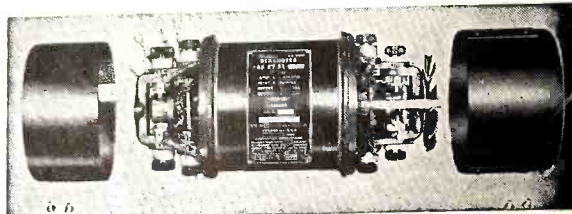


SHADED POLE MOTOR—for sound recorders, air circulators, many other applications. 4-pole, 2 or 4 coil construction. Will operate from 115 volts, 60 cycle a.c.

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Outstanding experience in producing rotary electrical equipment to meet rigid specifications is an integral part of every EPCO product.

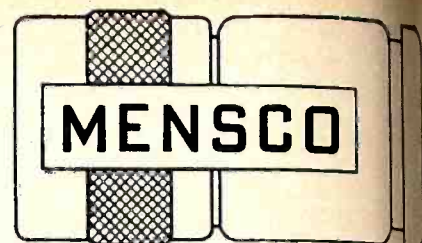
Whether your problem involves an industrial or highly developed military unit, EPCO's complete research and engineering facilities are at your disposal. Contact EPCO today for special design assistance that can provide you with the best solution.



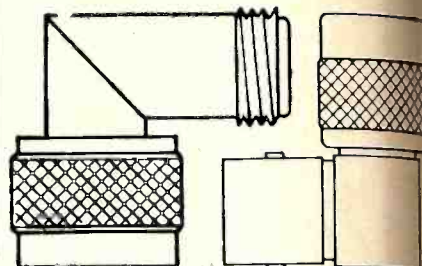
DYNAMOTOR OPERATES FROM 12-24-32 VOLTS
Output of this remarkably compact unit is 500 volts at .100 amperes. Dynamically balanced armature has 4 windings.

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• DC MOTORS & GENERATORS • SHADED POLE MOTORS (2-4-6 Pole) • P-M AC GENERATORS



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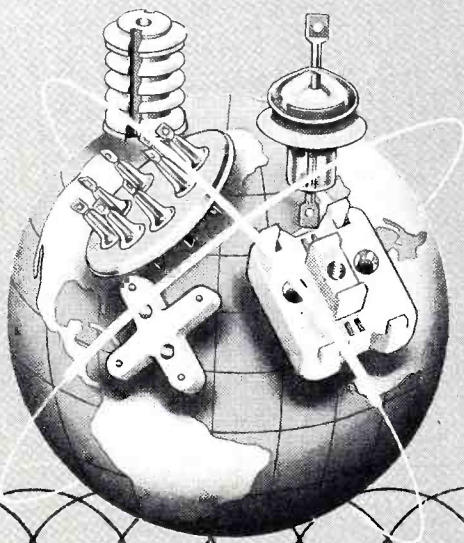
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Stupakoff

PRODUCTS

FOR THE WORLD OF ELECTRONICS

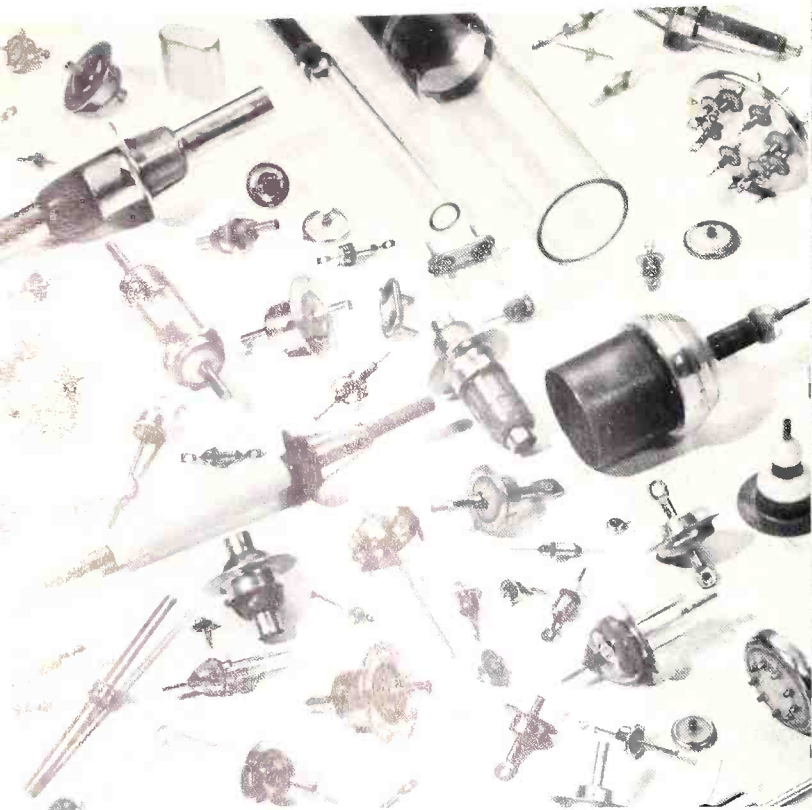


Stupakoff

CERAMIC & MFG. CO.

LATROBE, PENNSYLVANIA

GLASS-TO-METAL SEALS

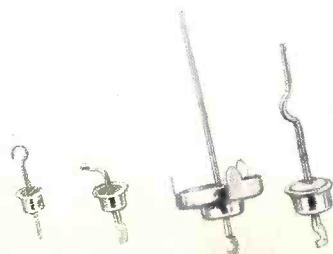


Perfectly closed and durable air-tight assemblies are made with Stupakoff Kovar-Glass Seals. The use of hard glass for these seals insures the highest degree of protection against thermal shock and weathering.

Among the various types of standard Stupakoff Kovar-Glass Seals are: Single Terminal, for all feed-through applications requiring a single electrode with tubular, solid or flattened and punched center lead; High Voltage, for special feed-through application where higher voltage-flashover and surface leakage ratings are required; Stand-off Terminals, specially useful as test and connection points; Strain-Relief Terminals, patented design developed especially for welding and brazing; Multi-Header Terminals, for applications requiring a number of terminals in a limited area.

In addition, Stupakoff designs and makes special seals for use where standard designs are not applicable. All types are readily produced in large or small quantities as required.

Stupakoff Kovar-Glass Seals are fully described in our new catalog, 453, sent free upon request.



STEATITE AND OTHER CERAMICS



Stupakoff is a leading manufacturer of ceramic products for electrical and electronic applications at all voltages, frequencies and temperatures. Parts are made of Alumina, Cordierite, Forsterite, Magnesia, Porcelain, Zircite, Titanates, Stupalith and Steatite—plain, ground, metallized or assembled.

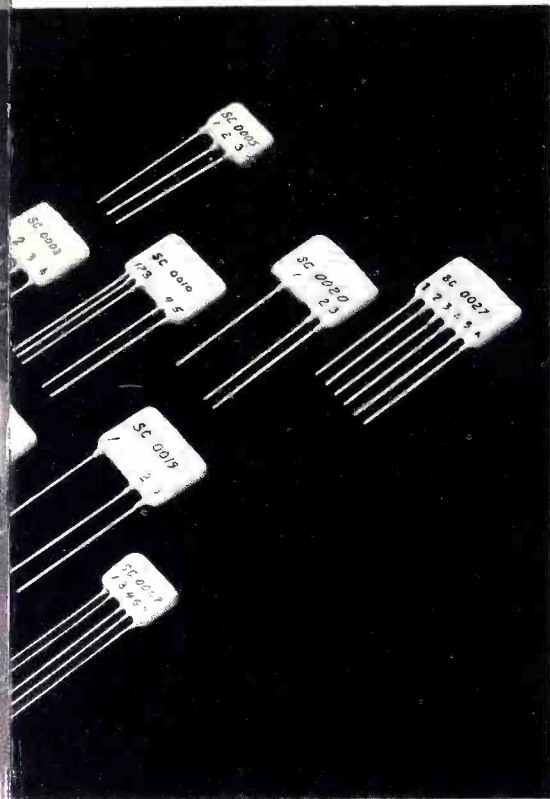
Where thermal shock conditions prevail, parts made of Stupalith will withstand extremely severe service. Stupalith parts range in weight from a fraction of an ounce to several pounds, and are made in simple or intricate shapes, by pressing, extrusion, casting or ramming. Safely used at temperatures up to 2400 F.

Stupakoff Temperature-Sensitive Resistor Ceramics are used for temperature indicating measuring equipment such as Radiosonde, for infrared light source and for heating elements. Supplied complete with terminals, in the form of rods, tubes, discs, bars, rings, etc.

For by-pass, lead-through blocking, standoffs and trimmer applications; also for temperature compensating service, Stupakoff offers Ceramic Dielectric materials having coefficients from P-100 to N-200 and high K materials up to K-6000. Made in the form of tubes, discs, and special shapes, plain or silvered.

Steatite products are fully described in catalog 951; data on other materials will be furnished upon request.

PRINTED CIRCUITS



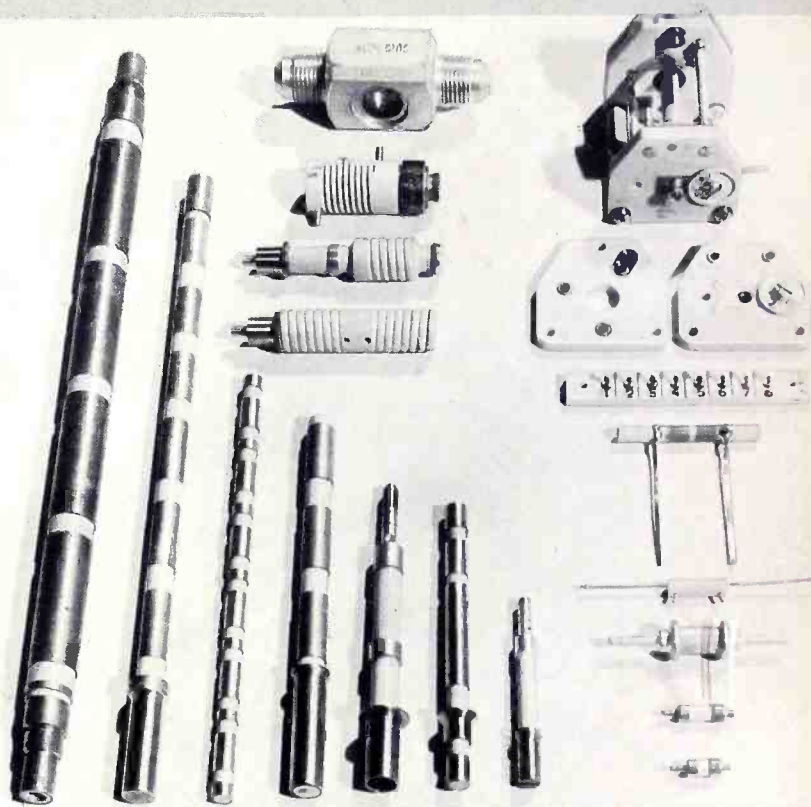
In one compact, sealed unit a specified wired resistors and capacitors of pre-wired Stupakoff Printed Circuits save space, speed assembly, reduce costs, minimize errors. The resistors and capacitors are printed on circuits designed in accordance with the requirements of individual applications. By using Printed Circuits instead of the individual soldered connections are reduced up to 50%. Assemblies are lighter and more compact, and assembly time is reduced and better products

are produced, compact, accurately produced units in many sizes, a typical one being 1 x 1½ x 1/8 (inches).

The resistors, capacitors and conductors are printed on vitreous high-dielectric ceramic and permanently bonded to the ceramic surface by firing, and protected from abrasion and corrosion by a tough, impervious plastic coating. The components are soldered in place, ready for complete assembly.

Write for bulletin 1151, containing complete specifications of a number of typical standard circuits and detailed information on the design and construction of Stupakoff Printed Circuits.

CERAMIC-METAL ASSEMBLIES



Stupakoff specializes in the application of metal to ceramic parts for a variety of purposes, such as metallized ceramic induction coils for radio receivers and transmitters; metallized ceramic shafts for air-tuning condensers; metallized plates for making fixed rigid assemblies; printed circuits; ceramic trimmer condensers; terminals and terminal boards; strain and lead-in insulators; and many other ceramic-to-metal products.

To combine ceramic and metal parts into one permanent unit, Stupakoff utilizes extensive experience with both materials. Methods of assembly employed by Stupakoff include: metallizing, soldering, pressing, spinning and others. Among the metals assembled to ceramics are silver, copper, brass, stainless steel, monel and Kovar.

Stupakoff high-precision ceramic assemblies offer many opportunities to reduce costs, increase production and improve electrical and electronic equipment. Full details will gladly be sent upon request.



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18 YEARS

SPERRY

13 YEARS

Kovar*



18 YEARS

Bomac

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THE MOST DEPENDABLE



15 YEARS

**GLASS-SEALING
ALLOY**



18 YEARS



13 YEARS



7 YEARS



11 YEARS



**VARIAN
associates**
5 YEARS



18 YEARS

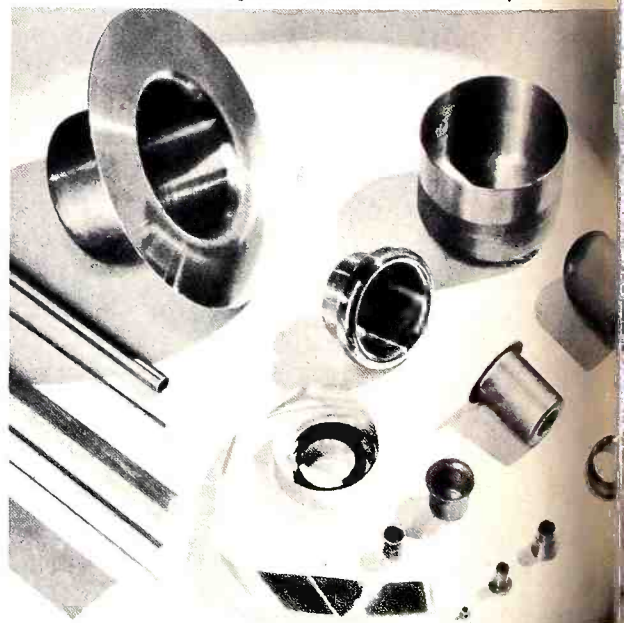
The ideal alloy for glass sealing, Kovar matches the expansivity of certain hard glasses over the entire working temperature range. It resists mercury attack, has ample mechanical strength and seals readily with simple oxidation procedure. It is available as sheet, strip, foil, rod, tube, wire—or fabricated into cups, eyelets, leads and other shapes. The prominent users of KOVAR and the length of time they have employed this metal are convincing proof of satisfaction.

Kovar is a cobalt, nickel, iron alloy, manufactured under very carefully controlled conditions. It attributes its success to the following characteristics:

1. Seals readily into hard or thermal shock resistant type glass.
2. Has substantially the same expansivity as the glass from -80° C to the annealing point of the glass.
3. Produces a permanent vacuum tight seal.
4. Is readily machined or fabricated to permit the use of small and intricate shapes.
5. Is of controlled composition to permit duplication of results.
6. Resists mercury attack.
7. Is usable in any thickness; no need to feather edge on tubular or intricate shapes.
8. Is relatively inexpensive, eliminating restraints on sizes and capacity.
9. Can be welded, soldered, and brazed to other metals.

Full information on the use of Kovar is given in Stupakoff Bulletin 145, which we will send upon request.

*Westinghouse Trade Mark No. 337,962



Supplied by **Stupakoff**

in the form of: SHEET, ROD, WIRE, FOIL, TUBING, EYELETS, LEADS and FABRICATED SHAPES

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MULTI-METAL WIRE CLOTH COMPANY, INC.

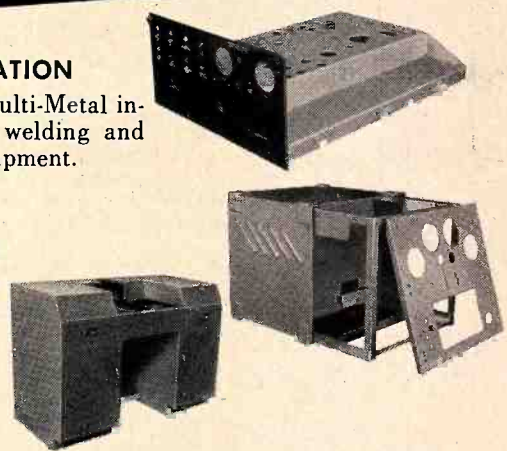
Electronics Division

1350 Garrison Avenue • New York 59, N. Y.



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For Every Purpose!

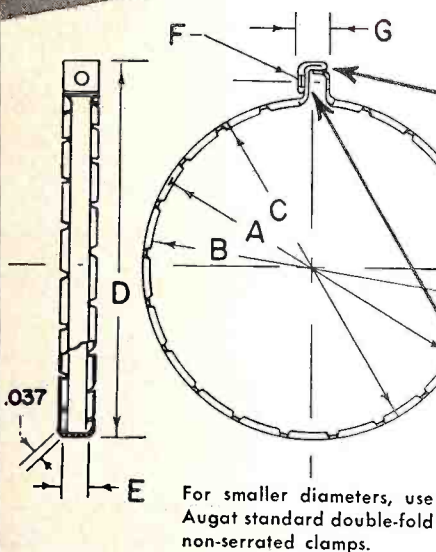
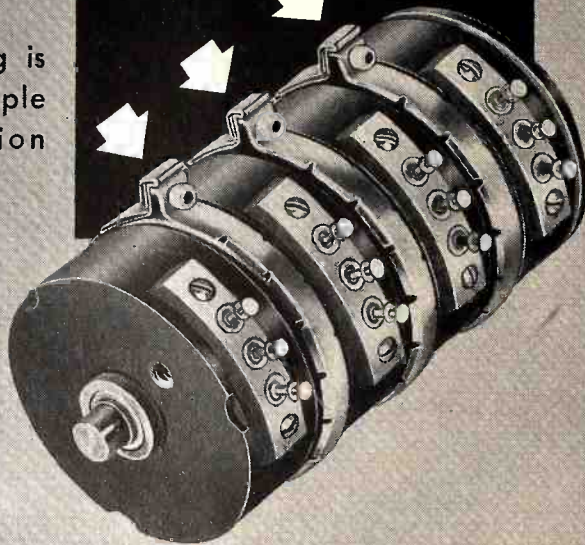
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The New AUGAT "GRIP-TITE" Clamp Ring

The Augat clamp ring is a sure grip in multiple ganging of precision potentiometers.

Grip-tite potentiometer clamp rings are made of 302 stainless steel, are corrosion resistant and have withstood rigid 200-hour salt spray tests.



When clamp screw is tightened to lock the ends in position, any added take-up on screw brings all pressure to bear on cup circumference . . . prevents slippage.

SERRATED EDGES on large size clamp rings allow for maximum and minimum tolerances between the two cups . . . provide greater grip to cup walls.

THREADED TRIPLE-FOLD RING HEAD, .075" thick eliminates nut . . . avoids loosening.

| Augat | Fig. | A | B | C | D | E | F | G |
|-------|------|-------|-------|-------|-------|------|------|------|
| 5007 | 1 | 1.288 | 1.236 | 1.338 | 1.550 | .134 | 2x56 | .165 |
| 5004 | 1 | 1.680 | 1.628 | 1.730 | 1.950 | .134 | 2x56 | .165 |
| 5005 | 1 | 2.032 | 1.980 | 2.082 | 2.294 | .134 | 2x56 | .165 |
| 5002 | 2 | 1.928 | 1.876 | 1.978 | 2.203 | .075 | 2x56 | .165 |
| 5009 | 1 | 1.555 | 1.503 | 1.605 | 1.823 | .134 | 2x56 | .165 |

All rings normally supplied without screws. Samples, specifications and prices on request.

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- For Trade Name Listings
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CLASSIFICATION CHART FOR SIGMA SENSITIVE RELAYS

| RELAY SERIES | SWITCH TYPE (MAX. CONTACT ARRANGEMENT) | SWITCH RATING* | SENSITIVITY | | MAXIMUM COIL RESISTANCE OR IMPEDANCE | COIL DISSIPATION (40°C rise)§ | SPEED RANGE** | MOUNTINGS, ENCLOSURES, AND DESIGNATIONS | | | PARTICULAR FEATURES | RELAY SERIES |
|--------------|--|--------------------------------|---|--|--|-----------------------------------|--|---|-------------------------|-------------------------|--|--------------|
| | | | Maximum (Standard) | "Aircraft"† | | | | Open Frame | Dust Cover | Hermetic Seal | | |
| 4 | SPDT (1-C) | 2 amp. | .02 watt DC | .05 watt DC | 12,000 ohms | 1.0 watts 85°C | .002-.015 sec. | 4F— | 4A— 4R— | 4RJ— | Medium price, sensitivity, and precision. | 4 |
| 5 | SPDT (1-C) | up to 3 amp. | .001 watt DC .007 watt AC, internal rectifier | .010 watt DC .025 watt AC, internal rectifier | 26,000 ohms (copper wire) | 1.5 watts 100°C-D.C. 70°C-A.C. | .004-.100 sec. Slow-release, with slug, available. | 5F— | 5AH— 5R— | 5RJ— 5JO— | High sensitivity, shock resistance, stability, and vibration resistance. | 5 |
| 41 | SPDT (1-C) | 2 amp. some adjustments 5 amp. | .032 watt DC 0.15VA AC 60 cps. | Not generally recommended | 12,000 ohms 190,000 ohms | 1.0 watts 100°C 2.0 VA 100°C | .002-.015 sec. Operates in 1st half cycle. | 41F— other open mountings available | 41R— 41RO— | 41RJ— 41JO— | High AC sensitivity, long mechanical life; fast—good for pulsing; high load ratings possible; low price. | 41 |
| 6 | 4PDT (4C) | 5 amp. with SPDT DPDT | .07 watt — 4C contacts .008 watt — 1C contacts DC POLARIZED | | 25,000 ohms or 12000/12000 in dual coils | 1.4 watts 100°C | .007-.12 sec. | 6FX— 6FY— 6FZ— | | 6HX— 6HY— 6HZ— | Polarized; biased, latching or 3-position (null-seeking); high gain (load power/operating power ratio); multi-contact. | 6 |
| 7 | SPDT (1-C) | 2 amp. | .002 watt, switching, gen'l. .0002 watt, keying setting DC POLARIZED | | 12,000 ohms (3500/3500 in dual coils) | 1.2 watts 85°C | .001-.007 sec. | | 7AOX— 7AOY— 7AOZ— | 7JOX— 7JOY— 7JOZ— | Polarized; biased, latching, or 3-position (null-seeking). For teletype and keying or pulsing, also switching and control functions. | 7 |
| 22 | DPDT (2-C) | 2 amp. | .04 watt DC — 2C contacts .02 watt DC — 1C contacts | | 12,000 ohms | 1.0 watts 100°C | .004-.020 sec. | | | 22RJ— | Miniature, double-pole; maximum shock resistance and precision. | 22 |

*Nominal, 24VDC or 115VAC resistive; medium-duty life, eg. 100,000 operations.

**Approximate, as governed by normal variations in driving circuit.

†Any duty involving vibration up to 10g at 55 cycles per second while in use.

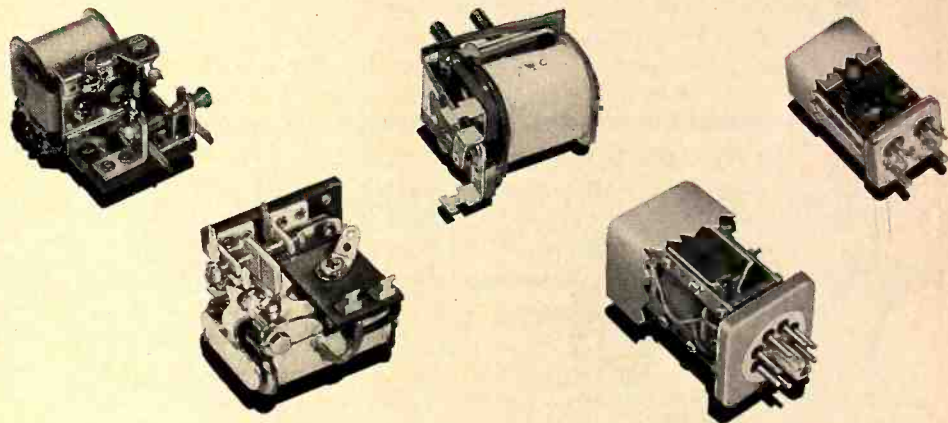
‡At operate voltage, operated. Unoperated, approx. 1/2 this value. Varies inversely with applied voltage.

§Sum of ambient plus temperature rise not to exceed temperature given for each relay. Thermal time constant varies from 10 to 30 minutes. For higher temperatures, inquire of factory.

SIGMA SENSITIVE RELAYS

BASIC TYPES

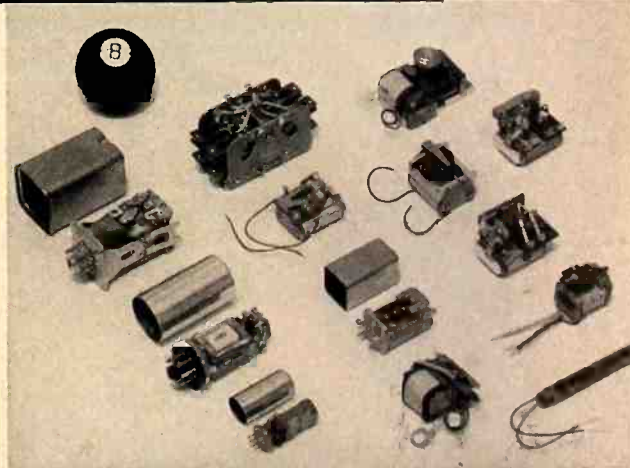
...tion from basic designs, with many enclosures mounting styles. May be ...ed with a coil resistance adjustment chosen from ... of standard codes. The ...ification chart calls atten- ... to the most obvious ...s of comparison between ... series.



NEW DESIGNS

... June 1954, the 13 relays ...e right were in various ...s of development. Some ...ese may soon be cata- ...d along with the six ... series tabulated in the ...ification Chart; others ...cannot make the grade. If ...are interested in any of ... characteristics, we'd be ...lato know about it.

- | | |
|-------------------|--|
| DC POLAR RELAYS | <ul style="list-style-type: none"> • Multi-circuit heavy current switch. • DPDT or SPDT three-position non-mechanically centered. • SPDT very high speed telegraph or information repeater. • DPDT or SPDT low cost. • SPDT miniature three-position. |
| DC NEUTRAL RELAYS | <ul style="list-style-type: none"> • Sensitive high current SPST. • Very sensitive and precise miniature. • Low cost DPDT. • SPDT midget low cost. |
| AC RELAYS | <ul style="list-style-type: none"> • 400 cycle (non-rectifier). • Constant voltage temperature compensated high overload rated. • Tuned (resonant) (1200-2800 cps). • Self-synchronous aperiodic motor for pulse counting (0-60 cps). |



SIGMA RELAY MANUAL



The Sigma Relay Manual includes full data on each Sigma relay, type, series and adjustment. Available combinations tabulated with reference to important characteristics and application data. Basic loose leaf binder and approximately 260 pages, \$5.00, including one year's subscription to supplementary pages as issued. Renewal, after first year, one dollar per year. (Separate sheets in response to your inquiry at no charge.) A four page folder summarizing Sigma products is available on request.

SIGMA

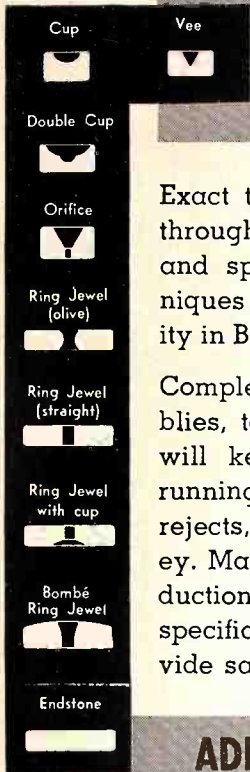
SIGMA INSTRUMENTS, INC.

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Bird

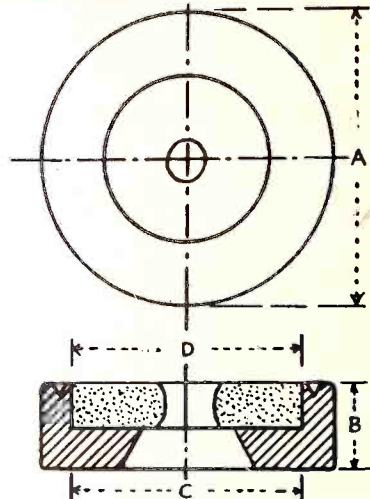
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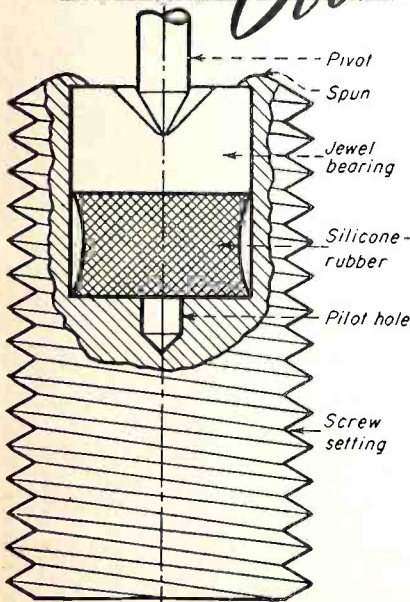


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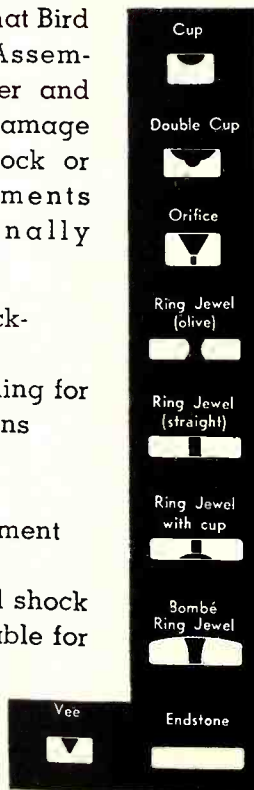
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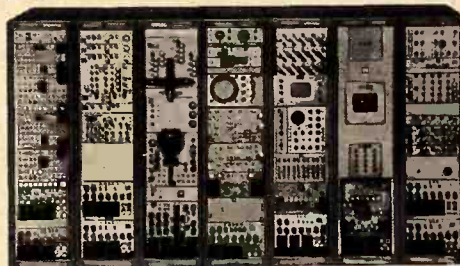
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"EVEREADY" RADIO BATTERIES

BRAND

| TYPES | VOLTAGE | LENGTH | WIDTH | HEIGHT | TERMINALS | SUGGESTED CURRENT RANGE | WEIGHT BATTERY |
|---|------------|-----------------------|---------------------|---------------------|-------------------------------|-------------------------|---------------------------|
| "A" BATTERIES FOR PERSONAL RECEIVERS | | | | | | | |
| 720 | 1.5 | 2 $\frac{1}{8}$ " | 1 $\frac{3}{8}$ " | 3 $\frac{1}{2}$ " | Socket —, +1.5 | 0-300 m.a. | 6 $\frac{1}{2}$ oz. |
| 724 | 6 | 1 $\frac{1}{2}$ " | 1 $\frac{3}{8}$ " | 2 $\frac{1}{2}$ " | Flat Contact —, +6 | 0-25 m.a. | 2 $\frac{1}{2}$ oz. |
| 950 | 1.5 | 1 $\frac{21}{64}$ " D | | 2 $\frac{7}{64}$ " | Flat Contact —, +1.5 | 0-150 m.a. | 3 oz. |
| 964 | 1.5 | 1 $\frac{3}{8}$ " D | | 4 $\frac{1}{64}$ " | Flat Contact —, +1.5 | 0-300 m.a. | 5 $\frac{9}{10}$ oz. |
| "B" BATTERIES FOR PERSONAL RECEIVERS | | | | | | | |
| 437 | 75 | 1 $\frac{1}{8}$ " | 1 $\frac{1}{8}$ " | 6 $\frac{3}{8}$ " | Snap Type —, +75 | 0-10 m.a. | 14 $\frac{3}{4}$ oz. |
| 455 | 45 | 2 $\frac{3}{16}$ " | 1" | 3 $\frac{1}{8}$ " | Snap Type —, +45 | 0-10 m.a. | 7 $\frac{1}{2}$ oz. |
| 457 | 67.5 | 2 $\frac{1}{8}$ " | 1 $\frac{3}{8}$ " | 2 $\frac{1}{2}$ " | Snap Type —, +67.5 | 0-6 m.a. | 7 $\frac{3}{8}$ oz. |
| 467 | 67.5 | 2 $\frac{3}{8}$ " | 1 $\frac{3}{8}$ " | 3 $\frac{45}{64}$ " | Snap Type —, +67.5 | 0-10 m.a. | 12 oz. |
| 477 | 67.5 | 1 $\frac{3}{8}$ " | 6 $\frac{3}{64}$ " | 5 $\frac{1}{8}$ " | Snap Type —, +67.5 | 0-8 m.a. | 8 $\frac{3}{8}$ oz. |
| 490 | 90 | 3 $\frac{3}{8}$ " | 1 $\frac{3}{8}$ " | 3 $\frac{45}{64}$ " | Snap Type —, +90 | 0-10 m.a. | 15 oz. |
| "A" BATTERIES FOR POCKET RECEIVERS | | | | | | | |
| 635 | 1.5 | 1 $\frac{1}{64}$ " D | | 1 $\frac{1}{8}$ " | Flat Contact —, +1.5 | 0-80 m.a. | 1 $\frac{1}{2}$ oz. |
| 915 | 1.5 | 3 $\frac{5}{64}$ " D | | 1 $\frac{1}{8}$ " | Flat Contact —, +1.5 | 0-25 m.a. | $\frac{1}{2}$ oz. |
| "B" BATTERIES FOR POCKET RECEIVERS, RADIO PAGING AND SPECIAL EQUIPMENT | | | | | | | |
| 411 | 15 | 1 $\frac{3}{8}$ " | $\frac{5}{8}$ " | 1 $\frac{29}{64}$ " | Flat Contact —, +15 | 0-2.5 m.a. | $\frac{1}{2}$ oz. |
| 412 | 22.5 | 1 $\frac{1}{2}$ " | $\frac{5}{8}$ " | 2" | Flat Contact —, +22.5 | 0-2.5 m.a. | 1 $\frac{1}{2}$ oz. |
| 413 | 30 | 1 $\frac{3}{8}$ " | $\frac{5}{8}$ " | 2 $\frac{1}{8}$ " | Flat Contact —, +30 | 0-2.5 m.a. | 1 $\frac{1}{2}$ oz. |
| 415 | 45 | 1 $\frac{3}{64}$ " | $\frac{5}{8}$ " | 3 $\frac{45}{64}$ " | Snap Type —, +45 | 0-4 m.a. | 2 $\frac{1}{2}$ oz. |
| 417 | 15 | 1 $\frac{1}{8}$ " | $\frac{3}{8}$ " | 1 $\frac{1}{8}$ " | Flat Contact —, +15 | 0-6 m.a. | 1 $\frac{1}{2}$ oz. |
| 420 | 22.5 | 1 $\frac{1}{8}$ " | $\frac{3}{8}$ " | 2 $\frac{1}{8}$ " | Flat Contact —, +22.5 | 0-6 m.a. | 2 $\frac{1}{2}$ oz. |
| 430 | 30 | 1 $\frac{1}{8}$ " | 1" | 2 $\frac{1}{8}$ " | Flat Contact —, +30 | 0-6 m.a. | 3 $\frac{1}{2}$ oz. |
| 491 | 240 | 2 $\frac{19}{32}$ " | 1 $\frac{5}{16}$ " | 4 $\frac{7}{16}$ " | Flat Recessed —, +240 | 0-2.5 m.a. | 13 oz. |
| 493 | 300 | 2 $\frac{11}{16}$ " | 2 $\frac{7}{32}$ " | 3 $\frac{29}{32}$ " | Pin Jacks —, +300 | 0-2.5 m.a. | 14 $\frac{1}{2}$ oz. |
| 497 | 510 | 3" | 1 $\frac{19}{32}$ " | 5 $\frac{5}{8}$ " | Flat Recessed —, +180, +510 | 0-2.5 m.a. | 1 lb. 10 oz. |
| 505 | 22.5 | $\frac{5}{8}$ " | 1 $\frac{1}{32}$ " | 1 $\frac{1}{64}$ " | Recessed —, +22 $\frac{1}{2}$ | 0-1.5 m.a. | $\frac{3}{8}$ oz. |
| 506 | 30 | 1 $\frac{3}{64}$ " | $\frac{5}{8}$ " | 1 $\frac{27}{64}$ " | Flat Contact —, +30 | 0-1.5 m.a. | $\frac{9}{10}$ oz. |
| 507 | 30 | $\frac{5}{8}$ " | 1 $\frac{19}{32}$ " | 2.605" | Flat Contact —, +30 | 0-1.5 m.a. | $\frac{9}{10}$ oz. |
| "A" BATTERIES FOR PORTABLE RECEIVERS | | | | | | | |
| 713 | 7.5 | 3 $\frac{3}{8}$ " | 5 $\frac{3}{64}$ " | 2 $\frac{3}{4}$ " | Socket —, +7.5 | 0-50 m.a. | 6 $\frac{1}{2}$ oz. |
| 717 | 7.5 | 2 $\frac{3}{8}$ " | 1 $\frac{1}{8}$ " | 3 $\frac{1}{2}$ " | Socket —, +7.5 | 0-75 m.a. | 8 oz. |
| 726 | 4.5 | 3 $\frac{1}{8}$ " | 1 $\frac{1}{8}$ " | 2 $\frac{1}{8}$ " | Socket —, +4.5 | 0-150 m.a. | 10 $\frac{1}{2}$ oz. |
| 736 | 4.5 | 3 $\frac{1}{8}$ " | 1 $\frac{1}{8}$ " | 4 $\frac{3}{8}$ " | Socket —, +4.5 | 0-250 m.a. | 1 lb. |
| 742 | 1.5 | 2 $\frac{1}{8}$ " | 2 $\frac{1}{8}$ " | 3 $\frac{3}{8}$ " | Socket —, +1.5 | 0-1000 m.a. | 1 lb. 5 oz. |
| 744 | 6 | 2 $\frac{3}{8}$ " | 2 $\frac{3}{8}$ " | 3 $\frac{3}{8}$ " | Socket —, +6 | 0-250 m.a. | 1 lb. 5 oz. |
| 746 | 4.5 | 3 $\frac{1}{8}$ " | 1 $\frac{1}{8}$ " | 4 $\frac{3}{8}$ " | Socket —, +4.5 | 0-300 m.a. | 1 lb. 3 $\frac{1}{2}$ oz. |
| "B" BATTERY FOR PORTABLE RECEIVERS | | | | | | | |
| 482 | 45 | 3 $\frac{1}{8}$ " | 1 $\frac{3}{8}$ " | 5 $\frac{1}{2}$ " | Socket —, +45 | 0-40 m.a. | 1 lb. 15 oz. |
| "A-B" PACKS FOR PORTABLE RECEIVERS | | | | | | | |
| 752 | 9 A | 14 $\frac{1}{16}$ " | 2 $\frac{1}{8}$ " | 4 $\frac{1}{8}$ " | Recessed Plug —, +9 | A: 50 m.a. | 6 lb. 2 oz. |
| | 90 B | | | | Recessed Plug —, +90 | B: 12-15 m.a. | |
| 753 | 7.5 & 9 A | 9 $\frac{3}{8}$ " | 2 $\frac{3}{8}$ " | 4 $\frac{1}{8}$ " | Socket —, +7.5 & 9 | A: 50 m.a. | 4 lb. 12 oz. |
| | 90 B | | | | Socket —, +90 | B: 12-15 m.a. | |
| 754 | 7.5 & 9 A | 10 $\frac{3}{16}$ " | 3 $\frac{1}{4}$ " | 4" | Socket —, +7.5 & 9 | A: 50 m.a. | 6 lb. 1 oz. |
| | 90 B | | | | Socket —, +90 | B: 12-15 m.a. | |
| 755 | 6 & 7.5 A | 8 $\frac{3}{8}$ " | 2 $\frac{7}{8}$ " | 3 $\frac{3}{4}$ " | Socket —, +6 & 7.5 | A: 50 m.a. | 3 lb. 9 oz. |
| | 75 B | | | | Socket —, +75 | B: 12 m.a. | |
| 756 | 7.5 & 9 A | 8 $\frac{7}{8}$ " | 2 $\frac{1}{8}$ " | 3 $\frac{3}{8}$ " | Socket —, +7.5 & 9 | A: 50 m.a. | 2 lb. 14 oz. |
| | 90 B | | | | Socket —, +90 | B: 8-12 m.a. | |
| 757 | 9 A | 9 $\frac{3}{8}$ " | 2 $\frac{3}{8}$ " | 4 $\frac{3}{8}$ " | Recessed Plug —, +9 | A: 50 m.a. | 4 lb. 12 oz. |
| | 90 B | | | | Recessed Plug —, +90 | B: 12-15 m.a. | |
| "A-B" PACK FOR HOME RECEIVERS | | | | | | | |
| 776 | 7.5, 9.0 A | 7 $\frac{3}{8}$ " | 4 $\frac{1}{8}$ " | 9 $\frac{7}{8}$ " | Socket —, +7.5, +9 | A: 50 m.a. | 14 lb. 12 oz. |
| | 90 "B" | | | | Socket —, +90 | | |
| | | | | | Recessed Plug —, +9 | B: 10-12 m.a. | |
| | | | | | Recessed Plug —, +90 | | |

These Battery Engineering Bulletins are available on request: 1. Batteries for Portable Electronic Equipment. 2. "Mini-Max" "A-B" Packs for Portable and Home Receivers. 3. Batteries for Hearing Aids. 4. High Voltage Batteries. 5. Photoflash Batteries.



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HAMMARLUND

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The New "HQ-140-X"

"HQ-140-X" is a new superheterodyne type receiver that provides ham and other short wave listeners with all the advantages of professional design and circuitry. In addition, it incorporates outstanding features that have made Hammarlund "HQ's" superior quality and performance. This receiver retains the high level sensitivity and selectivity of the "HQ-129-X," and in addition features notably improved frequency stability and image ratio. It covers a continuous range of frequencies from 540 kc to 31 mc, or 50 meters to 9.7 meters, in six bands.

Head tuning is supplied on the four higher frequency bands, and automatic calibration in the 80, 40, 20, 15, and 10 meter amateur bands. Many types of noise and other interference have been substan-

tially reduced by the outstanding noise limiter and the special Hammarlund patented crystal filter.



FEATURES

TUNING RANGES: .54—1.32 mc, 1.32—3.2 mc, 3.2—5.7 mc, 5.7—10 mc, 10—18 mc, and 18—31 mc.

CALIBRATED BAND SPREAD: 3.5—4 mc, 7—7.3 mc, 14—14.4 mc, 20.9—21.6 mc, and 28—30 mc.

TUBE LINE-UP: 6C4 Oscillator, 6BA6 RF Amplifier, 6BE6 Mixer, 6BA6 1st IF Amplifier, 6BA6 2nd IF Amplifier, 6BA6 3rd IF Amplifier, 6AL5 combination detector, AVC and noise limiter, 12AU7 1st AF Amplifier and BFO, 6V6GT/G Audio Power Output, OC3/VR105 Voltage Regulator and 5U4G Full Wave Rectifier.

The "SP-600-JX"

The "SP-600-JX" communications receiver, now also available to hams, is a masterpiece of receiver design and already is world-known for its outstanding construction and performance.

Professional receiver, with its six bands covering the frequency range from 540 kc to 54 mc, is being used in large quantities by military and governmental agencies, as well as by commercial stations for both single and diversity reception.

This magnificent receiver is a 20 tube dual conversion superheterodyne. The power supply is an integral part of the receiver chassis. Operation on any of six crystal controlled fixed frequency channels within the range of the receiver is immediately available. This designates it as the perfect receiver for point-to-point and network operations. Pre-arranged day and night fixed frequencies. With crystal control you can select your desired channels immediately.

Stability is .001 to .01 percent depending on frequency to which receiver is tuned, image rejection is 80 db to 120 db down, and spurious responses are at least 100 db down. Sensitivity is 1 microvolt CW and 2 microvolts AM while selectivity for the three calibrated crystal and three non-crystal ranges is from 200 cycles to 13 kc. Radiation is negligible with no cross-talk in multi-receiver installations.

"FC" and "FNC" COUPLINGS

FEATURES—The "FC-46-S" is an insulated flexible coupling designed to provide for mechanical ganging of shafts even though angularly misaligned. The smallest dimensions have been incorporated consistent with the rugged construction necessary for general service. A high degree of electrical isolation is achieved through the use of silicone treated steatite insulation. Flashover voltage is approximately 5000 V. R.M.S. Brass hubs and spring temper phosphor bronze flexible arms are nickel plated. An exclusive and important feature of this coupling is its characteristic of uniform contact through 360° of rotation. This eliminates tendency to vibrate at high speeds and minimizes bearing wear and assures accurate tracking.

The "FNC-46-S" is a non-insulated coupling for use where electrical continuity between shafts is required. The flexible arms are held securely to a nickel plated shaft instead of an insulator.

STANDARD STOCK TYPES

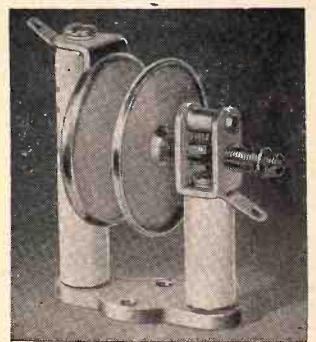
| | |
|---------------|---------------------------------|
| CODE FC-46-S | Insulated flexible coupling |
| CODE FNC-46-S | Non-insulated flexible coupling |

"NZ-10" CAPACITORS

FEATURES—The "NZ-10" is a compact transmitter neutralizing capacitor designed for easy and accurate adjustment. The rotor is attached to a fine-

thread lead screw which may be adjusted with smooth and precise action by a screwdriver and locked securely by a readily accessible clamping screw. A stop prevents shorting of plates at maximum capacity. Long leakage paths to ground from both rotor and stator are provided. Glazed steatite insulators and smoothly rounded aluminum plates minimize flashover.

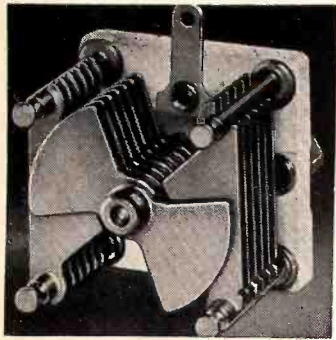
SPECIFICATIONS—Capacity is adjustable from 2.3 to 10 mmt. Peak voltage rating is 3000 V. at maximum capacity (minimum gap) position.



HAMMARLUND MANUFACTURING CO., INC.
WEST 34TH STREET, NEW YORK 1, N. Y.



HAMMARLUND



"BFC" CAPACITORS

FEATURES—The "BFC" "butterfly" type capacitor has very low minimum capacity, low inductance and isolated rotor for use in VHF applications as a series capacitor with no rotor contact. Mechanical and electrical symmetry and stator terminal locations minimize circuit inductance.

CONSTRUCTION—Brass rotors and stators are soldered and nickel-plated. The contact wiper is heavily silver-plated beryllium-copper. Tapped studs on the silicone

treated steatite front panel permit mounting the capacitor without grounding the rotor. The sleeve bearing is nickel-plated brass.

SPECIFICATIONS—Straight line capacity. 90° rotation from minimum to maximum capacity position. Air gap is 0.030" nominal. Tested at 1200 V. R.M.S., 60 cycles between rotor and each stator. *High Speed Ball-Bearing Models Also Are Available.*

| CODE | [CAPACITY/SECTION | | SERIES CAPACITY | | PLATES | |
|--------|-------------------|------|-----------------|------|--------|------------|
| | Max. | Min. | Max. | Min. | Rotor | Ea. Stator |
| BFC-12 | 14.5 | 3.4 | 7.6 | 2.2 | 4 | 3 |
| BFC-25 | 27.3 | 4.8 | 14.1 | 2.9 | 7 | 6 |
| BFC-38 | 40.1 | 6.2 | 20.6 | 3.6 | 10 | 9 |

"MAC" CAPACITORS

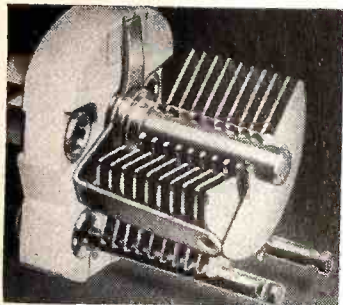
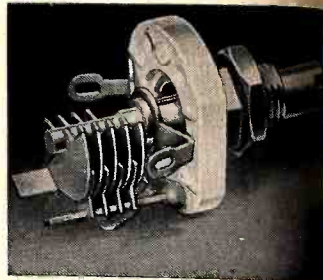
FEATURES—The "MAC" provides the low minimum capacity essential for use as a trimmer in the VHF range. It was engineered to achieve the smallest dimensions practical to meet the requirements of a miniaturized component.

CONSTRUCTION—Its silicone treated steatite base is only 3/4" x 5/8". Rotor and stator are

soldered assemblies and are of brass, nickel-plated. Rotor and stator terminals are positioned to permit short leads. The threaded bearing is provided with flat sides to permit single hole mounting.

SPECIFICATIONS—Straight line capacity. Screw-driver adjustment. Air gap is 0.017" nominal. Tested at 750 V. R.M.S., 60 cycles.

| CODE | CAPACITY | | PLATES | CODE | CAPACITY | | PLATES |
|--------|----------|------|--------|--------|----------|------|--------|
| | Max. | Min. | | | Max. | Min. | |
| MAC-5 | 5.0 | 1.4 | 5 | MAC-15 | 14.2 | 2.2 | 15 |
| MAC-10 | 8.7 | 1.7 | 9 | MAC-20 | 19.6 | 2.7 | 21 |



"APC" CAPACITORS

FEATURES—The "APC" trimmer capacitor originated by Hammarlund over twenty years ago is still widely recognized as the standard capacitor of its type. Its use is indicated in all classes of equipment where a compact, high quality air dielectric trimmer is required. It was designed to resist effects of temperature, moisture and vibration. Silicone treated steatite insulation is used to insure high leakage resistance.

bronze wiper assures positive rotor contact. All metal parts are nickel-plated. Terminals are tin dipped. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding the rotor.

SPECIFICATIONS—Straight line capacity characteristic. Hexagonal collar on slotted shaft permits rotor adjustments. Air Gap is 0.015" nominal. Tested at 600 V. R.M.S., 60 cycles.

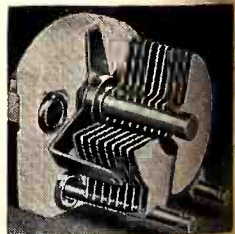
CONSTRUCTION—Brass rotor and stator are soldered to brass supports. Nickel-plated phosphor

| CODE | CAPACITY | | PLATES |
|---------|----------|------|--------|
| | Max. | Min. | |
| APC-25 | 25. | 3.0 | 7 |
| APC-50 | 50. | 3.9 | 14 |
| APC-75 | 75. | 4.6 | 20 |
| APC-100 | 100. | 5.5 | 27 |
| APC-140 | 140. | 6.7 | 37 |

"MAPC" CAPACITORS

FEATURES—The "MAPC" capacitor is representative of Hammarlund's efforts to meet the demand for smaller dependable components. It is a scaled-down version of the popular "APC" with everything reduced except the quality and performance characteristics. For example, an "MAPC" is about half the size and weight of an "APC." Lower minimum capacities and low inductance make the "MAPC" suitable for VHF use.

CONSTRUCTION—The standard "APC" construction is used in this capacitor. Rotors and stators are fabricated by soldering brass plates to supporting members and nickel-plating the assemblies. Nickel-plated phosphor bronze wiper assures positive rotor contact. Tapped brass mounting studs fastened to silicone treated steatite base permit mounting capacitor without grounding rotor.



| CODE | CAPACITY | | PLATES |
|----------|----------|------|--------|
| | Max. | Min. | |
| MAPC-15 | 15. | 2.3 | 6 |
| MAPC-25 | 25. | 2.6 | 10 |
| MAPC-35 | 35. | 2.9 | 14 |
| MAPC-50 | 50. | 3.2 | 19 |
| MAPC-75 | 75. | 3.9 | 29 |
| MAPC-100 | 100. | 4.5 | 38 |

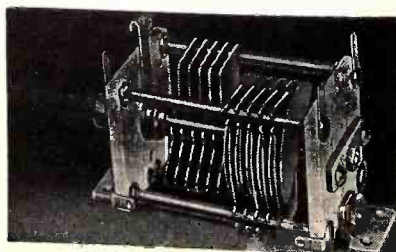
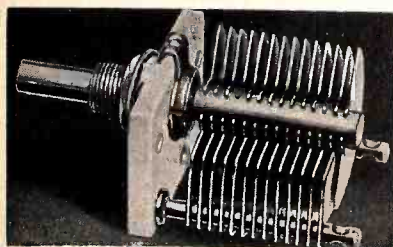
SPECIFICATIONS—Straight line capacity. Screw-driver or socket wrench adjustment. Air gap is 0.0135" nominal. Tested at 600 V. R.M.S., 60 cycles.

SINGLE SECTION CAPACITOR—The "HFA" is a single section tuning capacitor similar to "HF" except that larger plates permit wider air-gaps for the same capacitance values. Resultant higher break-down ratings extend the use of the capacitor into the high frequency low-power transmitter field. A threaded sleeve bearing permits single hole mounting and the bracket supplied may be used for base mounting. A lug type terminal soldered to the bearing provides an efficient rotor connection.

DOUBLE SECTION CAPACITOR—The "HFBD" is a dual, balanced rotor

"HFA" and "HFBD" CAPACITORS

transmitting capacitor employing front and rear panels plus a ball-thrust rear bearing, but otherwise incorporating constructional features identical to the smaller "HFA." An insulated shaft extension safeguards operating personnel from the high voltages which may be applied to the rotor. The small size, rugged construction, balanced rotor and range of capacitance values and breakdown voltages make this capacitor ideally suited to many applications.



| CODE | CAPACITY | | SPACING | PLATES SECTION |
|------------|----------|------|---------|----------------|
| | Max. | Min. | | |
| HFA-100-A | 102. | 4.5 | 0.090 | 19 |
| HFA-140-A | 145. | 6.0 | 0.090 | 27 |
| HFA-10-B | 9. | 2.3 | 0.030 | 3 |
| HFA-15-B | 16. | 2.8 | 0.030 | 5 |
| HFA-25-B | 25. | 3.0 | 0.030 | 7 |
| HFA-50-B | 50. | 4.3 | 0.030 | 14 |
| HFA-100-B† | 100. | 7.5 | 0.030 | 27 |
| HFA-15-E | 16. | 4.0 | 0.070 | 9 |
| HFBD-50-C | 50. | 9.0 | 0.050 | 11 |
| HFBD-100-C | 105. | 14.0 | 0.050 | 23 |
| HFBD-35E* | 37. | 9.5 | 0.070 | 11 |
| HFBD-65-E* | 63. | 12.5 | 0.070 | 19 |

SPECIFICATIONS—Straight line capacity. Air gaps and test voltages are as indicated in table. However, "HFBD" breakdown voltages are doubled and capacitance values approximately halved when stator sections are connected in series.

60 Cycle Test Voltage:
 "HFA"—"A" 800 V. R.M.S. "B" 1200 V. R.M.S.
 "E" 1750 V. R.M.S. "HFBD"—"C" 1500 V. R.M.S.
 "E" 3000 V. R.M.S., plates have rounded edges.
 †Has front and rear supporting panels.



"RMC" CAPACITORS

FEATURES—The "RMC" was designed specifically for applications requiring an "MC" type tuning capacitor with very rigid construction. Its

| CODE | CAPACITY | | PLATES |
|-----------|----------|------|--------|
| | Max. | Min. | |
| RMC-50-S | 50. | 7.3 | 7 |
| RMC-100-S | 105. | 9.5 | 14 |
| RMC-140-S | 143.5 | 11.0 | 19 |
| RMC-325-S | 327. | 17.5 | 43 |

sturdy frame consists of heavy gauge aluminum end panels held together by three aluminum tie rods. It has a brass sleeve front bearing and a single ball thrust rear bearing for smooth tuning and a high degree of resetability. The rotor contact is a forked silver-plated beryllium-copper spring wiping against a wide disc on the rotor.

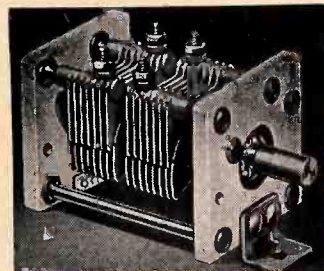
SPECIFICATIONS—Straight line capacity. Air gap is 0.0245" nominal.

"VU" CAPACITORS

A uniquely designed UHF tuning capacitor using completely new concepts. With it, conventional "lumped constant" circuits, tuned cavity techniques, can be efficiently used up to 500 rotor sections are in series to eliminate rotor wiper and the rotor. Thus, noise generated by rubbing metal-to-metal contact. Circuit connections are made to threaded studs on each side permits vacuum tube and inductor to be mounted adjacent to opposite sides of the capacitor to minimize circuit inductance.

| CODE | SERIES CAPACITY | | PLATES/SECTION |
|-------|-----------------|------|----------------|
| | Eff. | Min. | |
| VU-20 | 22.5 | 3.35 | 11 |
| VU-30 | 31.5 | 3.5 | 15 |
| VU-45 | 45.0 | 3.8 | 21 |

SPECIFICATIONS—The capacity characteristic approaches a straight line frequency curve. Air gap is .0168" nominal. Tested at 700 V. R.M.S., 60 cycles, between rotor and each stator.



"MC" and "MCD" CAPACITORS

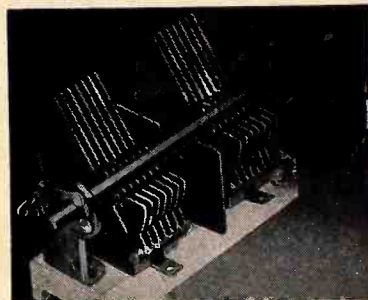
FEATURES—The "MC" is a versatile single section tuning capacitor designed to give a choice of mountings, connections and capacity characteristics. "MC-S" capacitors have a straight line capacity characteristic. "MC-M" units have offset plates resulting in a "Midline" characteristic which more equally spaces frequencies. "MC-X" units are wide-spaced for high voltages. The

"MCD" is a split-stator panel-mounted capacitor.

SPECIFICATIONS—Straight line or "midline" capacity characteristic. Single-spaced types have 0.0245" nominal air gap and are tested at 1000 V. R.M.S., 60 cycles. Wide-spaced ("X") types have 0.0715" nominal air gap and are tested at 1750 V. R.M.S., 60 cycles.

| CAPACITY | PLATES/SECTION | CODE | CAPACITY | | PLATES/SECTION |
|----------|----------------|-----------|----------|------|----------------|
| | | | Max. | Min. | |
| 20. | 5.5 | MC-20-SX | 20. | 6.8 | 7 |
| 35. | 6.0 | MC-35-MX | 32. | 7.8 | 11 |
| 50. | 6.3 | MC-35-SX | 32. | 8.5 | 11 |
| 50. | 6.5 | MC-50-MX | 53. | 10.5 | 19 |
| 80. | 7.3 | MC-50-SX | 53. | 11.5 | 19 |
| 80. | 8.0 | MC-100-SX | 100. | 16.5 | 35 |
| 100. | 7.7 | MCD-50-M | 50. | 5.5 | 7 |
| 100. | 8.3 | MCD-100-M | 100. | 6.3 | 14 |
| 140. | 9.0 | MCD-100-S | 100. | 7.0 | 14 |
| 140. | 10.0 | MCD-140-M | 140. | 7.8 | 19 |
| 200. | 10.3 | MCD-35-MX | 31. | 6.0 | 11 |
| 250. | 12.0 | MCD-35-SX | 31. | 6.8 | 11 |
| 320. | 13.5 | | | | |

M—Midline plates
X—Wide-Spaced
S—Straightline plates



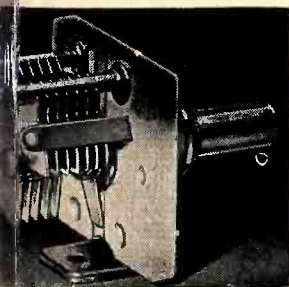
"HF" and "HFD" CAPACITORS

SECTION CAPACITOR—The "HF" is a single section tuning capacitor employ-

DOUBLE SECTION CAPACITOR—The "HFD" dual capacitor, like the "HF" singles, incorporate advanced features providing for maximum efficiency at high frequency. Aluminum front and rear end panels are mounted on a heavy silicone treated steatite base. Wide front and rear bearings with individual silver-plated beryllium-copper wipers for each

section assure long life and maximum contact efficiency. Single hole panel mount or base mounting.

SPECIFICATIONS—Straight line capacity. Single spaced types (HF and HFD) have 0.015" air gap and are tested at 600 V. R.M.S., 60 cycles. Wide spaced types (HF-X and HFD-X) have 0.045" air gap and are tested at 1400 V. R.M.S., 60 cycles.

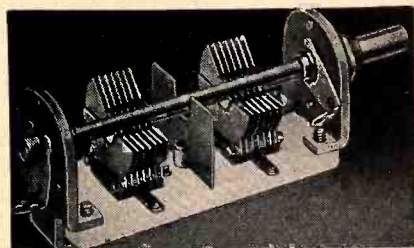


"HF" rotor and stator design. Extra long bearing and positive contact nickel-phosphor-bronze wiper make this unit suited to high frequency applications. Silicone treated steatite insulation. Single hole base mounting.

| CODE | CAPACITY | | PLATES/SECTION |
|----------|----------|------|----------------|
| | Max. | Min. | |
| HF-15 | 17.5 | 2.8 | 5 |
| HF-35 | 36. | 3.2 | 10 |
| HF-50 | 52. | 3.7 | 14 |
| HF-100 | 102. | 5.3 | 27 |
| HF-140 | 142. | 6.3 | 37 |
| HF-15-X | 15. | 3.6 | 10 |
| HF-30-X | 30. | 5.2 | 20 |
| HFD-50 | 52. | 3.6 | 14 |
| HFD-100 | 102. | 5.0 | 27 |
| HFD-140 | 142. | 6.0 | 37 |
| HFD-15-X | 16. | 3.8 | 11 |
| HFD-30-X | 28.5 | 5.0 | 19 |

D—Split stator

X—Wide-Spaced

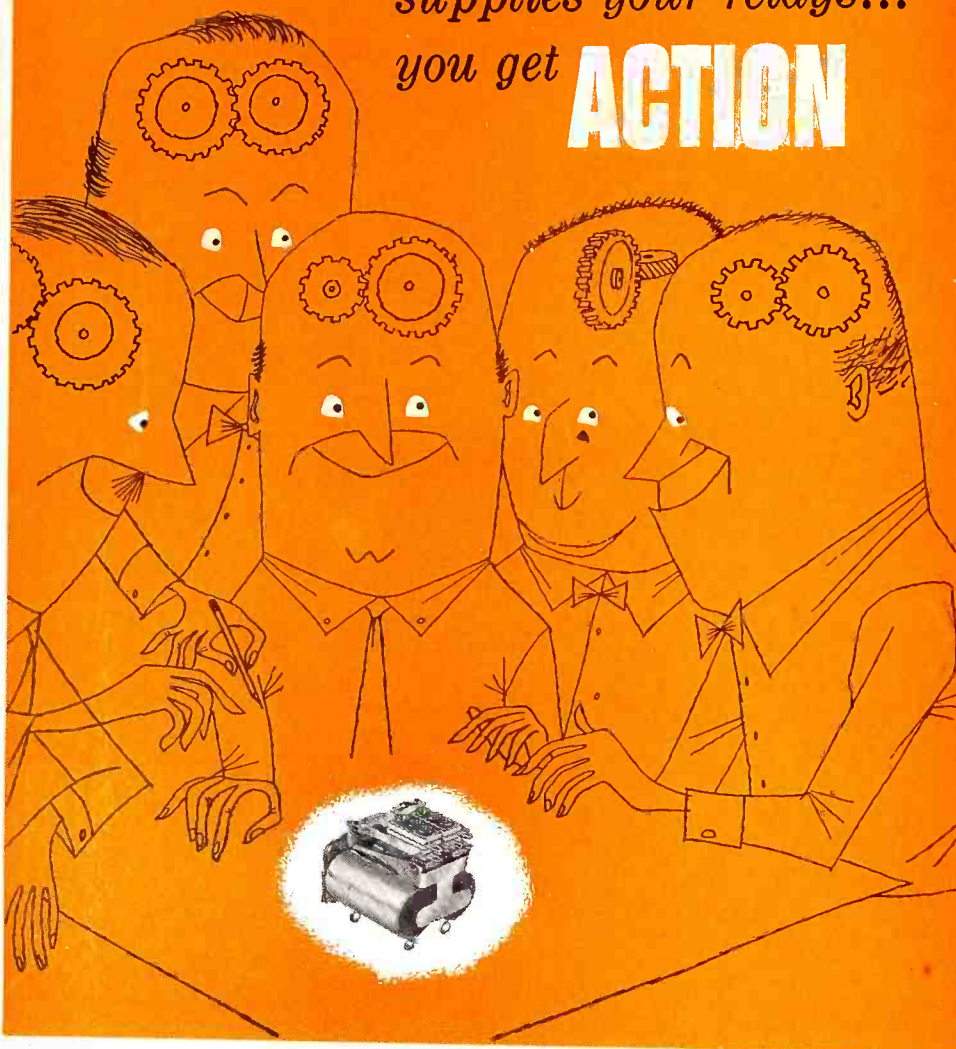


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AX-9902/5868



833A



857B



AX-5551



5870/AGR-9951

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5894/AX-9903



VC25
VC50
VC100



6333



5924/AX-9904R

| TYPE | PRICE | TYPE | PRICE | TYPE | PRICE | TYPE | PRICE | TYPE | PRICE |
|-----------------------------|---------|---------------------------|----------|-----------------------------------|----------|---------------|---------|--|----------|
| BEAM DEFLECTION TUBE | | MAGNETRONS | | SECONDARY EMISSION PENTODE | | 342A \$582.00 | | 6445* 375.00 | |
| EIT | \$16.50 | 2J48 | \$250.00 | EFP60 | \$8.75 | 343A | 350.00 | 6446 | 225.00 |
| GEIGER COUNTERS | | 2J55 | 165.00 | SUBMINIATURE PENTODES | | 343AA* | 435.00 | 6447* | 400.00 |
| 75N | \$10.00 | 2J56 | 165.00 | REFLEX KLYSTRON | | 450TH | 77.00 | SUBMINIATURE TRIODE | |
| 75N B3 | 10.00 | 4J47 | 500.00 | 2K25 | \$55.00 | 450TL | 77.00 | 6375** | \$..... |
| 90NB | 20.00 | 4J52 | 350.00 | TETRODES | | 498 | 500.00 | TWIN TRIODES | |
| 100C | 35.00 | 4J57 | 270.00 | AX4-125A/6155 | | 501R | 160.00 | E92CC† | \$3.00 |
| 100CB | 37.50 | 4J58 | 270.00 | 4X150A | \$23.00 | 502 | 150.00 | 5920 | 3.00 |
| 100N | 35.00 | 4J59 | 270.00 | AX4-250A/6156 | 35.00 | 502R | 180.00 | 6085‡ | 6.00 |
| 100NB | 37.50 | 5586 | 417.00 | 807 | 2.40 | 504R | 175.00 | TWIN TETRODES | |
| 120C | 75.00 | 5657 | 417.00 | 813 | 18.00 | 508/6246 | 500.00 | 832A | \$12.90 |
| 120N | 75.00 | MERCURY RECTIFIERS | | 6075/AX-9907 | 225.00 | 750TL | 137.50 | 5894 | 24.95 |
| 120NB | 77.50 | 249B | \$9.00 | 6076/AX-9907R | 275.00 | 805 | 13.50 | 6252/AX-9910 | 24.95 |
| 150N | 50.00 | 249C | 9.00 | 6079/AX-9908 | 60.00 | 810 | 16.25 | 6360 | 3.00 |
| 150NB | 52.50 | 255B | 145.00 | TRIODES | | 834 | 14.50 | VACUUM CONDENSERS | |
| 153C | 65.00 | 266B | 210.00 | 3X2500A3 | \$198.00 | 838 | 13.75 | VC25/20 | \$22.50 |
| 200C | 45.00 | 315A | 38.60 | 3X2500F3 | 198.00 | 849A | 137.00 | VC25/32 | 24.50 |
| 200CB | 47.50 | 575A | 21.00 | 6Q4 | 4.00 | 849H | 135.00 | VC50/20 | 26.50 |
| 200N | 45.00 | 673 | 22.50 | 6R4 | 3.00 | 851 | 335.00 | VC50/32 | 26.50 |
| 200NB | 47.50 | 857B | 215.00 | EC55/5861 | 35.00 | 858 | 500.00 | VC50/32 | 28.50 |
| 230N | 30.00 | 866AX | 2.10 | HF-100 | 17.50 | 859 | 500.00 | VC100/20 | 30.00 |
| 240C | 35.00 | 869B | 132.00 | HF200 | 30.00 | 880 | 510.00 | VC100/32 | 33.00 |
| 240N | 35.00 | 872AX | 8.20 | HF201A/463 | 28.50 | 889A | 210.00 | VC250/32 | 70.00 |
| HYDROGEN THYRATONS | | 6508 | 80.00 | 203H | 25.00 | 889RA* | 295.00 | VACUUM DIODE | |
| 4C35 | \$28.75 | 8008 | 8.25 | 207 | 240.00 | 891 | 230.00 | 222A | \$300.00 |
| 5C22 | 53.45 | MERCURY THYRATONS | | 212E | 104.00 | 891R* | 380.00 | VOLTAGE REFERENCE & REGULATOR TUBES | |
| 6268/AX-9911† | 28.75 | FG17/1701/967/ | | 212F | 104.00 | 892 | 230.00 | OA2 | \$2.90 |
| 6279/AX-9912† | 53.45 | 5557 | \$8.50 | 220C | 365.00 | 892R* | 380.00 | OB2 | 3.20 |
| IGNITRONS | | FG105/AX105 | 49.50 | 228A | 325.00 | 893A | 630.00 | 85A1/OE3 | 3.00 |
| 5550 | \$45.00 | 678 | 47.00 | 232C | 560.00 | 893AR* | 1212.00 | 85A2/OG3 | 3.00 |
| 5551/652 | 72.00 | 5559 | 16.00 | 241B | 115.00 | HF-3000 | 500.00 | 90C1 | 3.00 |
| 5552/651 | 110.00 | 5869/AGR-9950 | 25.00 | 250TH | 33.00 | Z83200 | 350.00 | 6354/15082 | 3.00 |
| 5553/655 | 239.00 | 5870/AGR-9951 | 100.00 | 250TL | 33.00 | 5604* | 540.00 | XENON RECTIFIERS | |
| 5554/679 | 171.00 | PENTODES | | 251A | 300.00 | 5619 | 390.00 | 3B28 | \$8.50 |
| 5555/653B | 333.50 | E81L‡ | \$5.00 | 279A | 355.00 | 5658 | 510.00 | 4B32 | 12.00 |
| 5822 | 130.00 | E83F‡ | 5.00 | HF300 | 35.00 | 5666 | 230.00 | XENON THYRATONS | |
| INERT GAS THYRATRON | | 828 | 13.75 | TRIODES | | 5667* | 310.00 | 5544 | \$27.00 |
| 2D21 | \$2.00 | 6083/AX-9909 | 13.50 | 3X2500A3 | \$198.00 | 5736 | 160.00 | 5545 | 35.00 |
| | | 6084‡ | 6.00 | 3X2500F3 | 198.00 | 5771 | 510.00 | 5685/C6J | 31.90 |
| | | 6227‡ | 6.00 | 6Q4 | 4.00 | 5866/AX-9900 | 20.00 | | |
| | | | | 6R4 | 3.00 | 5867/AX-9901 | 30.00 | | |
| | | | | EC55/5861 | 35.00 | 5868/AX-9902 | 50.00 | | |
| | | | | HF-100 | 17.50 | 5923/AX-9904 | 150.00 | | |
| | | | | HF200 | 30.00 | 5924/AX-9904R | 210.00 | | |
| | | | | HF201A/463 | 28.50 | 6077/AX-9906 | 2000.00 | | |
| | | | | 203H | 25.00 | 6078/AX-9906R | 2400.00 | | |
| | | | | 207 | 240.00 | 6333 | 230.00 | | |
| | | | | 212E | 104.00 | | | | |
| | | | | 212F | 104.00 | | | | |
| | | | | 220C | 365.00 | | | | |
| | | | | 228A | 325.00 | | | | |
| | | | | 232C | 560.00 | | | | |
| | | | | 241B | 115.00 | | | | |
| | | | | 250TH | 33.00 | | | | |
| | | | | 250TL | 33.00 | | | | |
| | | | | 251A | 300.00 | | | | |
| | | | | 279A | 355.00 | | | | |
| | | | | HF300 | 35.00 | | | | |

† The AmpereX types 6268/AX-9911 and 6279/AX-9912 are improved versions but completely interchangeable in every respect with the standard types 4C35 and 5C22 respectively. They have a minimum guaranteed life of 1000 hours due to the self-contained, self-regulating source of hydrogen.

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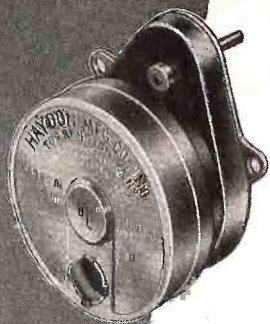
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1600

BASIC, STANDARD DUTY
The 1600 Series is the basic motor of the HAYDON line. This motor offers dependable performance, small size, total enclosure, operation in any position, controlled lubrication, simple assembly and a wide range of standard speeds from 60 to 1/60 rpm. Can be supplied to military specifications.

LIGHT DUTY, SLOW SPEED
The 4400 Series offers very slow output shaft speeds from 6 hours to 1 week for all normal duties. This motor is unique in providing the speed range available in such small space, with totally enclosed gearing, at comparatively low cost. Affords many possibilities for economical design without resort to the bulk and expense of external reduction gearing.

4400



3100

HEAVY DUTY, SLOW SPEED
The 3100 Series motor consists of the basic HAYDON motor and a heavy-duty gear train in a round housing. Designed for applications requiring higher torque at slow shaft speeds, this unit is particularly suitable for chart drive use in recording and control instruments. Standard speeds from 1 hour to 14 days per revolution.

D-C, REVERSIBLE

The HAYDON 9200 Series D.C. motor for timing applications is designed for operation from 6 to 30 volts. It can be supplied uncalibrated for use with external resistance or calibrated with resistance type leads.

D-C, R F FILTER

The 9250F Series D.C. motor provides the more uniform torque and speed characteristics of a unit wound for 28 volts, and has an R F Interference filter. The current and power drain is lower and no calibration is required.



9200
9250F



6700

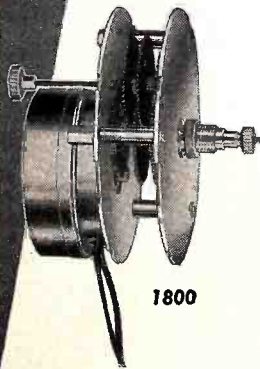
400 CYCLE HYSTERESIS-TYPE
The 6700 Series 400 cycle timing motor is an hysteresis type synchronous timing motor, essentially two phase. It is furnished with capacitor for self starting operation on single phase. Variations in temperature, voltage and heat do not affect timing, which is as accurate as the frequency control.

ALL HAYDON TIMING MOTORS

are totally enclosed and can be operated in any position. Write for free "Haydon Electric Timing Motors" catalog.



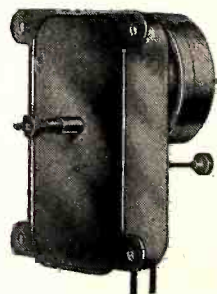
HAYDON CLOCK MOVEMENTS



1800

ROUND MOVEMENT
Compact round movement only 3" in diameter for use where space is at a premium, as in certain novelty, household and advertising clocks.

RECTANGULAR MOVEMENT
Features completely enclosed construction and easy installation. Back or bottom set, earlug or center mounting, choice of various arbor groups and sizes.



1802



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our product's performance depends on the performance of all its component parts.

When product specifications call for **TIMING MOTORS — TIMING DEVICES —** or **CLOCK MOVEMENTS** add in extra dependability by specifying **HAYDON** precision timing instruments.

HAYDON standard and custom-designed units are properly engineered and buyer-approved for accuracy and dependability . . . long-life coupled with minimum maintenance . . . adaptability to any operating position . . . correct design vital to reducing installation costs . . . plus, meticulous mass-production methods, when volume is required, bring even greater savings.

Haydon Manufacturing Company specializes in the design and mass production of custom-engineered timers for volume applications. HAYDON Timers for clothes driers, milk pasteurizers, dishwashers, and defrosters illustrate a few examples of HAYDON engineered and mass-produced units.

HAYDON* TIMING DEVICES

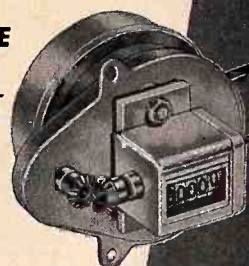


400 CYCLE ELAPSED TIME INDICATOR

The 7008 Series Elapsed Time Indicator is designed specifically for 400 cycle operation in airborne equipment. Barrel diameter is 1.525", length 2.45/64", weight 6 oz. Power consumption is less than 3 watts and it indicates in units of tens of hours up to 10,000 and repeats.

60 CYCLE ELAPSED TIME INDICATORS

The 5700 Series Elapsed Time Indicators provide simple, compact and accurate metering of elapsed time for 60 cycle operation. They are designed for use as inexpensive components for equipment requiring register of total operating or job time, or with existing machinery and devices.



5700

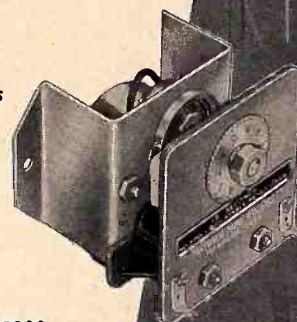


HERMETICALLY-SEALED TIME DELAY RELAYS

The 5103 Series Time Delay Relay is an hermetically sealed timer for military applications. It can be supplied for 60 or 400 cycle A.C., or D.C. The use of a relay coil for switching operation imposes a minimum load on the motor which is assigned to its true function as a time standard.

RESETTABLE TIME DELAY RELAYS

The 5900 Series Time Delay Relays provide time delay or interval timing in various ranges up to 10 minutes for such applications as the protection of power tubes, or timing portions of a complete cycle of operation.



5900

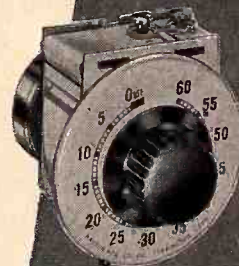


FIXED INTERVAL REPEAT CYCLE TIMERS

The 5800 Series Timers offer extreme flexibility and adaptability for timing problems requiring continuous repeat cycling, or single cycle operation to be initiated by an external circuit. These HAYDON timers are built up by various combinations of motors with adjustable, blank or specially designed cams operating a series of precision snap switches.

HEAVY-DUTY INTERVAL TIMER

The 8006 Series is a rugged, heavy-duty interval timer for general commercial, industrial and appliance applications. Construction is the simplest possible, for low cost and long life, consisting basically of a standard HAYDON synchronous motor driving through external reduction gearing a notched cam to operate a heavy switch, with a friction to permit setting.



8006

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There is a factory-trained HAYDON Field Engineer in your area — a timing specialist with the answers to your timing questions. Write us today for his name and location.

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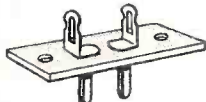


*Trademark Reg. U.S. Pat. Off.



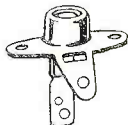
ELECTRONIC COMPONENTS

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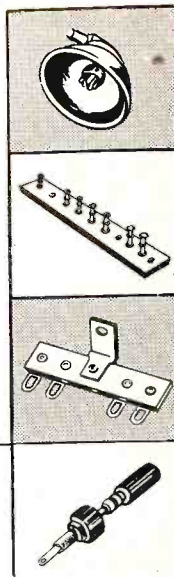
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HIGH VOLTAGE CERAMICONS



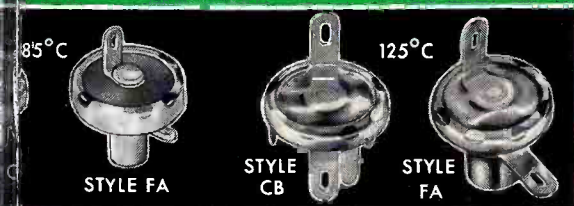
ers a wide selection of disc and molded ceramicons for high voltage service. Available ratings between 1000 V. and 30 KV. for potential tuning, by-passing and filtering applications.

ERIE "K-LOK" HIGH STABILITY DISC CERAMICONS



up to .0047 mfd at 500 V. are available in tolerances as close as $\pm 5\%$. Capacity variations with temperature, age and voltage are normally small. A truly premium capacitor.

ERIE BUTTON MICA CAPACITORS



from 15 mmf to 8100 mmf are available in tolerances as close as $\pm 2\%$. Rated at 500 W "Q" value exceeds 1000 for values up to 100 mmf. Available for maximum operating temperatures of 85°C. and 125°C. Extremely low inductance makes these very compact capacitors ideal for VHF and UHF applications.

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To meet exacting temperature compensation, by-passing, coupling and filtering requirements. Compensating units available from .75 to 1380 mmf. "Hi-K" by-pass units available from 100 mmf to .01 mfd.

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Erie offers a wide selection of chassis-mounting capacitors designed to overcome radiation and critical by-passing problems. Available in both temperature compensating and "Hi-K" materials. Manufactured in values up to 1500 mmf with 500 V. rating.

Ceramicon, Hi-K, K-LOK, GP, Button, and Plexicon are registered trade names of Erie Resistor Corporation



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Manufacturing Subsidiaries:

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see preceding page

ERIE

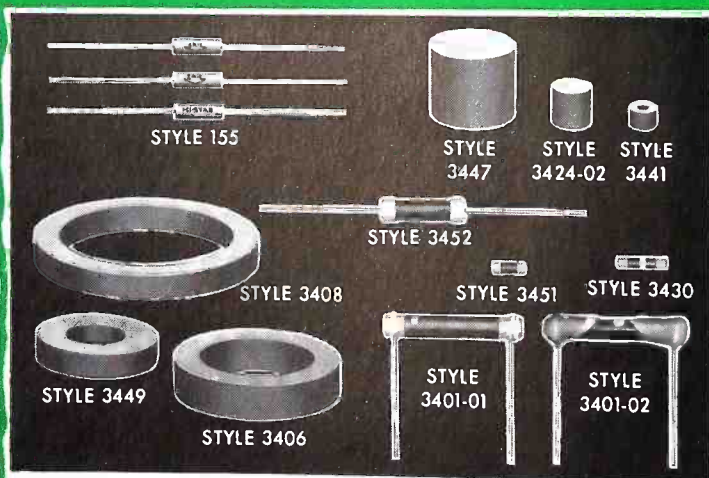
dependable electronic components

ERIE TRIMMER CAPACITORS



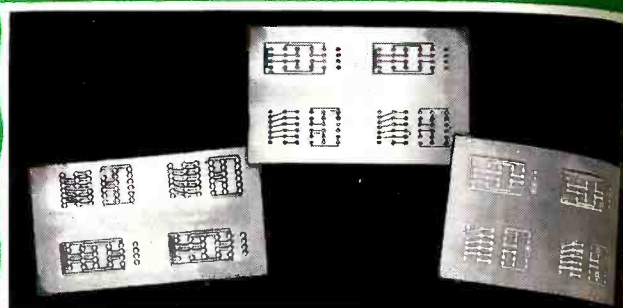
The largest and most versatile family of plastic and temperature compensating ceramic trimmer capacitors are available from Erie, to meet difficult tuner and converter requirements.

ERIE RESISTANCE PRODUCTS



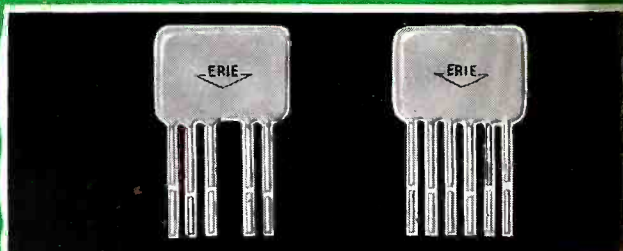
Erie has 25 years experience in the design and manufacture of high quality resistor products. Among these products are precision pyrolytic resistors, high voltage resistors and ignition noise suppressors. Complete facilities available to produce a wide variety for specific applications.

ERIE EMBOSSED CIRCUITRY



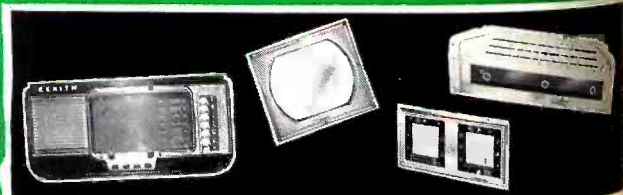
The exclusive Erie printed wiring technique provides a circuit pattern actually embedded in the surface of a high grade laminated phenolic. Will withstand severe soldering temperatures without peeling. Drastically reduces assembly costs.

ERIE PRINTED CIRCUITS



By combining several resistors and capacitors into one rigid compact package Erie is able to offer many design and production advantages. A wide selection of diode filters, plate couplers and special circuits are available.

ERIE CUSTOM MOLDED PLASTICS



A pioneer in injection molded plastics, Erie specializes in custom molded name plates, dials, TV masks and other precision items that not only require close tolerances but also have the eye-catching sales appeal of three dimension beauty.

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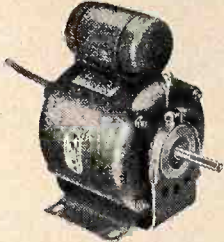
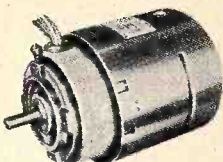
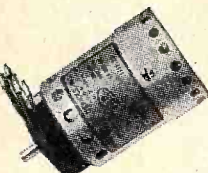
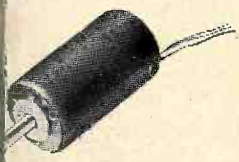
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for

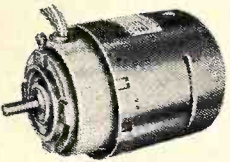
SPECIALIZED ROTATING ELECTRICAL EQUIPMENT ALTERNATORS • BLOWERS • MOTORS



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60 and 400 cycles
Single, two and three phase operation. 1/1500 to 1/3 H.P. 1" to 6-5/8" in diameter.

Variable and Dual Frequency Induction Motors
Motors for use on aircraft variable frequency supplies to drive fans, blowers, pumps, etc. Other EAD motors for use on dual and special frequency supplies.



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Cyclo-synchronous and Salient Pole Types
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GEAR MOTORS

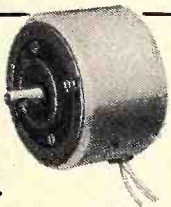
Precision units giving high torque with wide variety of gear ratios. Powered by 60 cycle, 400 cycle or variable frequency motors.

SERVO MOTORS

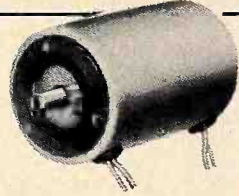
Small, precision motors designed for Servo use and for other special purposes where low inertia and high torque ratings are desirable.

ALTERNATORS

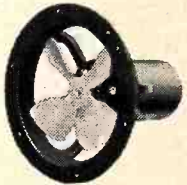
Power: 10 to 400 volt-amps. Wide frequency range.



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units capable of producing a combination of frequencies and voltages for special applications.

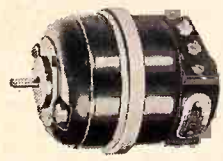


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These D.C. voltage generators provide a voltage signal proportional to speed, with high linearity for tachometer and control applications.



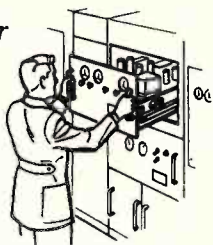
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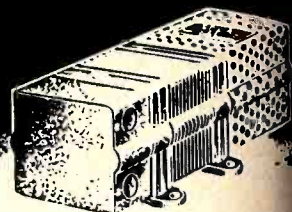
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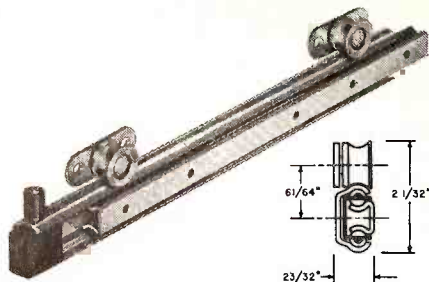
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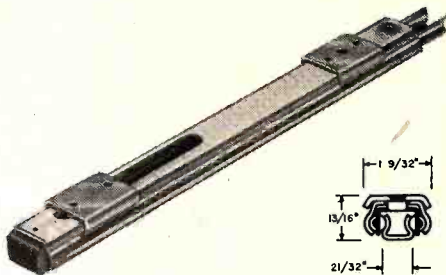
Write for Bulletin 7M-CV-200. We welcome any inquiries regarding special applications to your requirements.

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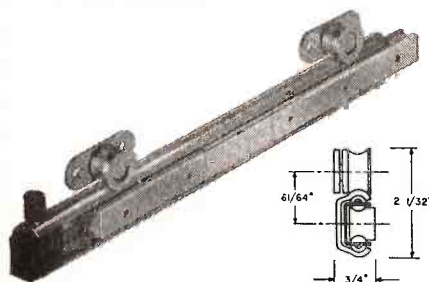
No. 306R Slide

Two-section slide with rollers for moving unit. Ball bearing action. Full travel possible. Load capacity: 50 lbs. per pair mounted vertically.



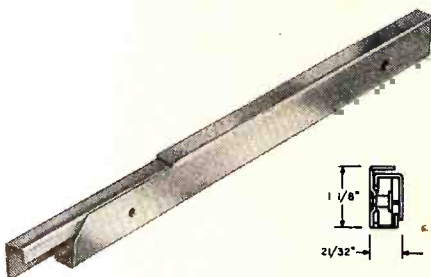
No. 308 Slide

Two-section underneath mounting slide. Ball bearing action. Glide brackets permit full travel, easy chassis removal. Load: 30 lbs. per pr.



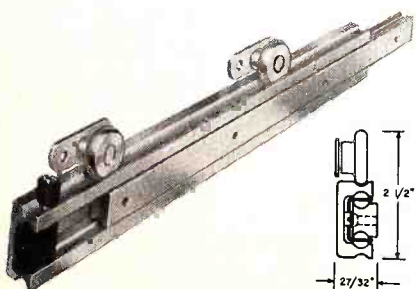
No. 313R Slide

Same as No. 306, but with solid center track of steel or aluminum. Load capacity: 75 lbs. per pair mounted vertically; 45 lbs. mounted horizontally.



No. 330 Slide

Very inexpensive roller type slide for quantity installation. Has some slide play. Travel 4" less than slide length. Load capacity: 50 lbs. per pair.



No. 575R Slide

Same features as No. 306, but heavier sections for greater loads. Load capacity: 100 lbs. per pair mounted vertically; 60 lbs. mounted horizontally.

Grant Industrial Slides

Grant Pulley & Hardware Corporation
Flushing, N. Y. Los Angeles, Cal.

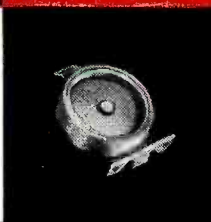
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STEVENS TYPE M THERMOSTATS

Stevens makes the largest line of bimetal thermostats in the industry. So if you call in Stevens application engineers while your product is still in the planning stage, they'll show your designers how to capitalize on the cost and delivery advantages of using a regular production-line Stevens thermostat to satisfy your special performance requirements.

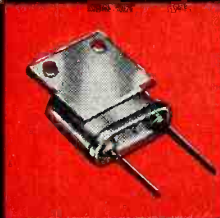
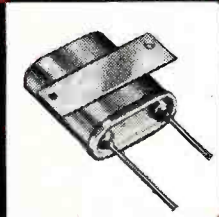
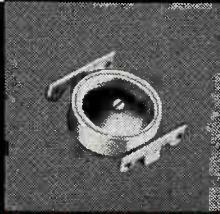
For example, Stevens Type M* bimetal disc thermostats shown are regular production used in such diverse products as appliances, fans, electronic and avionic devices, thermal timers, and instruments.

Engineered for compactness and lightness, they give quick make and break . . . close temperature control . . . reduce contact arcing . . . assure positive On and Off.

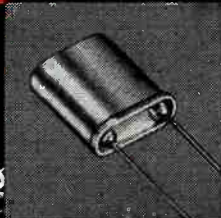
So for better performance . . . longer life . . . lower manufacturing costs—check with Stevens first. A call or letter will bring our representative on the double.

A-8024

STANDARD



METICALLY SEALED



STEVENS

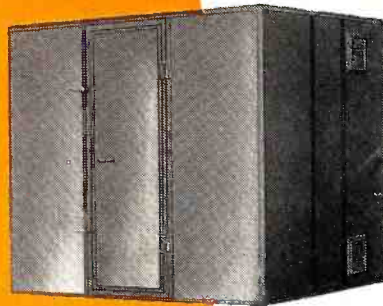
manufacturing company, inc.
Mansfield, Ohio

*PATENTED



What kind of enclosure do you need?
Which shielding material is best?
What is the important difference
between attenuation and inser-
tion loss?

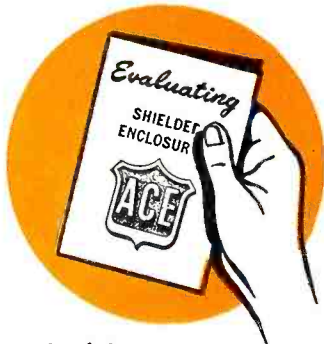
How should attenuation
be measured?
Why is interchangeability
so important?



HOW YOU CAN EVALUATE Shielded Enclosures

Selecting the proper shielded enclosures today is a big job . . . and no wonder! The unqualified statements and ambiguous terminology of some enclosure manufacturers makes intelligent purchasing extremely difficult.

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STANDARD SIGNAL GENERATOR MODEL 65-B

| FREQUENCY RANGE | OUTPUT RANGE | MODULATION |
|-----------------|----------------------------|---|
| 75 Kc.—30 Mc. | 0.1 microvolt to 2.2 volts | AM, 0 to 100% 400 cycles or 1000 cycles External mod., 50-10,000 cycles |

STANDARD SIGNAL GENERATOR MODEL 78

| FREQUENCY RANGE | OUTPUT RANGE | MODULATION |
|--|-------------------------|---|
| 25 Mc.; 195-225 Mc. 25 Mc.; 90-125 Mc. Other ranges on order | 1 to 100,000 microvolts | AM, 8200-400 cycles 625-400 cycles Fixed at approximately 30% |

STANDARD SIGNAL GENERATOR MODEL 78-FM

| FREQUENCY RANGE | OUTPUT RANGE | MODULATION |
|-----------------|-------------------------|--|
| 86 Mc.—108 Mc. | 1 to 100,000 microvolts | Deviation 0-300 Kc. 2 ranges FM, 400 and 8200 cycles External mod. to 15 Kc. |

STANDARD SIGNAL GENERATOR MODEL 80

| FREQUENCY RANGE | OUTPUT RANGE | MODULATION |
|-----------------|---------------------------|--|
| 2 Mc.—400 Mc. | 0.1 to 100,000 microvolts | AM, 0 to 30% 400 cycles or 1000 cycles External mod., 50-10,000 cycles |

STANDARD SIGNAL GENERATOR MODEL 82

| FREQUENCY RANGE | OUTPUT RANGE | MODULATION |
|--|---------------------------------------|---|
| 20 cycles to 200 Kc. 80 Kc. to 50 Mc. | 0-50 volts 0.1 microvolt to 1 volt | Continuously variable 0-50% from 20 cycles to 20 Kc. |

STANDARD SIGNAL GENERATOR MODEL 84

| FREQUENCY RANGE | OUTPUT RANGE | MODULATION |
|------------------|---------------------------|---|
| 300 Mc.—1000 Mc. | 0.1 to 100,000 microvolts | AM, 0 to 30%, 400, 1000, or 2500 cycles. Internal pulse modulator. External mod., 50-30,000 cycles. |

STANDARD SIGNAL GENERATOR MODEL 84-TV

| FREQUENCY RANGE | OUTPUT RANGE | MODULATION |
|---------------------|--|--|
| 300 Mc. to 1000 Mc. | Continuously variable from 0.1 microvolt to 1.0 volt | Continuously variable 0 to 30% External modulation 20 to 20,000 cycles. |

STANDARD SIGNAL GENERATOR MODEL 90

| FREQUENCY RANGE | OUTPUT RANGE | MODULATION |
|-----------------|---------------------------|---|
| 20 Mc.—250 Mc. | 0.3 microvolt to 0.1 volt | Continuously variable, 0 to 100% Sinusoidal modulation 30 cycles 5 mc. Composite TV modulation. |

PULSE GENERATOR MODEL 79-B

| FREQUENCY RANGE | PULSE WIDTH | OUTPUT |
|----------------------|---|--|
| 10 to 100,000 cycles | Continuously variable from 0.5 to 40 microseconds | Approx. 150 v. positive with respect to ground. "Sync Output" 35 v. positive with respect to ground. |

SQUARE WAVE GENERATOR MODEL 71

| FREQUENCY RANGE | WAVE SHAPE | OUTPUT |
|---|--|---|
| Continuously variable to 100,000 cycles | Rise time less than 0.2 microseconds with negligible overshoot | Step attenuator: 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable. |

VACUUM TUBE VOLTMETERS

MODEL 62

| VOLTAGE RANGE | FREQUENCY RANGE | INPUT IMPEDANCE |
|---|---------------------------|-----------------------|
| 0-1, 0-3, 0-30 and 0-100 volts AC or DC | 30 cycles to over 150 Mc. | Approximately 7 mmfd. |

MODEL 67

| VOLTAGE RANGE | FREQUENCY RANGE | INPUT IMPEDANCE |
|--------------------------------|--|------------------------------|
| 0005 to 300 volts peak-to-peak | 5 to 100,000 sine-wave cycles per second | 1 megohm shunted by 30 mmfd. |



CRYSTAL CALIBRATOR MODEL 111

STANDARD SIGNAL GENERATOR MODEL 80



MEGACYCLE METER MODEL 59

U.H.F. FIELD STRENGTH METER MODEL 58

| FREQUENCY RANGE | INPUT VOLTAGE RANGE |
|-------------------|--|
| 15 Mc. to 150 Mc. | 1 to 100,000 microvolts in antenna. 1 to 100 microvolts on semi-logarithmic output meter, balanced resistance attenuator with ratios of 10, 100 and 1000 ahead of all tubes. |

INTERMODULATION METER MODEL 31

| INTERMODULATION RANGE | FREQUENCIES (CYCLES) | ANALYZER INPUT VOLTAGES |
|----------------------------|----------------------------|--|
| 3%, 10% and 30% Full scale | LF: 60 cps HF: 3000 cps | Full scale ranges of 3, 10, 30 volts RMS |

MEGACYCLE METERS MODELS 59LF-59-59UHF

| FREQUENCY RANGE | FREQUENCY ACCURACY | MODULATION |
|--|--------------------|--|
| 0.1 Mc. to 4.5 Mc. 2.2 Mc. to 400 Mc. 430 Mc. to 940 Mc. | Within $\pm 2\%$ | CW or 120 cycles fixed at approximately 30%. Provision for external modulation |

CRYSTAL CALIBRATORS

MODEL 111

| FREQUENCY RANGE | FREQUENCY ACCURACY | HARMONIC RANGE |
|------------------|--------------------|--|
| 250 Kc.—1000 Mc. | 0.002% | .25 Mc. Oscillator: .25-450 Mc. 1 Mc. Oscillator: 1-600 Mc. 10 Mc. Oscillator: 10-1000 Mc. |

MODEL 111-B

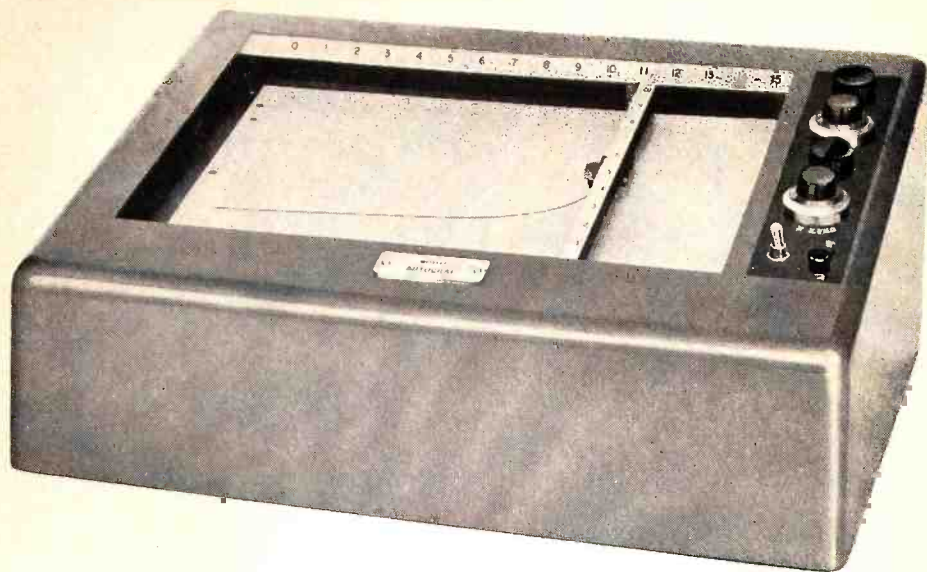
| FREQUENCY RANGE | FREQUENCY ACCURACY | HARMONIC RANGE |
|------------------|--------------------|--|
| 100 Kc.—1000 Mc. | 0.002% | .1 Mc. Oscillator: .1 — 450 Mc. 1 Mc. Oscillator: 1 — 600 Mc. 10 Mc. Oscillator: 10 — 1000 Mc. |



MEASUREMENTS CORPORATION

BOONTON NEW JERSEY





*A new, large size,
flat bed,
versatile
2-axis recorder...*

AUTOGRAF
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MODEL 2



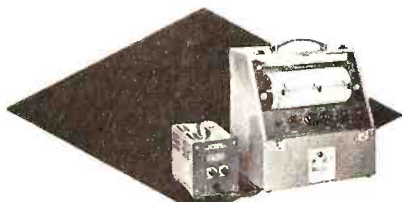
Curves are available for observation and labeling while they are being drawn.

The versatility and labor-saving convenience of the original portable Autograf have now been built into an instrument which handles standard 11" x 16½" graph papers. Model 2 has the same scales and ranges as Model 1 (0-5 millivolts to 0-100 volts each axis); same speed (full scale X and Y in one second); same input impedance (200,000 ohms per volt). In addition, depressed zero available each axis, larger recording area (twice as big), flat bed, easy-reading design.

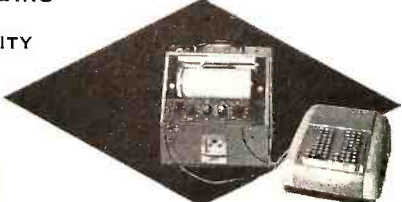


**THE AUTOGRAF
MODEL 1**

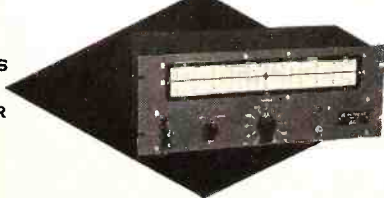
general purpose 8½" x 11" X-Y recorder — is doing duty in hundreds of laboratory applications: chemical, electrical, electronic, wind tunnel, computer... And on production lines: measuring motors, filters, tubes, transistors, airfoils, amplifiers, rectifiers, magnetic circuits and materials, nuclear devices, etc. . . .



**AUTOGRAF
CURVE FOLLOWER**
plots or reads out Y vs. X. Either Model 1 or Model 2 can be furnished as a recorder/curve follower.



**AUTOGRAF
POINT PLOTTER**
Models 1 and 2 may be fitted for point plotting from keyboard or other digital sources.



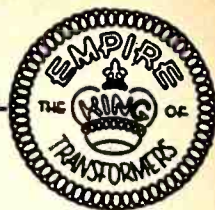
A new high accuracy, easy-to-read, multi-range servo-voltmeter with fast response. Scales 0-3 millivolts to 0-300 volts. Zero left or zero center. Designed for indication, control, or analog to digital conversion.

**BOTH AUTOGRAF
MODELS ARE OUTSTANDING
FOR THEIR VERSATILITY**

**NEW MODEL 20 SERIES
DC VOLTMETER**

Bulletins describing these instruments are available, and we will be glad to send you the ones you want. Write...

F. L. MOSELEY CO., 409 NORTH FAIR OAKS AVENUE, PASADENA 3, CALIFORNIA



**COILS
and
TRANSFORMERS**

**TELEVISION COMPONENTS
for quality performance**

- Horizontal Output and Flyback Transformers
- Vertical Output Transformers
- Vertical and Horizontal Blocking Oscillators
- Filter Reactors
- Power Transformers
- Audio Output Transformers

**EMPIRE
COIL COMPANY, INC.**
Transformer Division

85 Beechwood Ave. New Rochelle, N. Y.
Telephone New Rochelle 6-3000

a plus feature

Immediately following the
Product Listings in the
DIRECTORY SECTION

of this Issue
is a list of more than

**3400
TRADE NAMES**
of electronic and
allied products.

They are intended for
your use in determining
the manufacturer's name
when only
a trade name is known.

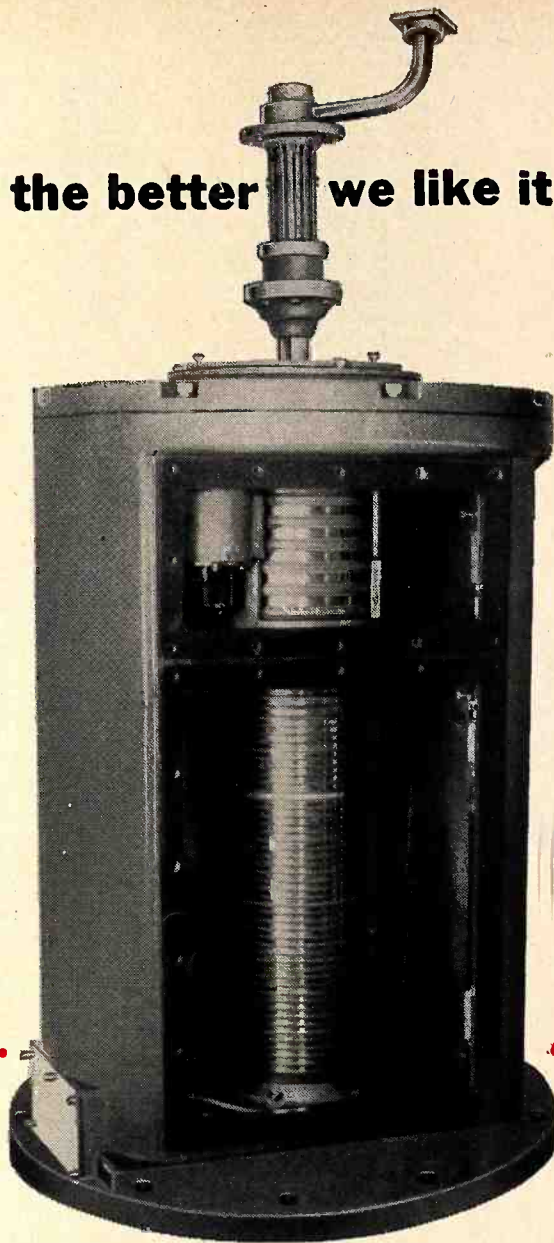
the stiffer the "specs" the better we like it

Virtually every project in the electronics manufacturing field involves operations within the scope of the D. E. Makepeace Company. As specialists, Makepeace is able to supply electronic assemblies for components which meet the most exacting specifications.

WAVEGUIDE TUBING AND MICROWAVE ASSEMBLIES

Long experience in the manufacture of precision drawn waveguide tubing, enables Makepeace to meet tolerances much tighter than specified in MIL-T-85-B. This precision is maintained in the production of components such as rotary joints, crystal mixers, antenna feeds, and many specialized assemblies to meet various requirements.

We shall be glad to confer with you on the design and manufacture of prototypes and production runs. Our exceptional testing facilities are at your disposal.



COLLECTOR RINGS AND BRUSHES

Because Makepeace pioneered in the production of solid and laminated precious metal slip rings, a range of sizes and special alloys is available to meet almost any requirement for space, weight, electrical noise, torque, or power handling capability.

In addition to the rings and brushes themselves, Makepeace has utilized its experience in this field in the design and manufacture of complete self contained ring and brush assemblies. The design of such a unit often poses unusual problems. The Makepeace engineering group having met many of these problems, can plan and manufacture a unit to meet your specifications. Before such an assembly is shipped, it is checked out and completely tested for electrical noise, voltage breakdown, impedance matching, power handling capability, and other test specifications as required.

PRECISION RECTANGULAR WAVEGUIDE TUBING
MICROWAVE COMPONENTS • MICROWAVE
ASSEMBLIES • ELECTRICAL CONTACT
MATERIAL • FORMED ELECTRICAL CONTACTS
RESISTOR WELDED CONTACTS • SLIP RING AND
SLIP RING ASSEMBLIES • BRUSH ASSEMBLIES
PRECIOUS METALS CLAD TO BASE METALS
SHEET—TUBING—WIRE AND ASSEMBLIES
SENDZIMIR PRECISION ROLLING

electronic assemblies and components by

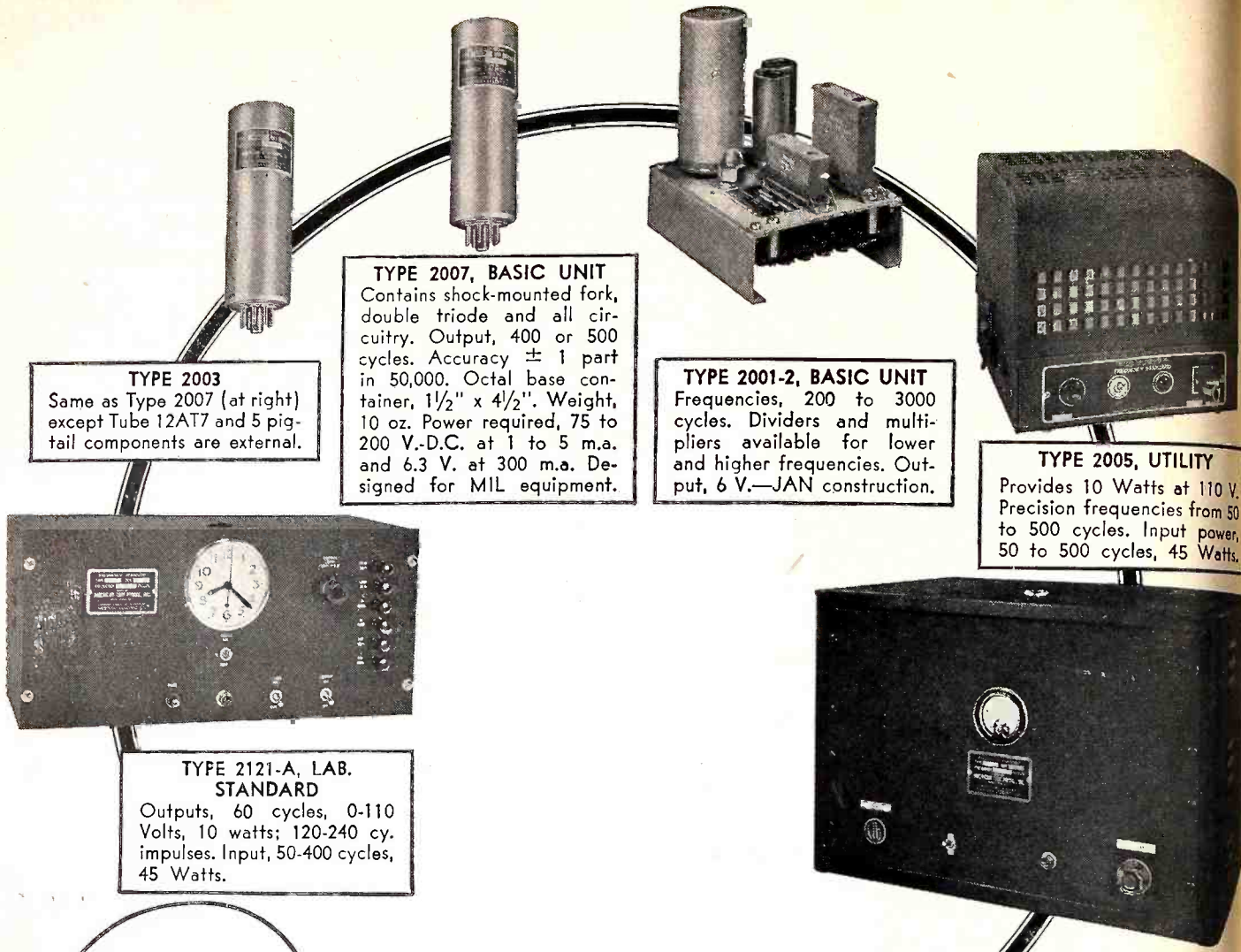
Makepeace

D. E. MAKEPEACE COMPANY

Division of Union Plate and Wire Co.

Attleboro, Mass.

Sales Offices: New York • Chicago • Los Angeles • Columbus



TYPE 2003
Same as Type 2007 (at right) except Tube 12AT7 and 5 pig-tail components are external.

TYPE 2007, BASIC UNIT
Contains shock-mounted fork, double triode and all circuitry. Output, 400 or 500 cycles. Accuracy ± 1 part in 50,000. Octal base container, $1\frac{1}{2} \times 4\frac{1}{2}$ ". Weight, 10 oz. Power required, 75 to 200 V.-D.C. at 1 to 5 m.a. and 6.3 V. at 300 m.a. Designed for MIL equipment.

TYPE 2001-2, BASIC UNIT
Frequencies, 200 to 3000 cycles. Dividers and multipliers available for lower and higher frequencies. Output, 6 V.—JAN construction.

TYPE 2005, UTILITY
Provides 10 Watts at 110 V. Precision frequencies from 50 to 500 cycles. Input power, 50 to 500 cycles, 45 Watts.

TYPE 2121-A, LAB. STANDARD
Outputs, 60 cycles, 0-110 Volts, 10 watts; 120-240 cy. impulses. Input, 50-400 cycles, 45 Watts.

TYPE 2111A, POWER UNIT
50 Watt output. 0-110-220 V. at 60 cycles or any frequency 50 to 1000 cycles.

Precision FREQUENCIES

**GUARANTEED ACCURACY
1 PART IN 100,000 (.001%)
except where otherwise noted**

- WIDELY USED
IN SUCH FIELDS AS**
- Aviation, Navigation
 - Ordnance, Ballistics
 - High Speed Photography
 - Viscosity Measurement
 - Fluid Flow
 - Nuclear Physics, Telemetering
 - Chemical Reaction
 - Radiation Counting
 - Computers
 - Facsimile
 - Fire Control
 - School and Indl. Research Labs.
 - Accurate Speed Control

The basis of these frequency standards is an electronically actuated high-precision fork, temperature-compensated and hermetically sealed against barometric changes. The partial list of uses at the right not only suggests the broad range of applications but also proven dependability where there can be no compromise with accuracy. Please request details by Type No. Our engineers are available for advice or cooperation on related problems.

American Time Products, Inc.
580 Fifth Avenue
New York 36, N. Y.

OPERATING UNDER PATENTS OF WESTERN ELECTRIC COMPANY

Advertisers:

How about the NUCLEAR field?

There are a good many advertisers using this BUYERS' GUIDE should also be advertising in NUCLEONICS.

Particularly in instrumentation laboratory equipment, there is a cross-over of use in the electronic and in the nuclear field.

At present, there is very little cross-over in the subscriber lists of the publications — a matter of a few percentage points.

It is quite possible that you are not making an effective presentation of your products and abilities in this excellent issue, but are missing an excellent presentation before one of the fastest growing fields in the country's history — the field of atomic energy.

The sales representatives of NUCLEONICS are also the sales representatives of NUCLEONICS. We have much evidence pointing to the opportunities in this great field. Ask them to show you how your potentials can be.

NUCLEONICS

ABP

McGraw-Hill Publication
330 West 42nd St.
New York 36, N. Y.

BOGUE

HI-CYCLE GENERATORS



For precision Hi-Cycle power generating equipment to meet one of a myriad of special power requirements ranging from highest quality laboratory power to precision electronic testing, industry relies on Bogue Precision Power. Bogue as the recognized leader in the Hi-Cycle field offers these performance characteristics—

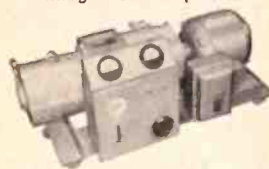
LOW HARMONICS

CLOSE VOLTAGE REGULATION

400 CYCLE REGARDLESS OF LOAD & INPUT VARIATIONS

For example, Bogue special 400 cycle single shaft, two-bearing synchronous motor driven units eliminate belts, gears and other special speed changers, yet, faithfully deliver 400 cycles—exactly—no load to full load regardless of voltage variations . . . truly the standard of 400 cycle power . . . the reason so many prominent companies have been depending on equipment built by Bogue Electric Manufacturing Company . . .

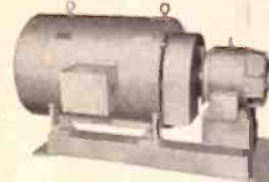
5 KW portable regulated 400 cycle motor-generator set with integral control panel.



Variable frequency 320 to 1000 cycle M-G set. Bogue magnetic amplifier maintains voltage and frequency to within one-half of 1% of any preset value.



5 KW low harmonic set. 400 cycle regardless of input voltage, loading or heating.



400 cycle voltage & frequency regulated inverter. Operates from 28 volt DC supply.

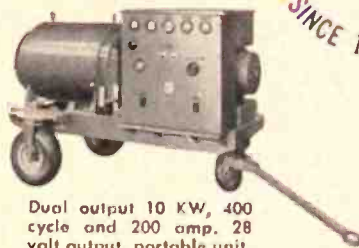
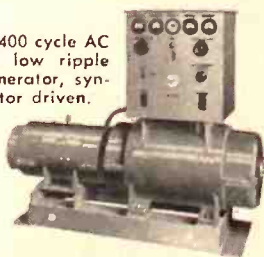


The Authority on High Cycle Power

BOGUE

56 IOWA AVENUE • PATERSON, 3, NEW JERSEY

Low harmonic 400 cycle AC generator and low ripple 28 volt DC generator, synchronous motor driven.



Dual output 10 KW, 400 cycle and 200 amp. 28 volt output, portable unit.

PRECISION ELECTRICAL EQUIPMENT
Bogue
SINCE 1892

REQUEST ILLUSTRATED CATALOG 440

Commerce and the Military write THEIR SPECIFICATIONS to

NEW! TWINPLEX COMMUNICATION UNITS



TYPE 177, MODEL 1



TYPE 178, MODEL 1

This Twinplex communication system makes possible a 2-channel radio circuit whereby 2 non-synchronous or synchronous telegraph transmissions modulate a single radio carrier wave by causing the carrier to assume one of four specific frequencies with 400 cps separations.

The transmitting equipment consists of the Twinplex Combiner Type 177 Model 1 and an RF Frequency Shift Keyer such as the Northern Radio Type 105 Model 4. The Combiner converts the four possible conditions of two telegraph signals (M1-M2, M1-S2, S1-M2, S1-S2) respectively into one of four voltages related in a 0-1-2-3 manner. The Combiner output voltage modulates the FS Keyer.

The receiving equipment consists of the Twinplex Converter Type 178 Model 1 and a single or diversity receiver such as the Northern Radio Type 110 Dual Diversity Receiving System. The Converter demodulates and separates the four audio tones from the radio receiver(s) into

two channels each carrying the originally transmitted intelligence. The Twinplex Converter replaces the standard FS Converter for this purpose.

The two telegraph channels provide the same operational flexibility as the two separate single channel FS systems. One can, for example, simultaneously receive channel #1 or 60 wpm teletype channel #2 on high-speed Morse or Division Multiplex. It further permits reception of channel #1 signals on standard FS converters (tunable to cps shift) without need for a Twinplex Converter: this is valuable for "Parallel Circuit Operation" where the intelligence of channel #1 is intended for pick-up by other receiving stations which are not equipped for Twinplex Reception in addition to the main receiving stations which are so equipped. Reception of channel #2 (or of both channels) requires the receiving end to be equipped with a Twinplex Converter.

NEW VARIABLE MASTER OSCILLATOR

- Long-time stability 1 cycle per megacycle
- Variable to ANY frequency from 2 to 4 mc within 1 part per million

The Northern Radio Company Variable Master Oscillator provides a continuously variable source of radio frequency energy with a stability of approximately 1 cycle per megacycle in the range of 2 to 4 megacycles. It has sufficient output to replace existing oscillators wherever a more stable and variable unit is required. It may be used as the basic control oscillator for diversity receivers, high frequency transmitters and other communications devices, or as a laboratory standard for test and measurement functions.

Its ease of operation and direct reading of frequency make it an outstandingly useful device where precise frequency control must be maintained by completely unskilled personnel. No curves, interpolations or calculations of any kind are required in its use. Frequency is set approximately to the desired value by rotating the oscillator dial. The last three digits of the frequency automatically pulls in to the value pre-set on the switches and holds with an accuracy that exceeds that of most temperature-controlled crystal oscillators.

The unit also provides a crystal controlled Beat Frequency oscillator for use in single or diversity receiving systems to provide stabilized BFO injection to the receivers.

An output is also provided from the high stability time base oscillator to make available its 100 KC frequency for use as a secondary standard. The stability of this output is one part in five million over any 12-hour period.

HIGH FREQUENCY OSCILLATOR

- Output Frequency: 2—4 MC continuously variable.
- Stability for any combination of temperature range from 0 to 50° C., and line voltage of 115 or 230 ± 10%: Approximately 1 cycle per megacycle.
- Output Level: 1/2 watt into 75 ohm load. Level control on rear of chassis.
- Readability: ± 2.5 cycles per second. Direct digital readout on mechanical and electronic counters.
- Resetability: Absolute.



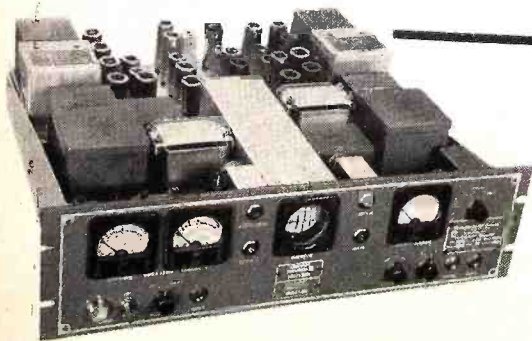
TYPE 173, MODEL 1

BEAT FREQUENCY OSCILLATOR

- Output Frequency: 400—800 KC crystal controlled.
- Output Level: 3.5 volts into 1000 ohm load. Level control on rear of chassis.

TIME BASE CRYSTAL OSCILLATOR

- Output Frequency: 100 KC.
- Stability for 0 to 50° C and ± 10% Line Voltage change: 0.2 parts per million for any 12 hour period 1.0 part per million for thirty days.
- Output Level: Approximately 2 volts.
- Output Impedance: Approximately 100,000 ohms.



TYPE 174, MODEL 1

FREQUENCY SHIFT DIVERSITY CONVERTER

For use with either single-receiver frequency diversity systems or 2-receiver space diversity systems. The Type 174 Model 1 provides solid copy of signals which are 14 db below white noise level—making it the outstanding unit of today. By means of plug-in units, any reasonable number of channels is available between the frequencies of 425 and 3315 cps for either frequency or space diversity operation. For standard FS operation, the plug-in networks provide shift adjustments from 100 to 1000 cps shift.

- Normal Input Level: -40 to +10 VU (Zero VU = 1mW into 600 ohms). (Satisfactory operation on fades to -60 VU).
- Limiter Recovery Time: Negligible for a 40 VU differential between Mark and Space frequencies.
- Output: 65 ma into 2000 ohms floating (self-contained line battery).

- Keying Speed: Maximum of 40 dot cycles with narrow band frequency diversity. Up to 400 dot cycles with wide band networks.
- Monitor: 2-inch Cathode Ray tube input phone jack
2 input volume level indicators
1 output current indicator

NORTHERN RADIO COMMUNICATIONS EQUIPMENT

Industry's Complete Line of High Quality Communications Equipment

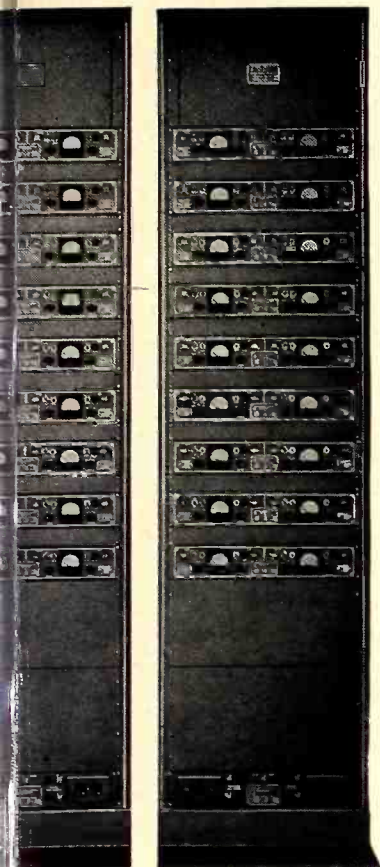
MULTIPLEX SYSTEMS ★ MULTI-CHANNEL TONE SYSTEMS ★ DIVERSITY RECEIVERS
HARD FREQUENCY SHIFT KEYERS ★ LOW FREQUENCY SHIFT KEYERS ★ FREQUENCY
CONVERTERS ★ TONE FILTERS ★ TONE KEYERS ★ DEMODULATORS ★ LINE
ADJUSTERS ★ MASTER OSCILLATORS ★ MONITORS ★ TWINPLEX EQUIPMENT

MULTI-CHANNEL FREQUENCY SHIFT TELEGRAPH SYSTEMS

Today's constantly growing demand for greater, faster, more dependable communications has made the need for improved Multiplex equipment more acute than ever before. In response to this need, Northern Radio Company now makes available several new Frequency Shift Multi-Channel Telegraph Systems. Reflecting the heritage of Northern Radio's constant research and precision manufacture over the years, these multi-channel systems display novel concepts of design together with outstanding performance, fidelity and operating economy.

These Multi-Channel Telegraph Systems are audio carrier systems capable of multiplexing such circuits as telephone lines, VHF, UHF, or radio frequency links—or practically any type circuit from which a two-wire audio circuit can be derived. Designed to meet any speed requirements, these systems are fully electronic, without relays or moving parts to wear. They can be used for high-speed printer, Morse or time division Multiplex circuits, as well as such applications as Telemetry, Control Circuits and Servo-Mechanisms. Instantaneous and complete sending end channel control permits any binary code groups, either "Clear Text" or "Cryptographic," to be channelized without need for additional phasing or synchronizing equipment, while paralleling of channels will allow for transmission of other type codes, such as 3 element cable code. The completely independent operation of each channel, including its own power supply, localizes faults to one channel only, leaving other channels unaffected. Individual channel separation filters are used at both transmitting and receiving ends. This arrangement allows for sending telegraph or control signals over a circuit carrying, simultaneously, other forms of intelligence; or for two-way communications on the same line.

The audio frequency shift principle of transmission provides for high fidelity of signal reproduction over a wide range of signal levels as well as under severe noise or interference conditions. Circuit requirements of any speed, shift and center frequency can readily be met. The systems illustrated is for use on printer circuits up to 100 WPM channel capacity. The system arrangement is very flexible, permitting grouping of the basic units into various arrangements of Multiplex Systems. These systems can be made to accommodate a large variety of channel numbers and speeds to meet any individual requirements. The flexibility is further improved by the fact that the racks, power control units, and terminal connection panels are the same for both transmitting and receiving terminals.



TEST BAY FOR TONE TELEGRAPH SYSTEMS

Northern Radio Company Test Bay for Tone Telegraph Systems provides a complete terminal of test equipment for testing, alignment and maintenance of Frequency Shift Telegraph Systems. Equipped with such equipment, it performs the following functions: (1) rapid and simple precision measurements of mark, space and center frequencies at transmitting and receiving terminals; (2) precision adjustment of FS Tone Keyers to specified frequencies; (3) accurate tuning of FS Converters; (4) rapid evaluation of signal distortion;

(5) measurements of tone and telephone line levels at both receiving and transmitting ends; (6) measurement of telephone line attenuation; (7) over-all system checks and alignment; (8) performance tests of Tone Multiplex Systems and associated equipment; (9) quick localization of systems faults; and (10), monitoring of all wave forms such as keying, keyed tone, etc.

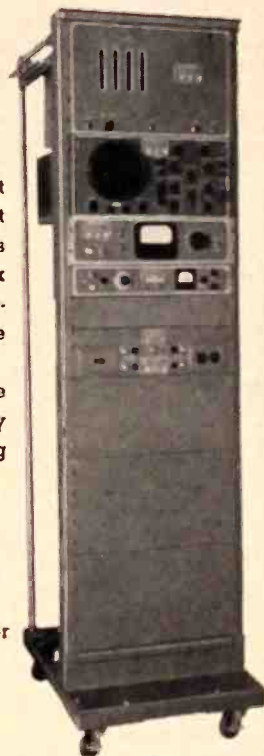
The Test Bay consists of Electronic Square Wave Keyer (Dotter), Cathode Ray Oscilloscope, Frequency Counter, Volume Level Indicator and Rack including blank panels, patch cords and test probes.

TYPE 168
MODEL 1

TONE CHANNELING SYSTEMS

Complete package systems of Multi-Channel Tone Equipment (both AM and Frequency Shift) are available for line or radio link systems.

For full data on the complete line, write now for catalog BG-54



NORTHERN RADIO COMPANY, inc.

Pace-Setters in Quality
Communication Equipment



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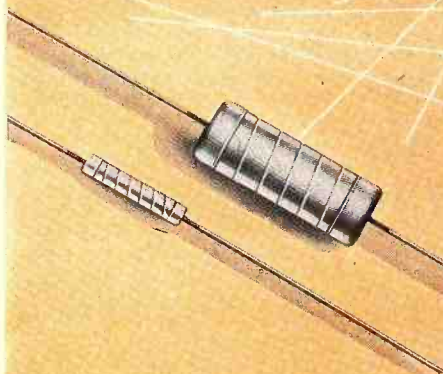
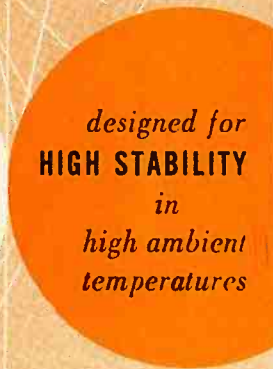
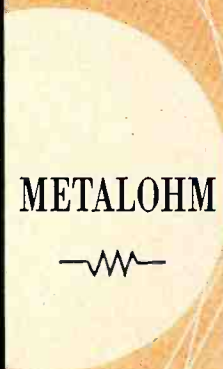
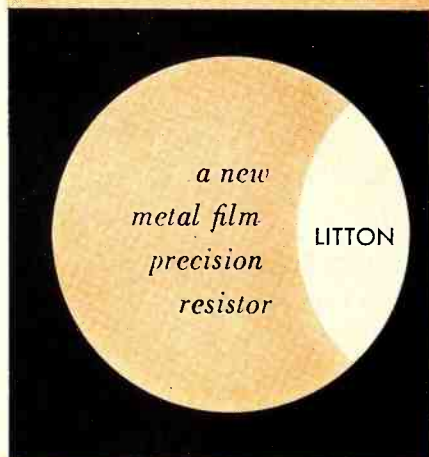
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For Distributor
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When buying
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electronics
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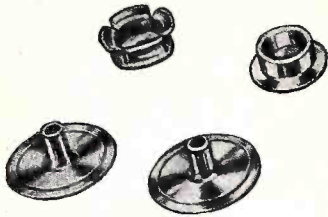
A new and superior precious metal film, perfected after more than three years' research, gives Metalohm resistors unmatched stability in high and low ambient temperatures. One-half watt unit will operate at full rated load of 70° C, and one watt unit will operate at full rated load to 100° C. Both sizes derate to zero at 200° C. Tolerance is 1%. Moisture and vapor are positively excluded. Exceptionally rugged . . . film is fused to a solid steatite core and protected by a vitrified enamel coating. Drawn-on end caps will not pull off. Low in cost. Meet and exceed specification MIL-R-10509A. Write for complete description.



write:

METALOHM, LITTON INDUSTRIES,
336 N. Foothill Road, Beverly Hills, California
Plants in San Carlos and Beverly Hills in California

Tailor-Made Fasteners in Volume Quantities



MINIATURE BATTERY CONNECTORS

For use with small "B" batteries; afford quick and positive polarized electrical connections and worthwhile space savings on small electronic equipment.



PLASTIC INDICATOR PLUG

Snap-in type, all plastic, lettered indicator plug buttons for electrical appliances. Can be moulded in ornamental or functional designs. For blinding applications. Removable.

FISHTAIL RATCHET PLATE

Made in a wide range of sizes to hold on smooth metal, die-cast or plastic studs. For use on refrigerators, radio cabinets, washing machines and other products to hold medallions, nameplates, etc.



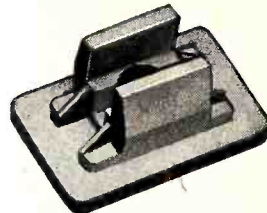
VIBRATOR GROUNDING FASTENERS

Holds 1/2" dia. beaded or non-beaded vibrator. Vibrator Can grounded to chassis. Holding prongs designed to hold several types of Cans.



RUBBER FOOT

Snap-in Rubber Foot for Record Changers and Phonograph Mountings eliminates threaded member, lock washer and nut thereby speeding assembly time and reducing costs.



NYLON SNAP-IN NUT

Designed for the attachment of shelf supports or channels to porcelainized sheet metal liners. Used with sheet metal screws they provide high pull-out values and no chippage.

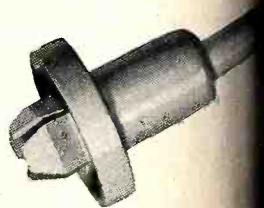
SPEAKER MOUNTING BOLT

Pronged head prevents bolt from turning in speaker panel during application of nut and lock washer, permits one-side attachment providing production-line savings.



SHELF SUPPORTS

Plastic Shelf Supports designed to snap into porcelainized hole. Driven pin expands Trimount section securing fastener without porcelain chippage. Variety of shapes and sizes.



PLUG BUTTONS

Made to snap into hole sizes 1/8" to 3". Can be embossed with ornamental or functional designs. Removable. Supplied with various finishes, in a variety of shapes and sizes.



QUICKEY FASTENER

Eliminates need for welding or swaging studs to sheet metal stampings, facilitates nesting, eliminates damage in transit because Quickey snaps in just before final assembly.

TRIMOUNT STUDS

Designed to hold two or more thicknesses of material together. Easily installed by hand. Insure vibration proof attachment. Permanent or removable attachment. Wide variety of shapes and sizes.



DOT

Parts illustrated are representative of the thousands of different specialized fasteners and allied devices designed and manufactured in volume by United-Carr and its subsidiaries for leading manufacturers of electronic equipment. United-Carr's wide and varied experience with special fastening problems in the automotive, aviation and appliance fields provides an unequaled background of technical knowledge which may well be applicable to your special needs.

UNITED-CARR
FASTENER CORP.
CAMBRIDGE 42, MASSACHUSETTS

Ucinite Electrical Assemblies

BATTERY CONNECTORS

Wired snap-on units for use with batteries equipped with United-Carr electrical snap fasteners. Wiring to customer's specifications.



BANANA PINS

Four sizes of plugs with one-piece beryllium copper springs. Adaptable mounting ends in threaded, staking, or solder lug types. Similar Mating Jacks also available.

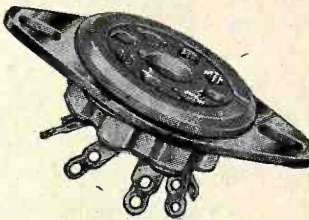


ANODE CONNECTORS

Plug button contacts for positive, firm connections. Corona resistant neoprene or silicon shields in straight or right angle types. Wiring to customer's specifications.

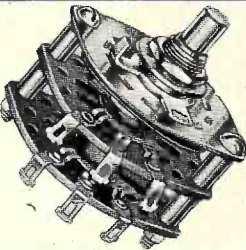
TUBE SOCKETS

Ceramic octals and special types. Ring or saddle mounting. Open ended plates for shock mounting with rubber grommets. J A N types.



TUBE CAPS

Positive gripping, heat treated steel springs in corona resistant metal housing. Insulated or non-insulated. Wired to specifications. Type shown has silicon shield for special application.



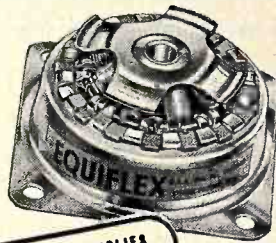
SNAP SWITCHES

Precision, momentary contact push-button switches. Small and dependable. Several circuit arrangements. Water tight version shown.



TEST JACK

Ucinite's quality jack for .080 probes. Beryllium copper contacts. Nylon insulation in colors. Metal shell for firm dependable mounting.



VIBRATION ISOLATORS

Equiflex (1 to 1 ratio) metal mounts ensure long life, fit small spaces, can be used in any direction. Three sizes, cup or plate mountings.



SHOCK MOUNTS

in several sizes— and durometer of washings can be varied. Threaded Teenuts or plain Insulated versions if



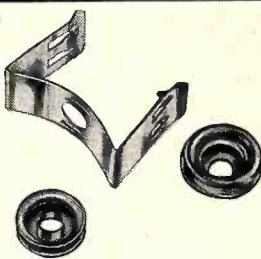
SWITCHES

switches manufactured by licensee. Variety of push-button as to specifications.



METAL STAMPINGS

production in Metal Years of engineering pooling skill available for your particular prob-



ELECTRICAL ASSEMBLIES

Ucinite

FIELD ENGINEERS

With years of specialized experience in the electronics field and complete facilities for the volume production of small metal stampings as well as the assembly of metal to plastic and ceramic components, Ucinite is fully equipped to supply you with special electrical parts and assemblies... designed, assembled, wired and marked to your specifications. For complete design, engineering and production service, call your nearest Ucinite field engineer.

UCINITE Company

DIVISION OF UNITED-CARR FASTENER CORP.

Newtonville 60, Massachusetts

AGE or PREHEAT up to 100 vacuum tubes for 50 hour reliability tests . . .

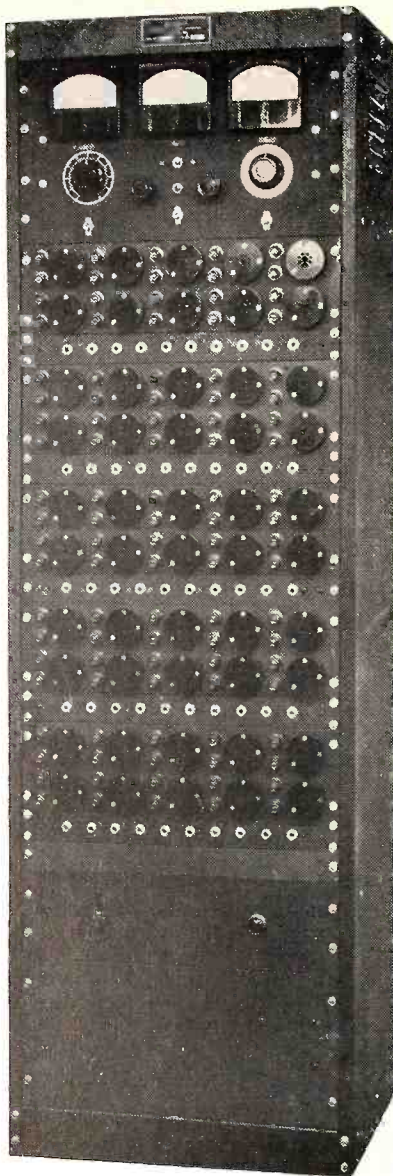
You can quickly apply any nominal voltage and/or load to any tube element for practically all receiving and many transmitting types with the P.T.L. Aging Rack. Plate, filament, screen and grid voltages may be varied as desired.

Multiple banks of ten production-type sockets accommodate octal, small seven, noval nine or subminiature tubes. Each bank is individually controlled so that up to ten different tube types may be aged simultaneously.

Self contained filament and plate power is supplied together with adequate bias voltages. Overload protection is included in all circuits.

Among Users of PTL Equipment are:

RCA, IBM, Eclipse Pioneer
Essex Wire, Ford Instrument,
Philco, General Motors,
Electric Auto Lite, Remington
Rand, Westinghouse



Fast, accurate, VISUAL INDICATION of the null point for A-C bridges

With the P.T.L. Type 239 Bridge Null Indicator you can see by simultaneous and independent indications, the reactive and resistive unbalances of A-C bridges on a 3" cathode ray tube. After a simple initial set-up, no further manual operation is required.

The indicator amplifier has gain sufficient to give 1 inch deflection for 20 microvolts of input signal. At maximum sensitivity, the hum and noise level is less than 2 microvolts. Continuous tuning in 9 ranges adequately reduces harmonic errors from 20 cps to 20 Kc. A.V.C. is incorporated to reduce overload distortion and speed production testing. The equipment is very useful in a laboratory as well as being essential for fast production testing of audio coils, condensers, etc.

Other production equipment:

SYNCHRO ERROR TEST SET
R-F COIL AND CONDENSER TEST SET
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Custom manufacturing and designing

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Specializing in Research, Design, Development and
Manufacture of Electronic Production Testing Facilities

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SPERRY GYROSCOPE COMPANY

SPERRY KLYSTRON TUBES and *Microline*† INSTRUMENTS

Starting from its sponsorship of the development of the klystron in 1938, Sperry has had vast experience in the manufacture of these tubes for low, medium and high power applications. As a result of Sperry's pioneering in microwave measuring techniques, this company has a complete line of *Microline* instruments which include every type of device essential to precision measurement, in the entire microwave field.

For further information on the equipment listed below or on new development of klystrons and microwave test units, write or telephone our Special Electronics Department or our nearest District Office.

| Description | Frequency Range in MC | Output Power | Beam Voltage | Reflector Voltage |
|----------------------------------|------------------------|--------------|--------------|-------------------|
| Klystron | 750 to 990 | 5w | 1000 | 0 to -1500 |
| Klystron | 950 to 1150 | 5w | 1000 | 0 to -1500 |
| Klystron | 1850 to 2160 | 10w | 1000 | 0 to -1000 |
| Klystron | 2660 to 3310 | 250mw* | 1250 | 0 to -750 |
| Klystron | 3300 to 4200 | 250mw* | 1250 | 0 to -750 |
| Klystron | 4200 to 5700 | 250mw* | 1250 | 0 to -750 |
| Klystron | 5700 to 7500 | 250mw* | 1250 | 0 to -750 |
| Klystron | 7500 to 10,300 | 250mw* | 1250 | 0 to -750 |
| Klystron | 8500 to 9660 | 20mw | 300 | -55 to -220 |
| Klystron | 5925 to 8100 | 1w | 750 | 0 to -300 |
| Klystron | 14,000 to 17,500 | 25mw | 300 | 0 to -150 |
| Klystron/Thermistor | 6000 to 6300 | 6w | 625 | none |
| Klystron/Thermistor | ** 2600 to 2800 | 225w | 4000 | none |
| Klystron/Thermistor | 2730 to 3330 | 25w | 3000 | none |
| Klystron/Thermistor | 3700 to 4200 | 10w | 750 | none |
| Klystron/Thermistor | 4970 to 5034 | 9w | 1000 | none |
| Klystron/Thermistor | ** 4800 to 5300 | 500w | 5200 | none |
| Klystron/Thermistor | 960 to 1215 | 30kw | 20,000 | none |
| Klystron/Thermistor (duty cycle) | ** 9100 to 9500 | 325w | 5000 | none |
| Klystron/Thermistor (duty cycle) | ** 9100 to 9500 | 7.5kw | 17,000 | none |
| Klystron/Thermistor (duty cycle) | ** 250 to 270 in | 350mw | 1000 | none |
| Klystron/Thermistor | ** 2500 to 2700 out | | | |
| Klystron/Thermistor | ** 715 to 875 in | 400 mw | 1000 | none |
| Klystron/Thermistor | ** 3750 to 6000 out | | | |
| Klystron/Thermistor (Freq.) | ** 4500 to 5250 in | 1.5w | 1000 | none |
| Klystron/Thermistor | ** 9000 to 10,500 out | | | |
| Klystron/Thermistor (Freq.) | ** 4700 to 5200 in | 600mw | 1500 | none |
| Klystron/Thermistor | **23,500 to 26,000 out | | | |

*Output Power.
†Manufacturer to center frequency specified by customer. An individual trimmer tuning.

See Section for klystron tube fittings.)

U.S. Pat. Off.

BARRETTER AND THERMISTOR MOUNTS

| Model | Description | Barretter or Thermistor Type | Frequency Range-kmc | Max. VSWR | Fittings Input | Fittings Output |
|-------|---------------------------------------|------------------------------|---------------------|-----------|----------------|-----------------|
| 554 | 7/8" Coaxial Barretter and Thermistor | 811 | .82-2.0 | 1.8 | UG-46/U | BNC |
| 163 | Type N Coaxial | 550 | | 1.5 | | |
| 85 | Type N Coaxial | 821 | 2.5-2.7 | 1.8 | Type N Plug | UHF |
| 164 | Type N Coaxial | 821 | 2.7-2.9 | 1.8 | Type N Plug | UHF |
| 245 | 2"x1" Waveguide | 821 | 2.9-3.1 | 1.8 | Type N Plug | UHF |
| 423A | 2"x1" Waveguide | 821 | 3.7-4.5 | 1.5 | UG-149A/U | UHF |
| 83A | 2"x1" Waveguide | 821 | 5.0-5.9 | 1.5 | UG-149/U | BNC |
| 253 | 1 1/2"x3/4" Waveguide | 821 | 4.6-5.65 | 1.5 | UG-149A/U | UHF |
| 212 | 1 1/2"x3/4" Waveguide | 821 | 5.3-6.6 | 1.7 | UG-344/U | UHF |
| 184 | 1"x1/2" Waveguide | 821 | 6.0-7.6 | 1.5 | UG-344/U | UHF |
| 219C | 1"x1/2" Thermistor Waveguide | 821 | 8.5-9.6 | 1.5 | UG-39/U | UHF |
| 365A | .702x.391 | 543 | 8.5-9.6 | 1.5 | UG-39/U | BNC |
| | | | 12.4-1.8 | 1.5 | UG-4A/U | BNC |

BARRETTOR ELEMENTS

811 125 OHMS (see Barretter and Thermistor Mounts)
821 200 OHMS (see Barretter and Thermistor Mounts)

THERMISTOR ELEMENTS

543 (see Barretter and Thermistor Mounts)
550 (see Barretter and Thermistor Mounts)

IMPEDANCE METERS

| Model | Frequency Range-kmc | Reading Accuracy | Transmission Line Size | Detector Element | Flanges Input | Flanges Output |
|-------|---------------------|------------------|------------------------|------------------|---------------|----------------|
| 361A | .65-4.0 | 0.1mm | 7/8" Coaxial | 1N21B* | UG-46/U | UG-45/U |
| 299 | 2.6-4.0 | 0.1mm | 3"x1 1/2" | 1N21B* | UG-214/U | UG-214/U |
| 103B | 3.95-6.0 | 0.1mm | 2"x1" | 1N23B* | UG-149A/U | UG-149A/U |
| 201 | 5.3-8.2 | 0.1mm | 1 1/2"x3/4" | 1N23B* | UG-344/U | UG-344/U |
| 145 | 8.1-12.4 | 0.1mm | 1"x1/2" | 1N23B* | UG-39/U | UG-39/U |
| 320 | 18.0-26.5 | 0.01mm | 1/2"x1/4" | 1N26 | UG-425/U | UG-425/U |
| 346 | 26.5-40.0 | 0.01mm | .360"x.220" | 1N53 | UG-381/U | UG-381/U |

*The Model 821 barretter element can also be used.

IMPEDANCE TRANSFORMERS

| Model | Type | Description | Frequency Range-kmc | Max. VSWR | Fittings |
|-------|-----------------------|--------------|---------------------|-----------|---------------------|
| 34A | Triple-Stub | 7/8" Coaxial | 1.7-3.75 | 50 | UG-46/U and UG-45/U |
| 137 | Double-Stub | 3/4" Coaxial | 2.66-10.3 | — | Type N Jack |
| 301 | Double-Slug | 3"x1 1/2" | 2.6-4.0 | 10 | UG-214/U |
| 109A | Double-Slug Waveguide | 2"x1" | 3.95-6.0 | 8-14 | UG-149A/U |
| 117B | Susceptance Waveguide | 2"x1" | 3.95-6.0 | 40 | UG-149A/U |
| 202 | Susceptance Waveguide | 1 1/2"x3/4" | 5.3-8.1 | 40 | UG-344/U |
| 178 | Susceptance Waveguide | 1"x1/2" | 8.1-12.4 | 40 | UG-39/U |
| 146 | Double-Slug Waveguide | 1"x1/2" | 8.1-12.4 | 8-14 | UG-39/U |

FREQUENCY METERS

| Model | Description | Type* | Frequency Range-kmc | Absolute Accuracy | Fittings R-F | Video |
|-------|-------------------------|-------|---------------------|-------------------|--------------|-------|
| 124C | Broadband Coaxial | T | .66-3.0 | 1/1000 | Type N | UHF |
| S22 | Detector Wave-meter Kit | T&A | 2.4-3.4 | 1/2000 | Type N | UHF |
| 291A | Cavity | T&A | 2.575-3.78 | 1/10,000 | Type N | UHF |
| 27B | Coaxial | T | 3.5-6.5 | 1/1000 | Type N | BNC |
| 28B | Cavity | T&A | 4.01-6.0 | 1/10,000 | UG-149A/U | UHF |
| 207A | Coaxial | T | 5.3-8.1 | 1/2000 | Type N | BNC |
| 208B | Cavity | T&A | 5.49-8.1 | 1/10,000 | UG-344/U | BNC |
| 126 | Coaxial | A | 8.1-10.2 | 1/2000 | UG-39/U | UHF |
| 273 | Cavity | T&A | 8.1-11.9 | 1/10,000 | UG-39/U | UHF |
| 348 | Cavity | T&A | 13.8-18.0 | 1/1000 | UG-419/U | UHF |
| 349 | Cavity | T&A | 19.0-26.0 | 1/1000 | UG-425/U | UHF |
| 350 | Cavity | T&A | 26.5-39.0 | 1/1000 | UG-381/U | UHF |

*T—Transmission A—Absorption

DIRECTIONAL COUPLERS

| Model | Description | Frequency Range | Attenuation-db | Fittings |
|-------|-------------------------|-----------------|----------------|-----------|
| 517 | 3/8" Coaxial | .24-48 | 20-30-40 | UG-46/U* |
| 519 | 3/8" Coaxial | 48-96 | 20-30-40 | UG-46/U* |
| 480 | 3/8" Coaxial | .96-1.99 | 20-30-40 | UG-46/U* |
| 467 | 3/8" Coaxial | 1.99-4.0 | 20-30-40 | UG-46/U* |
| 306 | 3"x1/2" Waveguide | 2.6-4.0 | 30 | UG-214/U |
| 544 | 3"x1/2" Waveguide | 2.6-4.0 | 40 | UG-214/U |
| 545 | 3"x1/2" Waveguide | 2.6-4.0 | 50 | UG-214/U |
| 233 | 2"x1" Waveguide | 4.0-6.0 | 24 | UG-149A/U |
| 321 | 2"x1" Waveguide | 4.0-6.0 | 30 | UG-149A/U |
| 322 | 2"x1" Waveguide | 4.0-6.0 | 40 | UG-149A/U |
| 209 | 1 1/2"x3/4" Waveguide | 5.3-8.1 | 24 | UG-344/U |
| 237 | 1 1/2"x3/4" Waveguide | 5.3-8.1 | 30 | UG-344/U |
| 305 | 1 1/4"x3/4" Waveguide | 7-10 | 20 | UG-51/U |
| 546 | 1 1/4"x3/4" Waveguide | 7-10 | 30 | UG-51/U |
| 547 | 1 1/4"x3/4" Waveguide | 7-10 | 40 | UG-51/U |
| 235 | 1"x1/2" Waveguide | 8.1-12.4 | 20 | UG-39/U |
| 419 | 1"x1/2" Waveguide | 8.1-12.4 | 30 | UG-39/U |
| 234 | 1"x1/2" Waveguide | 8.1-12.4 | 40 | UG-39/U |
| 388 | 0.702"x0.390" Waveguide | 12.4-17.0 | 20 | UG-419/U |
| 413A | 1/2"x1/4" Waveguide | 18.0-26.5 | 20 | UG-595/U |
| 414A | 1/2"x1/4" Waveguide | 18.0-26.5 | 30 | UG-595/U |
| 415 | 1/2"x1/4" Waveguide | 18.0-26.5 | 40 | UG-425/U |
| 405A | 0.360"x0.220" Waveguide | 26.5-36.0 | 20 | UG-599/U |
| 429A | 0.360"x0.220" Waveguide | 26.5-40.0 | 10 | UG-599/U |

*Input fitting. Main line output UG-45/U. Secondary line output, UG-46/U. Adapters (Models 352A and 217) convert these units to Type N.

ATTENUATORS

| Model | Description | Frequency Range-kmc | Attenuation Range-db | Waveguide Size | Fittings |
|-------|------------------|---------------------|----------------------|----------------|-----------|
| 127A | Precision ±.2db | 29-32mc | 15-95 | — | UHF |
| 110 | Variable | 4.0-6.0 | 0-20 | 2"x1" | UG-149A/U |
| 134 | Calibrated ±.5db | 8.5-9.6 | 2-45 | 1"x1/2" | UG-39/U |
| 173 | Fixed ±.5db | 8.5-9.6 | 3 | 1"x1/2" | UG-39/U |
| 174 | Fixed ±.5db | 8.5-9.6 | 6 | 1"x1/2" | UG-39/U |
| 183 | Fixed ±.5db | 8.5-9.6 | 10 | 1"x1/2" | UG-39/U |
| 152A | Variable | 8.1-12.4 | 0.5-20 | 1"x1/2" | UG-39/U |
| 375A | Variable | 12.4-18.0 | 1-15 | 0.702"x0.391" | UG-419/U |
| 374A | Variable | 26.5-40 | 1-20 | 0.360"x0.220" | UG-599/U |

TERMINATIONS

| Model | Description | Frequency Range-kmc | Power Capacity Watts | Max. VSWR | Fittings |
|-------|-------------------------|---------------------|----------------------|-----------|-----------|
| 637 | 3/8" Coaxial | .65-3.5 | 12 | 1.4 | UG-46/U |
| 308 | 3"x1/2" Waveguide | 2.6-4.0 | 1 | 1.04 | UG-214/U |
| 105 | 2"x1" Waveguide | 3.95-6.0 | 1 | 1.04 | UG-149A/U |
| 113 | 2"x1" Waveguide | 4.0-6.0 | 210 | 1.10 | UG-149A/U |
| 214 | 1 1/2"x3/4" Waveguide | 5.3-8.2 | 1 | 1.04 | UG-344/U |
| 213 | 1 1/2"x3/4" Waveguide | 5.3-8.2 | 150 | 1.10 | UG-344/U |
| 150 | 1"x1/2" Waveguide | 8.1-12.4 | 1 | 1.04 | UG-39/U |
| 246 | 1"x1/2" Waveguide | 8.1-12.4 | 100 | 1.10 | UG-39/U |
| 402 | 0.360"x0.220" Waveguide | 26.5-40.0 | 18 | 1.15 | UG-381/U |
| 495 | 1"x1/2" Waveguide | 8.1-12.4 | 5 | Tunable | UG-39/U |

HIGH POWER WAVEGUIDE TERMINATIONS

| Model | Description | Frequency Range-kmc | Power* Capacity | Max. VSWR | Fittings (Similar to) |
|-------|-----------------------|---------------------|------------------------------|-----------|-----------------------|
| 563 | 3"x1/2" Waveguide | 2.6-4.0 | 2500w Avg. 2.2 Meg. w (Peak) | 1.15 | UG-214/U |
| 564 | 2"x1" Waveguide | 3.95-6.0 | 1.5kw Avg. 1.4 Meg w (Peak) | 1.15 | UG-149A/U |
| 565 | 1 1/4"x3/4" Waveguide | 7.0-10.0 | 350w Avg. 350kw (Peak) | 1.15 | UG-51/U |
| 566 | 1"x1/2" Waveguide | 8.1-12.4 | 500w Avg. 700kw (Peak) | 1.15 | UG-39/U |
| 567 | 1/2"x1/4" Waveguide | 18.0-26.5 | 40w Avg. 80kw (Peak) | 1.15 | UG-595/U |

*At atmospheric pressure

ELECTRONIC INSTRUMENTS

| | |
|------------|---|
| Model 84C | Wattmeter Bridge* |
| Model 123B | Wattmeter Bridge* |
| Model 555 | Klystron Power Supply—see Klystrons |
| Model 296B | Microwave Receiver |
| Model 38A | F. M. Test Set (Commercial equivalent of the TS-147/B) X band |
| Model 539 | VSWR Test Set X band |

*See Barretter & Thermistor Section for units applicable to these bridges.

DETECTORS AND MIXERS

| Model | Description | Frequency Range-kmc | Crystal | Input | Local Osc. | Output |
|-------|-----------------------------------|---------------------|---------|---------------|------------|--------|
| 337C | Mixer 3/8" Coaxial | 2.6-4.0 | 1N23 | Type N Female | Type N | UHF |
| 111B | Detector Sect. | 3.95-6.0 | 1N23B | UG-149A/U | none | UHF |
| 338 | Mixer | 3.95-5.85 | 1N23B | Type N | Type N | UHF |
| 339 | Mixer | 5.85-8.2 | 1N23B | Type N | Type N | UHF |
| 206A | Detector Sect. | 5.3-8.2 | 1N21B* | UG-344/U | none | BNC |
| 360A | Detector 1"x1/2" Waveguide | 8.1-9.6 | 1N23B* | UG-39/U | none | BNC |
| 379 | Mixer | 8.1-12.4 | 1N23B | UG-39/U | UG-39/U | UHF |
| 357A | Detector 0.702" x0.391" Waveguide | 12.4-18.0 | 1N26 | UG-419/U | none | BNC |
| 358 | Detector 1/2"x1/4" Waveguide | 18.0-26.5 | 1N26 | UG-425/U | none | UHF |
| 359A | Detector 0.360" x0.220" Waveguide | 26.5-40.0 | 1N53 | UG-549/U | none | BNC |

*The model 821 barretter element can also be used.

ADAPTERS

| Model | Description | Frequency Range-kmc | Fittings |
|-------|--|---------------------|-----------------------|
| 352A | 3/8" Coaxial to Type N | 0-4.0 | UG-45/U Type N Jack |
| 217 | 3/8" Coaxial to Type N | 0-4.0 | UG-46/U Type N Jack |
| 354A | 3/8" Coaxial to 3/8" Coaxial | 0-4.0 | UG-45/U UG-45/U |
| 355A | 3/8" Coaxial to 3/8" Coaxial | 0-4.0 | UG-46/U UG-46/U |
| 250 | 3"x1/2" Waveguide to Type N | 2.6-4.0 | UG-214/U Type N Jack |
| 144A | 3"x1/2" Waveguide to 3/8" Coaxial | 2.6-4.0 | UG-214/U UG-45/U |
| 248 | 2"x1" Waveguide to Type N | 3.95-6.0 | UG-149A/U Type N Jack |
| 100A | 2"x1" Waveguide to 3/8" Coaxial | 3.95-6.0 | UG-140/U UG-149A/U |
| 204 | 1 1/2"x3/4" Waveguide to Type N | 5.3-8.2 | UG-344/U Type N Jack |
| 249 | 1 1/4"x3/4" Waveguide to Type N | 7.0-10.0 | UG-51/U Type N Jack |
| 167A | 1"x1/2" Waveguide to Type N | 8.1-12.4 | UG-39/U Type N Jack |
| 486A | SKL to 1"x1/2" Waveguide Transformer Adapter | 8.1-12.4 | UG-39/U SKL |
| | UG-275/U SKL Cable End Plug. | | |
| | UG-276/U SKL Right Angle Plug. | | |
| | UG-131/U SKL Type N Jack Adapter. | | |

TEES

| Model | Description | Frequency Range-kmc | Fittings |
|-------|------------------------------|---------------------|----------|
| 165A | 1"x1/2" Waveguide—Series Tee | 8.1-12.4 | UG-39/U |
| 166A | 1"x1/2" Waveguide—Shunt Tee | 8.1-12.4 | UG-39/U |
| 406 | 1"x1/2" Waveguide—Magic Tee | 8.1-12.4 | UG-39/U |

SHORTS

| Model | Description | Frequency Range-kmc | Fittings |
|-------|-------------------------|---------------------|-----------|
| 636 | 3/8" Coaxial | .7-4.0 | UG-46/U |
| 114A | 2"x1" Waveguide | 3.95-6.0 | UG-149A/U |
| 203 | 1 1/2"x3/4" Waveguide | 5.3-8.2 | UG-344/U |
| 377 | 1"x1/2" Waveguide | 8.1-12.4 | UG-39/U |
| 372 | 0.702"x0.391" Waveguide | 12.4-18.0 | UG-419/U |
| 373A | 1/2"x1/4" Waveguide | 18.0-26.5 | UG-595/U |
| 371A | 0.360"x0.220" Waveguide | 26.5-40.0 | UG-599/U |

SPERRY GYROSCOPE COMPANY

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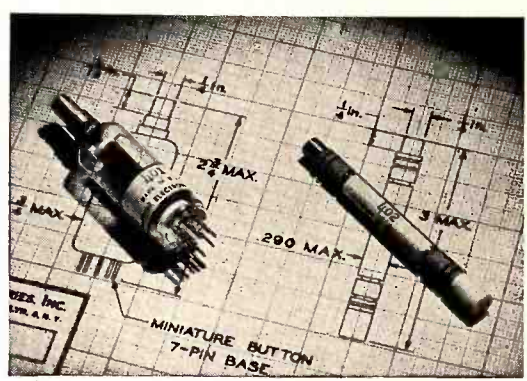
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**BUYERS'
 GUIDE**

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**Your Regulated High Voltage
 Problems can be Economically
 Solved, Now, by the Originators
 of the Corona Discharge V-R Tube**

ANTON



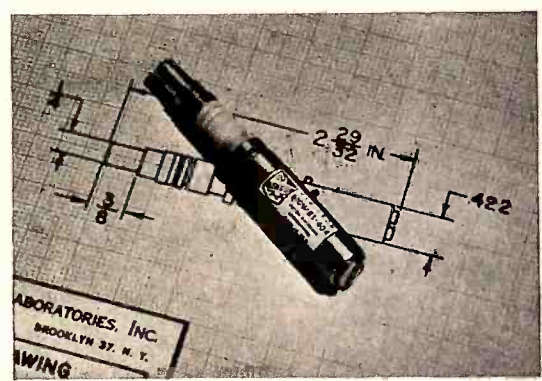
Typical Rugged AEL Corona Discharge V-R Tubes

**FIXED REGULATION
 300V to 10,000V**

- stabilized voltages
- currents up to 2 milliamperes
- low dynamic resistance
- unlimited life
- size—ranging from sub-miniature T3 bulb to larger volume stainless steel shells

**VARIABLE REGULATION
 550V to 750V**

- Just a turn of a screwdriver makes $\pm 50V$ adjustment possible
- Stabilized voltage at every point
- Currents up to 50 micro-amperes
- no hot cathodes
- unlimited life



Variable Corona Discharge V-R Tube conceived and developed in its entirety by AEL

**ANTON Corona Discharge V-R Tubes
 New Freedom for Circuit Designers**

**TYPICAL
 APPLICATIONS**

- Color TV Receivers and Monitors
- Airborne Radar Power Supplies
- Voltage Reference Tubes
- Cathode Ray Oscilloscopes
- Radiac Power Supplies
- All high voltage low current power supplies

Also available at AEL is a complete line of nucleonic tubes and instruments. We welcome the specifications of your individual requirements.

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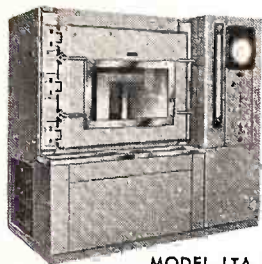
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ACCURACY and DEPENDABILITY

MURPHY & MILLER

TEST CHAMBERS

• ALTITUDE SIMULATION • HUMIDITY SIMULATION • LOW TEMPERATURE • HIGH TEMPERATURE

Advanced design features, highest quality materials and superior craftsmanship go into every M & M test unit to assure accurate tests and dependable operation. Before you specify or buy *any* test equipment — see what Murphy & Miller has to offer you.

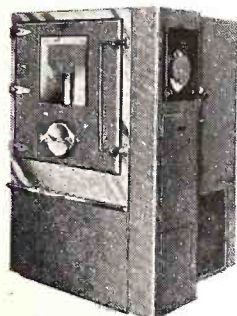


MODEL LTA 12
12 CUBIC FT. TEST SPACE

ALTITUDE SIMULATION UNIT

- Altitude Ranges over 200,000 ft.
- Temperature Range from +300°F to -120°F
- Humidity cycle 20% to 95% from +35°F to 185°F
- New design — greater capacity per horsepower — lower operating cost . . . greater efficiency

Available in units with 12 and 27 cubic ft. of test space, M & M Altitude Simulation Chambers offer every standard and optional feature for faster, more flexible testing. Optional features include Program Controlled Heating, Cooling and Humidity Cycles, Automatic Recorders, Special Wiring, etc. etc.

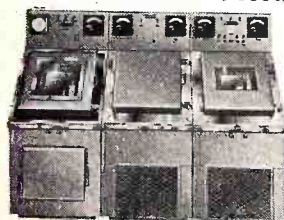


MODEL H 12
12 CUBIC FT.
TEST SPACE

HUMIDITY TEST CABINET

- Provides Relative Humidities between 20% and 95%
- Temperatures from +185°F to +35°F
- Instant response of humidity system insures accurate testing
- Uniform temperature and humidity throughout test cycles.

High capacity heating, refrigeration and forced air systems insure fast, accurate temperature rise and pull-down Program control cycle for temperature, humidity and cooling available. Models manufactured with test spaces from 12 to 48 cubic feet.



DRY ICE FUNGUS HUMIDITY

NEW SLOPING FRONT UNITS

- Exclusive sloping front for easier viewing . . . faster loading
- Available in single units or combinations

Compact, portable and inexpensive, M & M Slope Front test cabinets are made for low temperature (dry ice refrigerant) Fungus, humidity testing. Cabinets are fully automatically controlled.

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The standard 10-turn model... the first helical precision potentiometer... still the most popular. Threaded bushing.



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A 3-turn model, combining high setting accuracy with space-saving behind the panel. Threaded bushing mount.

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All available in both linear and non-linear versions

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A 15-turn, large diameter model. For extreme accuracy and resolution. Servo or bushing mount.



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A 25-turn model. Provides even greater accuracy and resolution than the B series. Threaded bushing.



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An ultra-precision 10-turn model. Manufactured to closest tolerances throughout. Servo or bushing.



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An ultra-precision 3-turn model. Provides extreme accuracy and small size. Servo or bushing mount.



AJ SERIES

A miniature 10-turn model. Only 7/8" dia. by 1 1/2", yet offers a coil 18" long. Servo or bushing mount.

STANDARD SPECIFICATIONS OF LINEAR SINGLE SECTIONS

| RES | A | AJ | AN | B | C | CN | D | E | G | J | L | T | V | Y |
|------------|------------|------------|-------------|-----------|------------|---------------|----------------|------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 10 | 10 | 10 | 15 | 3 | 3 | 25 | 40 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1-13/16 | 7/8 | 1-7/8 | 3-5/16 | 1-13/16 | 1-7/8 | 3-5/16 | 3-5/16 | 1-5/16 | 2 | 3 | 7/8 | 1-3/4 | 1-3/4 | 1-3/4 |
| 2 | 1-1/2 | 1-63/64 | 2-7/8 | 1-9/64 | 1-7/64 | 4-9/64 | 6-1/64 | 57/64 | 31/32 | 1 | 3/4 | 0.8 | 0.8 | 0.8 |
| 1/4 | 1/8 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/8 | 1/4 | 1/4 |
| 46 | 18 | 45 | 140 | 14 | 13.5 | 234 | 374 | 3.1 | 5 | 8.3 | 1.9 | 4.5 | 4.5 | 4.5 |
| +4° | +12° | +1° | +4° | +4° | +1° | +4° | +4° | +4° | 360° continuous | 360° continuous | 360° continuous | 360° continuous | 360° continuous | 360° continuous |
| 3,600°-0° | 3,600°-0° | 3,600°-0° | 5,400°-0° | 1,080°-0° | 1,080°-0° | 9,000°-0° | 14,400°-0° | 352°±2° | 356°±1° | 358°±1° | 354°±2° | 345° max. | 354°±1° | 354°±1° |
| 10 to 450K | 25 to 100K | 50 to 400K | 40 to 1 meg | 5 to 130K | 15 to 125K | 60 to 1.7 meg | 100 to 2.7 meg | 5 to 30K | 5 to 75K | 5 to 100K | 1K to 100 K | up to 130K | up to 130K | 5 to 65K |
| ±1% | ±3% | ±1% | ±1% | ±1% | ±1% | ±1% | ±1% | ±1% | ±1% | ±1% | ±1% | ±1% | ±1% | ±1% |
| ±0.05% | ±0.1% | ±0.025% | ±0.025% | ±0.15% | ±0.075% | ±0.025% | ±0.025% | ±0.25% | ±0.15% | ±0.1% | ±0.2% | ±0.2% | ±0.2% | ±0.2% |
| 1K & up | 5K & up | 5K & up | 10K & up | 5K & up | 30K & up | 1K & up | 1K & up | 5K & up | 1K & up | 10K & up | 10K & up | 10K & up | 10K & up | 10K & up |
| 5 | 2 | 5 | 10 | 3 | 3 | 15 | 20 | 2 | 4 | 5 | 1.2 | 2.5 (d) | 2.5 | 2.5 |
| 4.4 | 1.1 | 4.5 | 13 | 2.5 | 2.7 | 17 | 21 | 2 | 4 | 5.8 | 0.6 | 2.75 | 3 | 3 |
| 2 | 1 | 1.3 | 2.75 | 1.8 | 1.3 | 3.5 | 3.5 | 0.75 | 1 | 1.5 | 0.050 | 1.5 | 1.5 | 1.5 |
| 1.5 | 0.5 | 0.9 | 2.0 | 1.3 | 0.9 | 2.5 | 2.5 | 0.50 | 0.5 | 0.6 | 0.050 | 1.2 | 0.8 | 0.8 |
| 18 | 0.3 | 22 | 200 | 7 | 7.5 | 270 | 400 | 2.8 | 14 | 55 | 0.12 | 2.5 | 2.5 | 2.5 |
| 28 | 32 | 28 | 80 | 14 | 14 | 90 | 100 | 8 | 21 | 33 | 9 | 13 | 17 | 17 |
| 20°±1° | 45°±4° | 20°±1/2° | 15°±1° | 20°±1° | 20°±1/2° | 15°±1° | 15°±1° | 36°±1° | 15°±1° | 10°±1° | 30°±2° | 15°±1° | 18°±1° | 18°±1° |
| 3 | no ganging | 2 | 3 | 3 | 2 | no ganging | no ganging | no ganging | 8 | 8 | 5 | 25 | 14 | 14 |

Resistance is ±1% for series A, ±1% for all others
Resistance is ±0.5% for all series

Operating temperature range is -55° to +105°C for series T, -55° to +90°C for series V, -55° to +80°C for all others
Design details subject to change without notice, certified drawings available on request
At 80°C

G SERIES

moderately priced, continuous-rotation model. Small in size, yet extra-rugged. Threaded bushing mount.



T SERIES

An all-metal, continuous-rotation model. Features very low torque... very small size. Servo or bushing mount.

SINGLE-TURN HELIPOTS®

All available in both linear and non-linear versions

J SERIES

A two-inch diameter, continuous-rotation model. External clamps for easy phasing. Servo or bushing.



L SERIES

A three-inch diameter, continuous-rotation model. External clamps for easy phasing. Servo or bushing.



Y SERIES

A 1 1/4" diameter, continuous-rotation model. External clamps for easy phasing. Servo or bushing.

V SERIES

An all-metal, continuous-rotation model. Features wide choice of non-linear outputs. Two-hole servo.



first in precision potentiometers

Helipot Corporation/South Pasadena, California
Engineering representatives in principal cities
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One Source For

POWERSTAT VARIABLE TRANSFORMERS

deliver a continuously adjustable output voltage from a-c power lines

A POWERSTAT variable transformer is an autotransformer of toroidal core design with a movable brush tap that is rotated to deliver any required output voltage from zero to, or above, line voltage. Important features include: excellent regulation, high efficiency, conservative ratings, zero waveform distortion, rugged mechanical construction and smooth control. Numerous standard POWERSTATS in ratings from 150 VA to 100 KVA are available for 120, 240 and 480 volt, single and three phase operation. Most are offered in either manual or motor-driven models. The chart lists some of the most-called-for types. Others — designed for specific applications — are available for every requirement. Consult us about your specific needs.



TYPE 10



TYPE 20



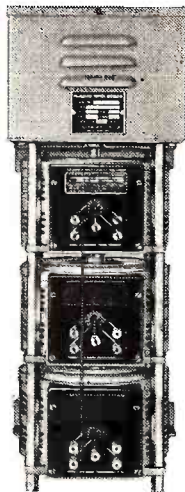
TYPE 116U



TYPE 116



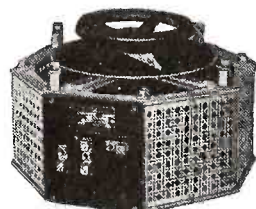
TYPE 136



TYPE 5M136-3



TYPE 2PF136



TYPE 1156

| Line Voltage | Output Voltage | Maximum Output Amp. | Maximum Output KVA | Frequency | Type | Approx. Net | Weight Shipping | Motor Speed | |
|--------------|----------------|---------------------|--------------------|-----------|----------|-------------|-----------------|-------------|--|
| 120 | 0-132 | 1.25 | 0.165 | 160 | *10 | 1.8 | 3 | | |
| | 0-140 | 3.0 | 0.42 | 160 | *20 | 4 | 6 | | |
| | 0-140 | 7.5 | 1.0 | 50/60 | *116U | 10 | 11 | | |
| | 0-140 | 7.5 | 1.0 | 50/60 | *116 | 11 | 12 | | |
| | 0-140 | 7.5 | 1.0 | 50/60 | 3PF116 | 11 | 12 | | |
| | 0-140 | 7.5 | 1.0 | 50/60 | 3TF116 | 11 | 12 | | |
| | 0-140 | 20.0 | 2.8 | 50/60 | *136 | 22 | 25 | | |
| | 0-140 | 20.0 | 2.8 | 50/60 | *F136 | 22 | 25 | | |
| | 0-140 | 20.0 | 2.8 | 50/60 | *2PF136 | 23 | 26 | | |
| | 0-140 | 20.0 | 2.8 | 50/60 | *3PF136 | 23 | 26 | | |
| | 0-140 | 20.0 | 2.8 | 50/60 | *3TF136 | 23 | 26 | | |
| | 0-140 | 40.0 | 5.6 | 50/60 | *136-2P | 47 | 53 | | |
| | 0-140 | 45.0 | 6.3 | 50/60 | 1156 | 73 | 80 | | |
| | 0-140 | 45.0 | 6.3 | 50/60 | F1156 | 74 | 81 | | |
| | 0-140 | 90.0 | 12.6 | 50/60 | 1156-2P | 150 | 170 | | |
| | 0-140 | 135.0 | 18.9 | 50/60 | 1156-3P | 225 | 295 | | |
| 0-140 | 180.0 | 25.2 | 50/60 | 1156-4P | 330 | 420 | | | |
| 0-140 | 270.0 | 37.8 | 50/60 | 1156-6P | 500 | 600 | | | |
| 240 | 0-264 | 1.25 | .33 | 160 | *10-2E | 4.5 | 5.0 | | |
| | 0-280 | 3.0 | .84 | 50/60 | *216U | 10 | 11 | | |
| | 0-280 | 3.0 | .84 | 50/60 | *216 | 11 | 12 | | |
| | 0-280 | 3.0 | .84 | 50/60 | 3PF216 | 11 | 12 | | |
| | 0-280 | 3.0 | .84 | 50/60 | 3TF216 | 11 | 12 | | |
| | 0-280 | 7.5 | 2.1 | 50/60 | *116U-2S | 17 | 22 | | |
| | 0-280 | 7.5 | 2.1 | 50/60 | *116-2S | 18 | 23 | | |
| | 0-280 | 9.0 | 2.5 | 50/60 | *236 | 22 | 25 | | |
| | 0-280 | 9.0 | 2.5 | 50/60 | *F236 | 22 | 25 | | |
| | 0-280 | 9.0 | 2.5 | 50/60 | *2PF236 | 23 | 26 | | |
| | 0-280 | 9.0 | 2.5 | 50/60 | *3PF236 | 23 | 26 | | |
| | 0-280 | 9.0 | 2.5 | 50/60 | *3TF236 | 23 | 26 | | |
| | 0-280 | 20.0 | 5.6 | 50/60 | *136-2S | 45 | 51 | | |
| | 0-280 | 28.0 | 7.8 | 50/60 | 1256 | 73 | 80 | | |
| | 0-280 | 28.0 | 7.8 | 50/60 | F1256 | 74 | 81 | | |
| | 0-280 | 45.0 | 12.6 | 50/60 | 1156-2S | 144 | 164 | | |
| 0-280 | 56.0 | 15.7 | 50/60 | 1256-2P | 150 | 170 | | | |
| 0-280 | 84.0 | 23.5 | 50/60 | 1256-3P | 225 | 295 | | | |
| 0-280 | 112.0 | 31.4 | 50/60 | 1256-4P | 330 | 420 | | | |
| 0-280 | 168.0 | 47.0 | 50/60 | 1256-6P | 500 | 600 | | | |
| 480 | 0-560 | 3.0 | 1.7 | 50/60 | *216U-2S | 17 | 22 | | |
| | 0-560 | 3.0 | 1.7 | 50/60 | *216-2S | 18 | 23 | | |
| | 0-560 | 9.0 | 5.0 | 50/60 | *236-2S | 45 | 51 | | |
| | 0-560 | 28.0 | 15.7 | 50/60 | 1256-2S | 144 | 164 | | |
| | 0-560 | 56.0 | 31.4 | 50/60 | 1256-4PS | 330 | 420 | | |
| 0-560 | 84.0 | 47.0 | 50/60 | 1256-6PS | 500 | 600 | | | |
| Three Phase | 120 | 0-132 | 1.25 | .28 | 160 | *10-2E | 4.5 | 5.0 | |
| | | 0-140 | 3.0 | .73 | 160 | *20-2D | 9.0 | 12 | |
| | | 0-140 | 7.5 | 1.8 | 50/60 | *116U-2D | 17 | 22 | |
| | | 0-140 | 7.5 | 1.8 | 50/60 | *116-2D | 18 | 23 | |
| | | 0-140 | 20.0 | 4.8 | 50/60 | *136-2D | 45 | 51 | |
| | | 0-140 | 45.0 | 10.9 | 50/60 | 1156-2D | 144 | 164 | |
| | | 0-140 | 90.0 | 21.8 | 50/60 | 1156-4D | 320 | 410 | |
| | | 0-140 | 135.0 | 32.7 | 50/60 | 1156-6D | 490 | 590 | |
| | 240 | 0-240 | 1.25 | .52 | 60 | 10-3E | 7.0 | 8.0 | |
| | | 0-240 | 3.0 | 1.2 | 60 | 20L-3Y | 14.0 | 17.0 | |
| | | 0-280 | 3.0 | 1.5 | 50/60 | *216U-2D | 17 | 22 | |
| | | 0-280 | 3.0 | 1.5 | 50/60 | *216-2D | 18 | 23 | |
| | | 0-280 | 7.5 | 3.6 | 160 | *116U-3Y | 27 | 36 | |
| | | 0-280 | 7.5 | 3.6 | 160 | *116-3Y | 27 | 37 | |
| | | 0-280 | 9.0 | 4.4 | 50/60 | *236-2D | 45 | 51 | |
| | | 0-280 | 20.0 | 9.7 | 160 | *136-3Y | 68 | 77 | |
| 480 | 0-280 | 28.0 | 13.6 | 50/60 | 1256-2D | 144 | 164 | | |
| | 0-240 | 45.0 | 18.7 | 50/60 | 1156L-3Y | 215 | 280 | | |
| | 0-280 | 56.0 | 27.2 | 50/60 | 1256-4D | 320 | 410 | | |
| | 0-280 | 84.0 | 40.7 | 50/60 | 1256-6D | 490 | 590 | | |
| | 0-240 | 90.0 | 37.4 | 50/60 | 1156L-6Y | 500 | 600 | | |
| | 0-560 | 3.0 | 2.9 | 160 | *216U-3Y | 26 | 36 | | |
| | 0-560 | 3.0 | 2.9 | 160 | *216-3Y | 27 | 37 | | |
| | 0-560 | 9.0 | 8.7 | 160 | *236-3Y | 68 | 77 | | |
| 0-560 | 28.0 | 27.2 | 160 | 1256-3Y | 215 | 280 | | | |
| 0-560 | 56.0 | 54.3 | 160 | 1256-6Y | 500 | 600 | | | |

*These units are supplied with an "L" terminal which allows connecting in parallel to limit the output voltage to the applied voltage. If "L" type connection is used on other models, the "L" must be included in the type number when ordering.
†When these POWERSTATS are "L" connected so that the output voltage does not exceed the applied voltage, the frequency range is 50/60 cycles.

SEND FOR POWERSTAT BULLETIN P553G

STANDARD TYPES FOR VARIOUS APPLICATIONS

POWERSTAT VARIABLE TRANSFORMERS for

OIL-COOLED OPERATION



TYPE O-1126

By immersing a POWERSTAT in transformer oil, the rating above normal air operation is increased and duty in a corrosive atmosphere is possible. A standard line is offered in various ratings and sizes.

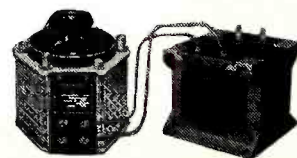
EXPLOSIVE ATMOSPHERES



TYPE X-1126

To provide safe operation in hazardous areas where a small arc of spark could cause an explosion, explosion proof POWERSTATS are available. Standard models are approved by Underwriters' Laboratories for Class I, Group D service.

HIGH CURRENT NEEDS



2106LC

rect line voltage variations to maintain a specified output voltage and supply a limited output voltage range. A multitude of ratings are available.

LIMITED OUTPUT RANGE

Relatively large amounts of power can be controlled by small POWERSTATS when used in conjunction with a fixed output transformer. This combination is known as a POWERSTAT Corrector. It can be used to correct line voltage variations to maintain a specified output voltage and supply a limited output voltage range. A multitude of ratings are available.

Look to SUPERIOR ELECTRIC for all VOLTAGE CONTROL NEEDS

Voltage Control Apparatus

STABILINE AUTOMATIC VOLTAGE REGULATORS

maintain a constant output voltage regardless of line or load changes

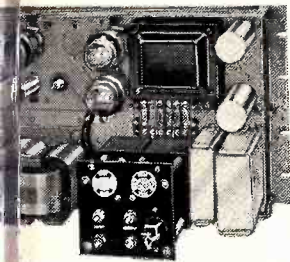
MADE IN 2 DISTINCT TYPES TO MEET YOUR NEEDS EXACTLY

TYPE IE (INSTANTANEOUS ELECTRONIC)

TYPE EM (ELECTRO MECHANICAL)

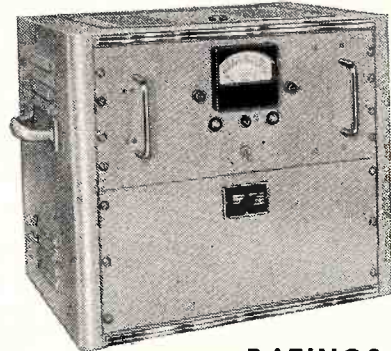
For the most exacting control. Completely electronic with no moving parts. Correction is instantaneous. Waveform distortion does not exceed 3%. Output is held to within ± 0.1 per cent of nominal for wide line variations and to within ± 0.15 per cent for load current or load power factor change from lagging .5 to leading .9. Standard types are listed below. Special units can be ordered to meet specific requirements.

... for controlling large industrial loads or providing zero waveform distortion. Consists of an electronic detector circuit controlling a motor-driven POWERSTAT variable transformer that feeds a buck-boost auxiliary transformer. Features include: high efficiency, insensitivity to magnitude and power factor of load and no effect on system power factor. Standard models are offered in ratings from 2 to 100 KVA.



TYPE IE51002R

TYPE IE5101R



TYPE EM4115

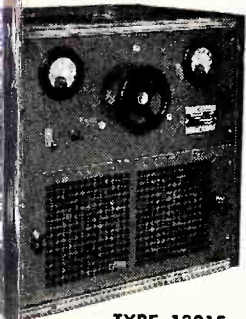
RATINGS TYPE IE

RATINGS TYPE EM

| Output Voltage Range | Frequency In Cycles | Load Range In Amperes | Load Power Factor Range | Rated Output KVA | Type |
|----------------------|---------------------|-----------------------|-------------------------|------------------|-----------|
| 110-120 | 60 \pm 10% | 0-2.2 | .5 lagging | 0.25 | IE51002 |
| 110-120 | 60 \pm 10% | 0-2.2 | | 0.25 | IE51002R |
| 110-120 | 60 \pm 10% | 0-4.5 | | 0.5 | IE51005 |
| 110-120 | 60 \pm 10% | 0-4.5 | | 0.5 | IE51005R |
| 110-120 | 50 \pm 10% | 0-4.5 | | 0.5 | IEL51005 |
| 110-120 | 50 \pm 10% | 0-4.5 | | 0.5 | IEL51005R |
| 220-240 | 50 \pm 10% | 0-2.2 | | 0.5 | IEL52005 |
| 220-240 | 50 \pm 10% | 0-2.2 | | 0.5 | IEL52005R |
| 110-120 | 60 \pm 10% | 0-8.5 | | 1.0 | IE5101 |
| 110-120 | 60 \pm 10% | 0-8.5 | | 1.0 | IE5101R |
| 110-120 | 50 \pm 10% | 0-8.5 | .9 leading | 1.0 | IEL5101 |
| 110-120 | 50 \pm 10% | 0-8.5 | | 1.0 | IEL5101R |
| 220-240 | 50 \pm 10% | 0-4.5 | | 1.0 | IEL5201 |
| 220-240 | 50 \pm 10% | 0-4.5 | | 1.0 | IEL5201R |
| 110-120 | 60 \pm 10% | 0-22.0 | | 2.5 | IE5102 |
| 110-120 | 60 \pm 10% | 0-22.0 | | 2.5 | IE5102R |
| 220-240 | 60 \pm 10% | 0-11.0 | | 2.5 | IE5202 |
| 220-240 | 60 \pm 10% | 0-11.0 | | 2.5 | IE5202R |
| 220-240 | 50 \pm 10% | 0-11.0 | | 2.5 | IEL5202 |
| 220-240 | 50 \pm 10% | 0-11.0 | | 2.5 | IEL5202R |
| 110-120 | 60 \pm 10% | 0-43.5 | 5.0 | IE5105 | |
| 220-240 | 60 \pm 10% | 0-22.0 | 5.0 | IE5205 | |

| Nominal Output Voltage | Input Voltage Range | Output Voltage Range | Output Current (Amperes) | Output KVA | Type |
|------------------------|---------------------|----------------------|--------------------------|------------|---------|
| Single Phase 115 | 95-135 | 110-120 | 17.5 | 2.0 | EM4102 |
| | | | 52.0 | 6.0 | EM4106 |
| | | | 130.0 | 15.0 | EM4115 |
| 230 | 195-255 | 220-240 | 32.5 | 7.5 | EM4207 |
| | | | 120.0 | 27.5 | EM4228 |
| 460 | 400-520 | 420-460 | 15.0 | 6.6 | EM4407 |
| | | | 40.0 | 17.6 | EM4418 |
| Three Phase 230 | 195-255 | 220-240 | 25.0 | 10.0 | EM6210Y |
| | | | 38.0 | 15.0 | EM6215Y |
| | | | 50.0 | 20.0 | EM6220Y |
| | | | 113.0 | 45.0 | EM6245Y |
| | | | 175.0 | 70.0 | EM6270Y |
| | | | 460 | 400-520 | 420-460 | 16.0 | 12.5 | EM6412Y |
| 420-500 | 420-460 | 22.0 | 17.5 | EM6417Y | |
| | | 33.0 | 25.0 | EM6425Y | |
| | | 66.0 | 50.0 | EM6450Y | |
| | | 100.0 | 75.0 | EM6475Y | |
| | | 131.0 | 100.0 | EM64100Y | |

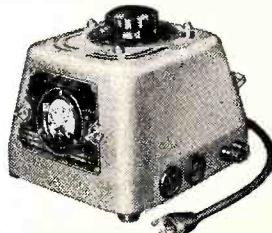
SEND FOR STABILINE BULLETIN S351



TYPE 13015

VARICELL D-C POWER SUPPLIES

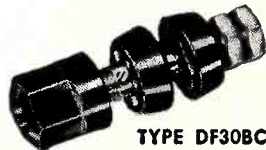
... the ideal source of stabilized and regulated variable d-c voltages from a-c power lines. Output is not affected by line or load changes. Send for Bulletin V1051.



TYPE UC1M

VOLTBOX A-C POWER SUPPLIES

... are compact portable instruments that eliminate the need for collecting a variable transformer, voltmeter and connection leads for tests involving variable a-c voltages. Numerous types for every need are described in Bulletin P553G.



TYPE DF30BC

5-WAY BINDING POSTS

... offer permanent clamping, spade lug, clip-lead, looping and clamping, or banana plug connections. Complete insulation, 30 amp. current capacity, 1,000 volts working voltage. Available in black or red for polarity or circuit identification. Send for Bulletin BP652.

Be sure to see Superior Electric's Mobile Display when it is in your area.



THE
SUPERIOR ELECTRIC
COMPANY

5000 Clarke Avenue
Bristol, Connecticut

B.I.W. FLEXIBLE TV CAMERA CABLE

DESIGNED FOR **SMOOTHER EASIER TROUBLEFREE OPERATIONS**

- Teflon insulated coaxials
- Flexible Neoprene insulated conductors
- Flexible Neoprene Jacket

These insure a cable that will give lasting service without troublesome break-downs. Our years' experience in the camera cable field is your guarantee of quality. Write today for complete specifications.

LOW NOISE shielded instrument wire

- .5 MV internal noise characteristic

B.I.W. 626A TEFLON insulated conductors for a temperature range of -60° to 400° F. Only a .5 MV internal noise characteristic, this wire is ideal for use with instruments utilizing the Piezoelectric effect.

FLEXIBLE COAXIAL CABLES FOR HIGH TEMPERATURE

| | TYPE NO. | CON- DUCTOR | O.D. $\pm 0.005''$ | CAP. PER FT. | OHMS | |
|---|----------------------|----------------|-----------------------|--------------------|------|--------------------|
| NL: TEFLON insulated and treated nylon covering for 250F. | COX-2FS-011-GL or NL | 0.011" cw | .075 | 30 | 50 | Miniature |
| | COX-3FS-011-GL or NL | 0.011" cw | .090 | 21 | 70 | flexible |
| | COX-4FS-011-GL or NL | 0.011" cw | .125 | 16 | 93 | cables |
| | COX-2FS-22-RS | *22 str. | .170 | 30 | 50 | Small |
| | COX-3FS-22-GL or NL | *22 str. | .170 | 20 | 73 | diameter |
| | COX-3FS-026-GV | 0.026" cw | .240 | 20 | 73 | RG-124/U |
| GV: TEFLON insulated and teflon treated fibre-glass covering for 400F. | COX-4FS-22-GV | *22 str. | .210 | 16 | 93 | Size of 62/U |
| | COX-4FS-026-GV | 0.026" cw | .245 | 17 | 90 | Size of 62/U |
| | COX-2FS-20-GV | *20 str. | .165 | 28 | 52 | Smaller than 58A/U |
| | COX-2FS-032-GV | 0.032" Ag. | .190 | 28 | 52 | RG-159/U |
| | COX-2FS-16-GV | *16 str. Ag. | .260 | 30 | 50 | Equal to 5A/U |
| | COX-2FS-13-GV | *13 str. Ag. | .370 | 30 | 50 | RG-115/U |

SHIELDED WIRE

- New 125° C shielded wire. Miniature size, high abrasion resistance. Stable capacitance over temperature range.

NYLEX LACING CORD

- Round Nylon cord—will flatten over conductors causing less deformation of insulation.
- 24-36-50 Lb. sizes

LOW CAPACITY PROBE CABLES

- B.I.W. #411A Flexible probe cable—8.5 mmf/ft.

HOOK-UP WIRE

TYPE SRIR, with glass braid covering in colors. Gauge sizes #24 to #8 stranded, solid or flexible. Insulation: Extruded synthetic resin; flameproof, resists oil, easily strips.

Covering: Closely woven fibreglass in solid colors; white, black, brown, red, orange, yellow, green, blue and any of 100 combinations.

Coating: Smoothly finished with tough flame resisting lacquer. Voltage rating: 1000 RMS, diameter no larger than ordinary 600 RMS.

TYPE SRIR, plain or with nylon braid in colors.

TYPE SRLV, plain or SRLV(J) with nylon sheath: small diameter 300 volt, 105° C rating, in all colors for miniature wiring.

TYPE SRMV, plain or SMRV(J), nylon jacket: 600 volt, 105° C hook-up wire.

TYPE SRHV, with either glass braid or nylon sheath: for voltage ratings of 2500, 5000 and 10,000 DC in electronic applications.

TYPE ANRW, plain or with cotton braid: for good abrasion and heat resistance. Insulated with neoprene compound for 600 volts, withstands baking at 250° F without damage—for leads on coils and transformers.

TYPE SRHT (Synthetic Resin High Temperature) is the nation for a series of hook-up wires for high temperature applications, and is made in gauge sizes #26 to #6, in all colors, various types of coverings to be serviceable under different conditions and temperature ratings.

SRHT(GS): rated at 200° C, has a tinned copper shielded silicone treated fibreglass braid.

SRHT(SG); **(SN)**; **(GV-22-2)**; **(GV-22-3)**: single, two and three conductor wires for telemetering use.

SRHT(NN): rated at 125° C, is nylon braid covered and finished with flexible nylon coating.

SRHT(CV): rated at 150° C, is covered with a unique abrasion resistant braid saturated with silicone resin.

SRHT(GV): rated at 200° C, is covered with fibreglass saturated and finished with silicone resin.

SRHT(GF): rated at 250° C, is covered with glass braid saturated and finished with "Teflon."

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ABOVE ALL U.S.C. Connectors



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Plugs—MI-7M, 8M, 10M, 12M, 20M, 21M, 24M, 24M, 41M, 50M, 75M
Receptacles—MI-7F, 8F, 10F, 12F, 18F, 20F, 21F, 24F, 24F, 41F, 50F, 75F

MH SERIES (Hood)
Cat. No. MH-9, 10, 11, 12
Cable Opening 7/16", 10/16", 18/16", 19/16"

MH SERIES
Plugs—MH-1M, 5M, 7M, 9M, 12M
Receptacles—MH-1F, 5F, 7F, 9F, 12F

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Solderless Miniature
No. Plug MI-7MSDL, etc.
MI-21FSD, etc.
for all MI SERIES above

MI-5L SERIES (Double Lead Screw Lock)
Available all MI SERIES types
Typical Cat. No. MI-24MSL—Side cable entrance hood
MI-24MSL—Rear cable entrance hood
MI-24MSL—Plug used with hood
MI-24F2SL—Receptacle used on chassis
MI-24F2—Receptacle used with hood
MI-24MSL—Plug used on chassis

MI-5045SL
MI-50F2SL

HMI SERIES (Hermetic Seal Miniature Plug)
Available all MI-M types

MI-14M
MI-14M (Alum. Hood)
Available all MI Series
Typical MI-14MB (Rear cable entrance)
MI-14MS (Side cable entrance)

MBO-10M Relay hermetic seal plug
MR-14F—Mating receptacle
MBO-7MGW (Plug)
Receptacle MBO-7FGW

MSL SERIES (Solderless Spring Ejection)
Typical Cat. No. MS-12FSD, 10FSD, 24FSD, 24MSL, 24MSL, 24MSL, 24MSL, 24MSL

MS-12FSD
MS-12MSL
MS-24MSL
MS-24MSL

MS-24MSL
MS-24MSL
MS-24MSL
MS-24MSL

980 SERIES (Spring Ejection)
Plugs—980-12F, 18F5, 24F, 24F
Receptacles—980-12M, 18M5, 24M, 24M

980-12FSD
980-12MSL
980-24MSL
980-24MSL

990 SERIES
Plug (Long contacts) 990-7M, 10M, 15M, 18M
Receptacle (Long contacts) 990-7F, 10F, 15F, 18F
Plug (Short contacts) 990-7MS, 10MS, 15MS, 18MS
Receptacle (Short contacts) 990-7FS, 10FS, 15FS, 18FS

990-7M
990-10M
990-15M
990-18M

990-B (Alum. Div. Cost Bracket)
Used with 990 Series
Typical Cat. No. 990-12B, 10B, 24B, 18B

990-15FSD
990-15MSL

990-SL SERIES (Solderless)
Plug—990-7MSL, 10MSL, 15MSL, 18MSL
Receptacle—990-7FSD, 10FSD, 15FSD, 18FSD

990-7MSL
990-10MSL
990-15MSL
990-18MSL

990-7FSD
990-10FSD
990-15FSD
990-18FSD

990-15HR
990-15HR (Alum. Hood)
Available all 990 Series
Typical 990-15MB (Rear cable entrance)
990-15MS (Side cable entrance)

990-15HR
990-15HR
990-15HR
990-15HR

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991A
CABLE CLAMPS
Withstanding 1000 P.S.I. in cable sizes 3/16" to 21/32"

903 TYPE
903-M
903-F
903-T
903-B
903-C
903-D
903-E
903-F
903-G
903-H
903-I
903-J
903-K
903-L
903-M
903-N
903-O
903-P
903-Q
903-R
903-S
903-T
903-U
903-V
903-W
903-X
903-Y
903-Z

902A Hood
used with 902-15 Contact Connectors
Available—Rear and side cable entrance
Flush and recessed assembly

902 SERIES
Available all 990 Series
Typical 902-15MB (Rear cable entrance)
902-15MS (Side cable entrance)
902-15FSD (Solderless)
902-15FSD (Solderless)
902-15FSD (Solderless)
902-15FSD (Solderless)

902-15MSL
902-15MSL
902-15MSL
902-15MSL

902-15MSL
902-15MSL
902-15MSL
902-15MSL

SC (Scope Connectors)
SC-21M—21 Contact, male
SC-21F—21 Contact, female
Other designs to specification

SC-21F
SC-21M

901MG
901MG
901MG
901MG

900MG
900MG
900MG
900MG

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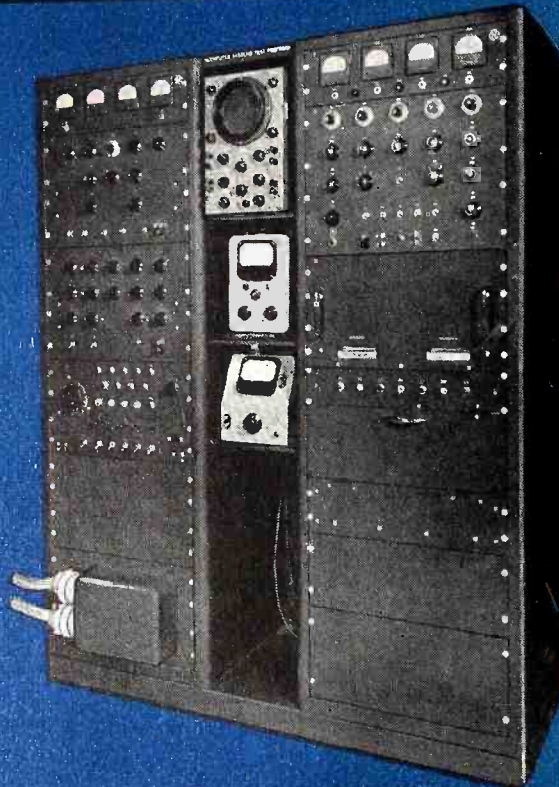
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COMPUTER SYSTEMS TEST UNIT

We specialize in the design and manufacture of complete production test facilities for use in testing the most advanced, complex radar, computing, and missile guidance systems and components.

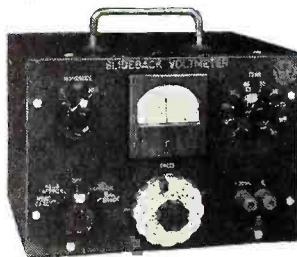
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for

- MOTORS
- RELAYS, SOLENOIDS
- M-G SETS
- ELECTRO-PLATING
- BATTERY CHARGING
- CONTACTORS, STARTERS

BULLETIN 147



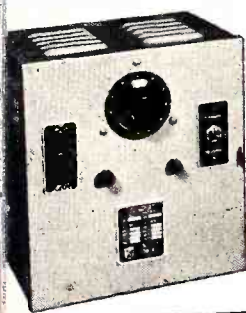
| D.C. Output | | Catalog No. | | Dimensions - Inches | | | Approx. Shpg. Wt. Lbs. |
|-------------|---------|--------------------|--------------------|---------------------|----|----|------------------------|
| Volts | Amperes | 115 V.A.C. 60 ~ 1ϕ | 230 V.A.C. 60 ~ 1ϕ | H | W | D | |
| 0-6 | 25.0 | K38 | — | 9 | 17 | 9 | 33 |
| | 50.0 | K47 | K48 | 10 | 21 | 15 | 65 |
| | 100.0 | K56 | K57 | 14 | 21 | 15 | 110 |
| 0-12 | 12.5 | K65 | — | 9 | 17 | 9 | 30 |
| | 25.0 | K74 | K75 | 10 | 21 | 15 | 65 |
| | 50.0 | K83 | K84 | 14 | 21 | 15 | 110 |
| 0-28 | 10.0 | K92 | — | 9 | 17 | 9 | 40 |
| | 20.0 | K101 | K102 | 10 | 21 | 15 | 75 |
| | 40.0 | K110 | K111 | 19 | 21 | 15 | 125 |

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for

- COIL WINDERS
- LATHE FEEDS & DRIVES
- DRILLING and TAPPING
- PRECISION GRINDERS
- CONVEYOR SYSTEMS

BULLETIN 125



INPUT: 105-125 Volts, 60 Cycles, Single Phase

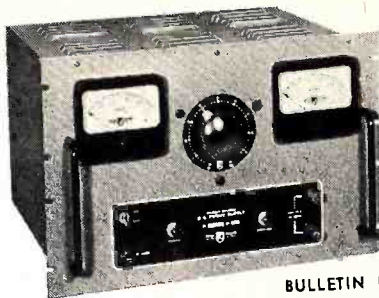
| Motor Type and H.P. Rating | Control Range in % Rated Speed | Dynamic Braking | Catalog No. |
|----------------------------|--------------------------------|-----------------|-------------|
| Shunt Up to 1/15 H.P. | 0-100% | No | GM31 |
| Compound 1/2 and 3/4 H.P. | 0-100% or 0-115% | Yes | GM50 |

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for

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- INVERTERS
- ACTUATORS
- AMPLIDYNES
- MOTORS
- D.C. SELSYNS

BULLETIN 150



INPUT: 115 Volts, 60 Cycles, Single Phase

| D.C. Output | | | | Regulation | Cat. No. |
|-------------|---------|--------|-------------------------------|------------|----------|
| Volts | Amperes | Ripple | Full Load 28V. 1/10 Load 33V. | | |
| 0-28 | 20 | 1% | | | K101F |

POWER CONVERSION

for

- MOTORS
- GENERATOR FIELDS
- RELAYS, SOLENOIDS
- MAGNETIC CHUCKS
- BRAKES, CLUTCHES
- PULLEYS
- ALARM SYSTEMS

BULLETIN 118

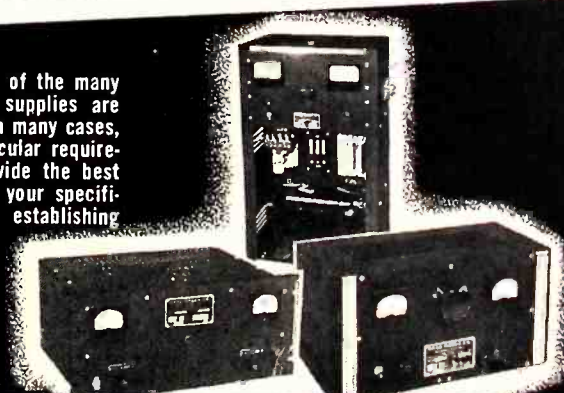


| D.C. Output | | A.C. Input | Cat. No. | D.C. Output | | A.C. Input | Cat. No. |
|-------------|-------|------------|----------|-------------|-------|------------|----------|
| Volts | Watts | Volts 1ϕ | | Volts | Watts | Volts 1ϕ | |
| 115 | 125 | 115 | A10 | 230 | 125 | 115 | B10 |
| | 125 | 230 | A11 | | 125 | 230 | B11 |
| | 125 | 440 | A12 | | 125 | 440 | B12 |
| | 250 | 115 | A13 | | 250 | 115 | B13 |
| | 250 | 230 | A14 | | 250 | 230 | B14 |
| | 250 | 440 | A15 | | 250 | 440 | B15 |
| | 375 | 115 | A16 | | 375 | 115 | B16 |
| | 375 | 230 | A17 | | 375 | 230 | B17 |
| | 375 | 440 | A18 | | 375 | 440 | B18 |
| | 500 | 115 | A19 | | 500 | 115 | B19 |
| | 500 | 230 | A20 | | 500 | 230 | B20 |
| | 500 | 440 | A21 | | 500 | 440 | B21 |
| 750 | 115 | A22 | 750 | 115 | B22 | | |
| 750 | 230 | A23 | 750 | 230 | B23 | | |
| 750 | 440 | A24 | 750 | 440 | B24 | | |
| 1000 | 115 | A25 | 1000 | 115 | B25 | | |
| 1000 | 230 | A26 | 1000 | 230 | B26 | | |
| 1000 | 440 | A27 | 1000 | 440 | B27 | | |

The applications listed on this page are typical of the many fields, in which OPAD-GREEN standard power supplies are effecting economies and assuring satisfaction. In many cases, equipments have been custom-built to fill particular requirements. Our engineers are always ready to provide the best solution for your D.C. power problem. Send us your specifications, or request our form PEQ to aid in establishing your needs.



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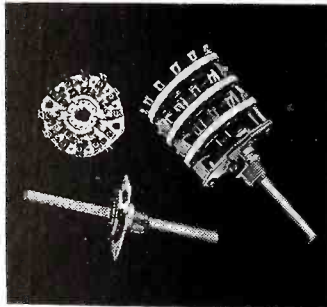
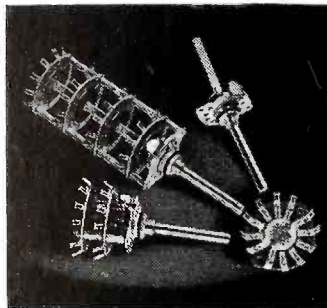
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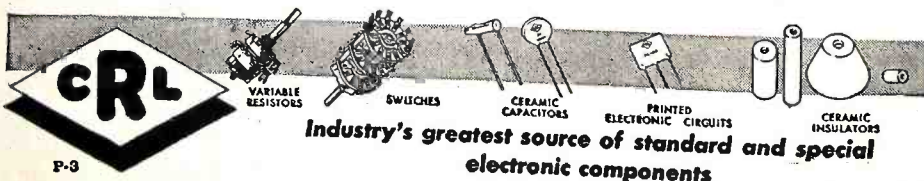
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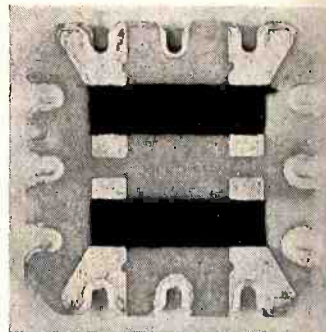
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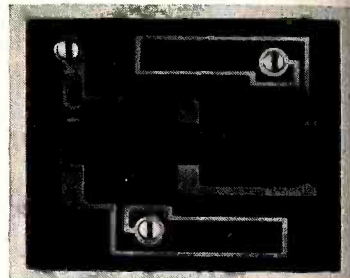
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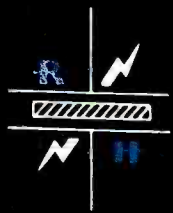
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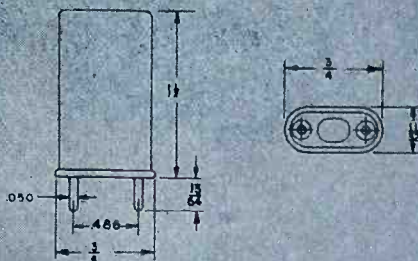
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16-300 kc

This plated crystal is hermetically sealed and wire mounted in a lightweight metal cover of nickel silver.

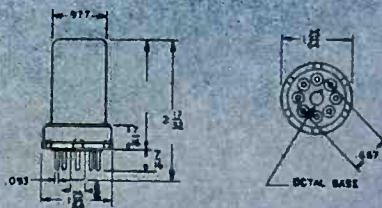
For Military Specifications order: CR-37, 38, 42/u



16-1000 kc

This crystal is hermetically sealed in a metal tube type holder having a standard octal base. Holder is evacuated and argon filled.

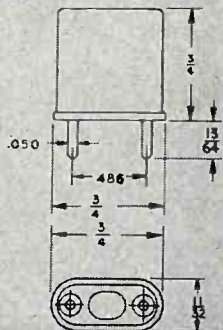
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200 kc-100 mc

Hermetically sealed, plated crystal.

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Microwave Products

DIC-2217 — KLYSTRON MOUNT FOR 2K25, "X" BAND

A standard DICO design for operation in the range of 8.5 to 9.6 kmc. An adjustable uncalibrated output padding attenuator is provided. Incorporated in each shielded D.C. input lead is a polyiron absorbing slug, to prevent entrance of interfering energy or radiation of local oscillator energy in the "X" Band region.



DIC-6113 — DUPLEXER ASSEMBLY

This is a typical custom made waveguide component, demonstrating Diamond's ability to manufacture accurately to customer's specifications.



DIC-6028 — FREQUENCY METER, "S" BAND

This reaction type frequency meter covers the range of 2.15 to 4.3 kmc. Similar meters for the 1.4 to 2.3 kmc and 3.5 to 6.5 kmc ranges are available. Normally manufactured as reaction type meters, they are also available in the transmission type.



Illustrated above are a few of the many DICO designed and manufactured microwave components, produced under highest quality-control standards. For more complete information on DICO microwave components and test equipment send for catalog 953.

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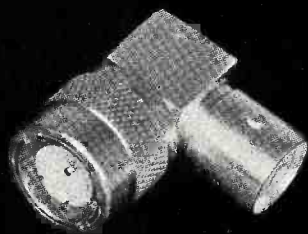
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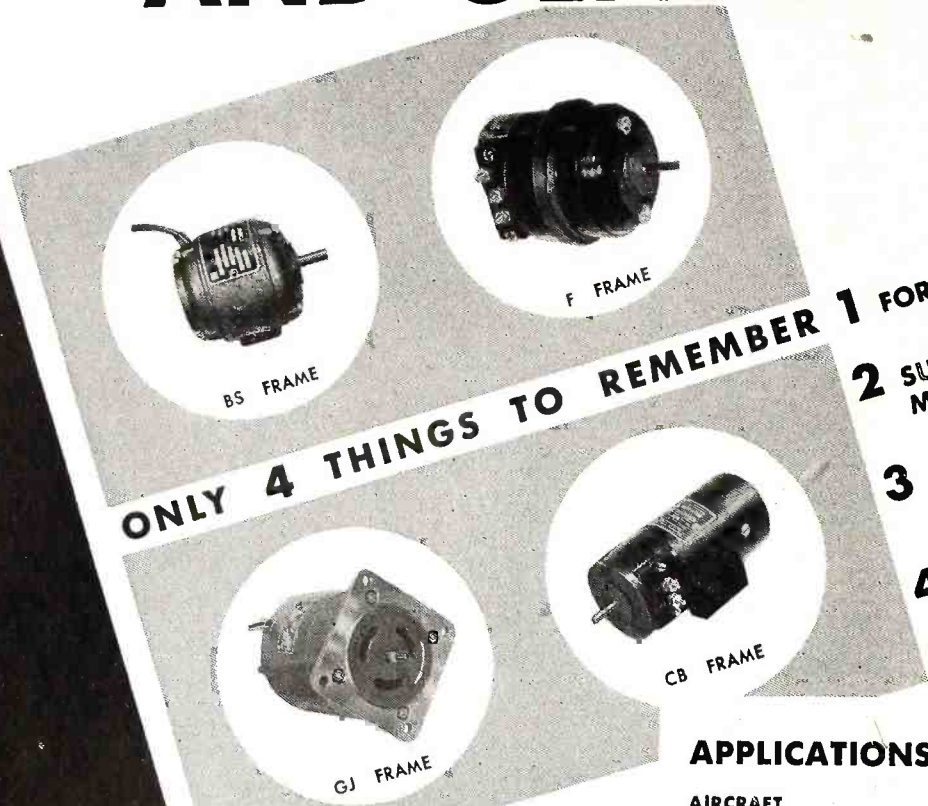
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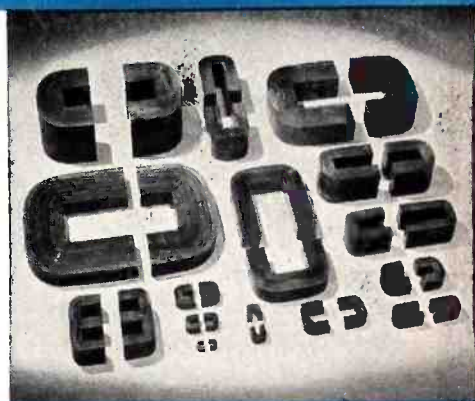
Arnold Magnetic Materials

TYPES "C" AND "E" CUT CORES

"E" Cores are made from Silectron strip (highly oriented steel) in 1, 2, 4 or 12-mil wide variety of window areas, for high and low applications. Sizes range up to 12-mil strip, and from fractions of a pound to hundreds of pounds in thin-wound cores. Ultra-thin (12-mil or less) can also be supplied. Strip of the proper width is

wound on a mandrel, then heat treated, bonded and cut into halves. Careful control results in accurately dimensioned and matched core halves whose effective air gap at the butt joint is very small.

In 3-phase applications, the use of "E" Cores provides weight and size reduction, as well as higher efficiency and possible cost savings. Rigid standard tests are employed for both "C" and "E" types of cores, and special tests where required.



TAPE WOUND CORES

Upon the specific properties of the tape, Tape Wound Cores are made of Deltamax, 4-79 Molybdenum Permalloy, Mumetal, 4750 Molybdenum Permalloy, or Silectron . . . in standard thicknesses of 1, 2, 4 or 12-mils, and in tape gauges of 1/2 and 1/4-mil.

Any size core can be supplied, from a gram to hundreds of pounds. Toroidal cores are made in 22 standard sizes with protective nylon cases. Special sizes of toroidal cores, and all square or rectangular Tape Wound Cores, are produced to individual requirements.

Used for magnetic amplifiers, pulse transformers, current transformers, wide-band transformers, non-linear retard coils, peaking strips, reactors, etc., this gapless type of core construction results in maximum effective working permeability with minimum flux leakage.



MOLY-PERMALLOY POWDER CORES

For inductors, filters, broadband transformers and networks, for frequencies up to 200 kc, these Toroids provide a small volume. Characterized by low current and hysteresis losses.

at 50 to 200 kc. Many of these cores may be furnished stabilized to provide constant permeability ($\pm 0.1\%$) over a specific temperature range.

Toroid Cores are supplied in standard permeabilities: 125, 60, 26 and 14. They provide constant permeability over a wide range of flux density. Toroid Cores are recommended for frequencies up to 75 kc; the 60 Mu at 10 to 50 kc; the 26 Mu at 30 to 75 kc; and the 14 Mu

These Moly Permalloy Powder Toroids are available in a wide range of sizes, to obtain nominal inductances as high as 281 mh/1000 turns. They are given various types of enamel and varnish finishes, some of which permit winding with heavy Formex insulated wire without supplementary insulation over the core.



ALNICO MAGNETS

Arnold manufactures permanent magnets of Alnico, although Alnico is the preferred type due to the energy product of that alloy.

Alnico Magnets are quite hard and somewhat brittle and may be machined only by grinding. Most sizes and shapes are manufactured as sand castings and are made to the customer's drawings and specifications. Some types and shapes of Alnico Magnets are carried as stock items.

Some small sizes of magnets may be furnished in sintered Alnico, but special shapes made in this way require rather expensive dies.



W&O 5236

TECHNICAL DATA ON ARNOLD PRODUCTS

... "Arnold Silectron Cores"—available data, covering a complete range of sizes, tape gauges, etc.

... "Properties of Deltamax, Molybdenum Permalloy and Supermalloy"—28 pages on Arnold Tape-Wound Cores.

... "Molybdenum Permalloy"—16 pages, complete technical data.

... General information on all magnetic materials: permanent magnets, powder cores, etc.

ADDRESS DEPT. EB-54

THE ARNOLD ENGINEERING COMPANY

SUBSIDIARY OF ALLEGHENY LUDLUM STEEL CORPORATION

General Office & Plant: Marengo, Illinois

DISTRICT SALES OFFICES . . . New York: 350 Fifth Ave.

Los Angeles: 3450 Wilshire Blvd.

Boston: 200 Berkeley St.



PRODUCTS OF . . . "THE"

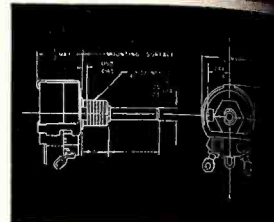
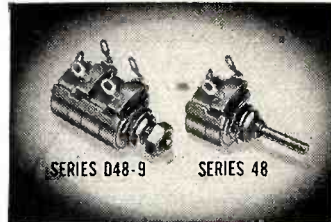
COMPOSITION-ELEMENT CONTROLS (Series 48)

Pat. Pending

5/8 DIA. FOR MINIATURIZATION

Linear, 500 ohms to 5 megohms. Taper, 2,500 ohms to 2.5 megohms; 10% resistance at 50% C.W. rotation. Rated at 0.2 watt for linear units. 300° rotation. Shaft locking device may be incorporated upon request. Single and multiple units available.

Engineering Bulletin No. 121

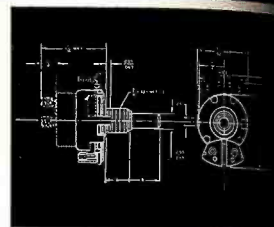


COMPOSITION-ELEMENT CONTROLS (Series 47)

15/16 DIA.

Linear, 500 ohms to 5 megohms. Tapered, 1,000 ohms to 5 megohms. Rated at 0.25 watt for linear units. Standard taps at 37½%, 50% and 62½% of effective rotation. 300° rotation without switch; 330° with switch.

Engineering Bulletin No. 117

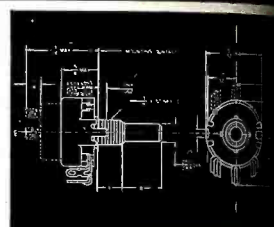


COMPOSITION-ELEMENT CONTROLS (Series 37)

1-1/8 DIA.

Linear, 500 ohms to 10 megohms. Tapered, 1,000 ohms to 10 megohms. Rated at 0.5 watt for linear units. Standard taps at 37½%, 50% and 62½% of effective rotation. 300° rotation without switch; 330° with switch.

Engineering Bulletin No. 112



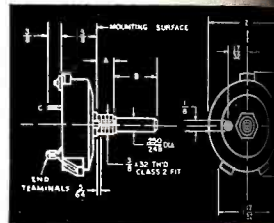
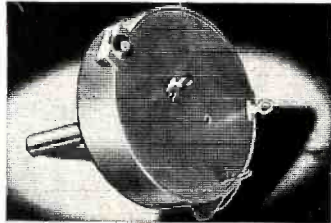
COMPOSITION-ELEMENT CONTROLS (Series 51)

Pat. Pending

2" DIA., HI-VOLTAGE, HI-RESISTANCE

Resistance range, 5,000 ohms to 50 megohms for linear units. Rated at 1 watt. Insulation, 10,000 volts D.C. to ground, 4,000 volts maximum across end terminals.

Engineering Bulletin No. 119



Armed Services requirements as to corrosion-resistant materials and plating, low-temperature operation, vibration, rigid electrical and mechanical specifications, etc., can be incorporated in any of the Clarostat units.

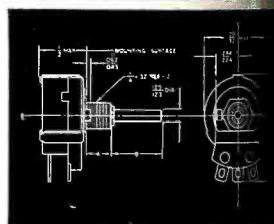
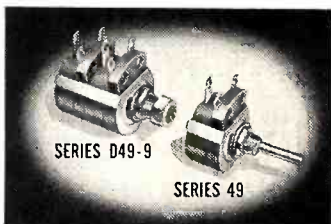
WIRE WOUND CONTROLS (Series 49)

Pat. Pending

3/4 DIA. FOR MINIATURIZATION

Linear, 10 to 10,000 ohms. Rated at 1 watt. Mechanical and Electrical rotation 300°. 360° Mechanical rotation available. Max. 355° Electrical. Shaft locking device may be incorporated. In single or multiple units.

Engineering Bulletin No. 104

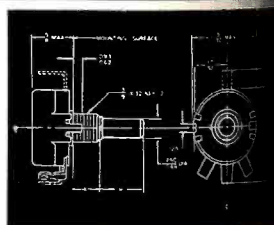
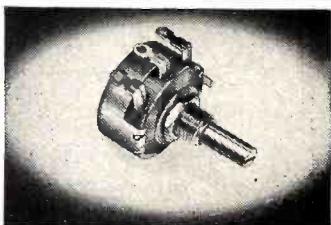


WIRE WOUND CONTROLS (Series 43)

1-1/8 DIA.

Linear, 1 to 10,000 ohms. Tapered, submit your requirements. Rated at 2 watts, for linear units. Mechanical rotation 300° Electrical 280° without switch; 260° with switch.

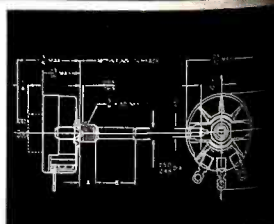
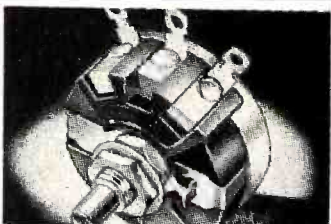
Engineering Bulletin No. 116



WIRE WOUND CONTROLS (Series 58)

Linear, 1 to 50,000 ohms. Tapered, 5 to 25,000 ohms. Non-inductive 1 to 12,000 ohms, linear only. Linear, 3 watts. Mechanical rotation 300° Electrical 280° without switch; 240° with switch.

Engineering Bulletin No. 118



** Trade-Mark
*Reg. U. S. Pat. Office

CLAROSTAT MFG. CO., INC.

DOVER, NEW HAMPSHIRE

HOUSE OF RESISTORS**

HIGH-PRECISION CONTROLS (Series 42a)

Pat. Pending

Up to 18 sections in one unit assembly. Single shaft. No back lash. Linear: 10 to 100,000 ohms standard. Max. resistance: 350 ohms per degree of rotation. Tapered, submit your requirements. Linearity up to $\pm 0.5\%$. Power rating for linear units, 3 watts per section. Standard rotation; Mech. 290°; Elec. 280°

Engineering Bulletin No. 142

PLUG-IN ULTRA-PRECISION (Series 52)

Pat. Pending

Multiple sections in one unit assembly. Single shaft. Linear: 10 to 100,000 ohms suggested values. Up to 200,000 ohms available. Resistance tolerance $\pm 0.5\%$ where resolution permits. Linear and Non-linear available to $\pm 0.25\%$. Power rating for linear units 3 watts at 40°C per section. Effective rotation 358° Continuous rotation or limited rotation.

Engineering Bulletin No. 152

WIRE WOUND CONTROLS (Series MH)

"HUMDINGER" *

Ultra-compact potentiometer or rheostat. 2 to 1,000 ohms, only linear resistance feasible. Rating, 1 watt. Intermediate taps are special. Metal dust-proof cover available.

Engineering Bulletin No. 103

POWER RHEOSTATS (Series 25 & 50)

Pat. 2,346,598

Full power rating even at $\frac{1}{2}$ of rotation. 25-watt, $\frac{1}{2}$ to 2,500 ohms; 50-watt, $\frac{1}{2}$ to 5,000 ohms. Linear and tapered. Tandem units available. 25G and 50G approved under MIL-R-6749 specifications.

Engineering Bulletin No. 115

"GREENOHM" * POWER RESISTORS

Fixed, 4 to 200 watts; adjustables, 10 to 200 watts. $\pm 5\%$ for values of 50 ohms and higher. $\pm 10\%$ for values below 50 ohms. $\pm 1\%$ special. Intermediate taps, upon order. Widest choice of mountings and terminals. Non-inductive units made to specifications.

Engineering Bulletin No. 113

"GREENOHM JR." * POWER RESISTORS (Series GJ)

C7GJ, 7-watt, 0.5 to 5,000 ohms. C4GJ, 4-watt, 0.5 to 1,000 ohms. Standard resistance tolerance $\pm 10\%$. Breakdown voltage between surface and resistance element, > 2500 volts A.C. Ceramic tube casing. Inorganic materials throughout. Pigtail terminals, standard.

Engineering Bulletin No. 110

STANDEE* SERIES KS — ABOVE-CHASSIS-MOUNTED POWER RESISTORS

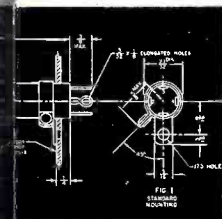
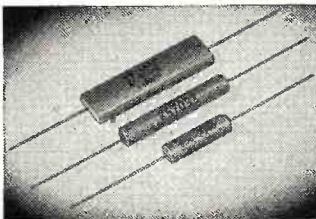
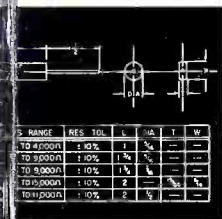
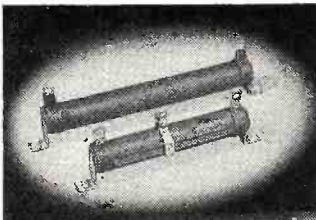
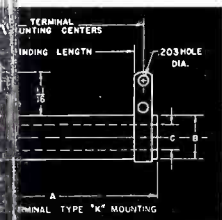
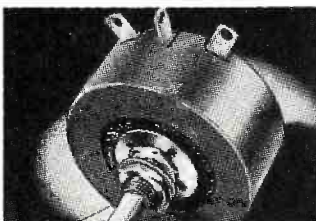
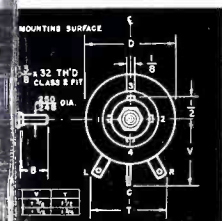
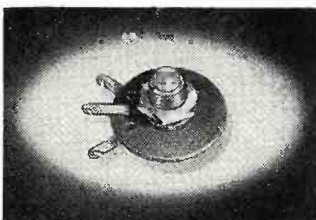
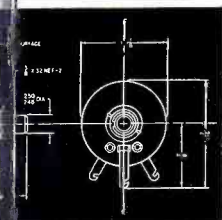
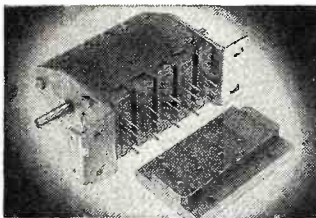
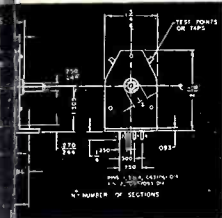
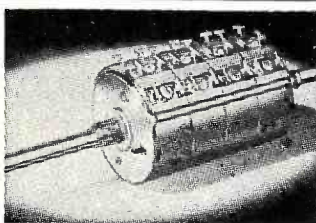
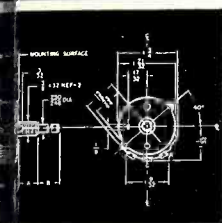
| Model | Power (Watt) | Resistance Range (ohms) | Dim. "L" |
|-------|--------------|-------------------------|----------|
| A6KS | 10 | 1 to 6,000 | 1-1/2 |
| A8KS | 15 | 1 to 9,000 | 2 |
| A10KS | 20 | 1 to 12,000 | 2-1/2 |
| A12KS | 25 | 1 to 15,000 | 3 |
| A16KS | 30 | 1 to 20,000 | 4 |

Standard resistance tolerance $\pm 10\%$.

Engineering Bulletin No. 146



Submit your resistance problems to Clarostat. Clarostat Engineering and Manufacturing Facilities through experience in the varied Allied Electric and Electronic Fields have the ability to meet unusual requirements by modifications of existing resistors and controls.

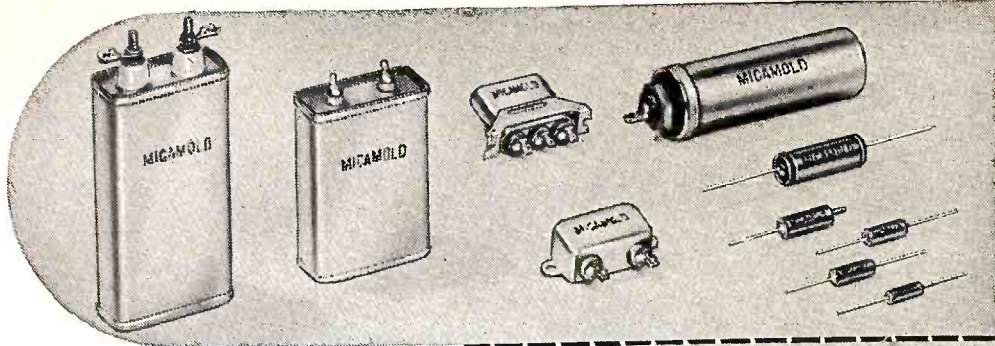


CLAROSTAT MFG. CO., INC.
DOVER, NEW HAMPSHIRE

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Printed in U. S. A.

30 YEARS OF CAPACITOR EXPERIENCE

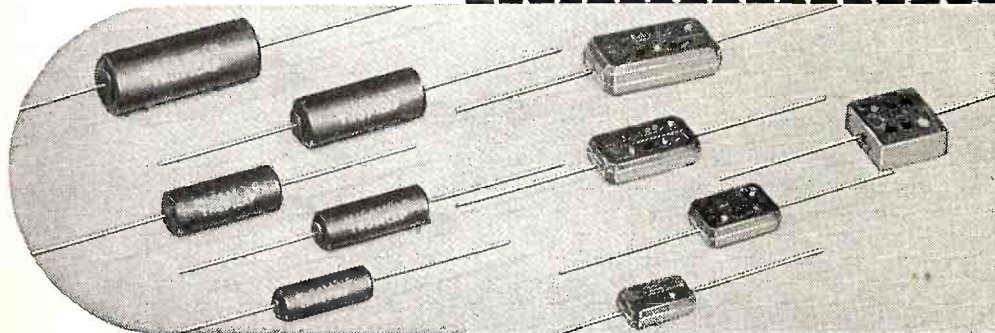
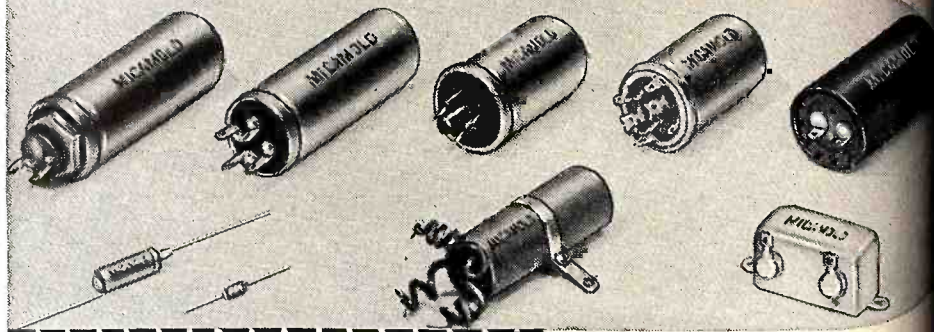
MICAMOLD pioneered the development, design and manufacture of capacitors — and is still producing under the original management.



MICAMOLD METAL ENCASED PAPER CAPACITORS — hermetically sealed and available in all the Military Standard styles and many special designs. Micamold also manufactures complete lines of oil filled capacitors for industrial applications. Another Micamold first — the exclusive Ambirite line — the only paper capacitors for operation at 150°C.

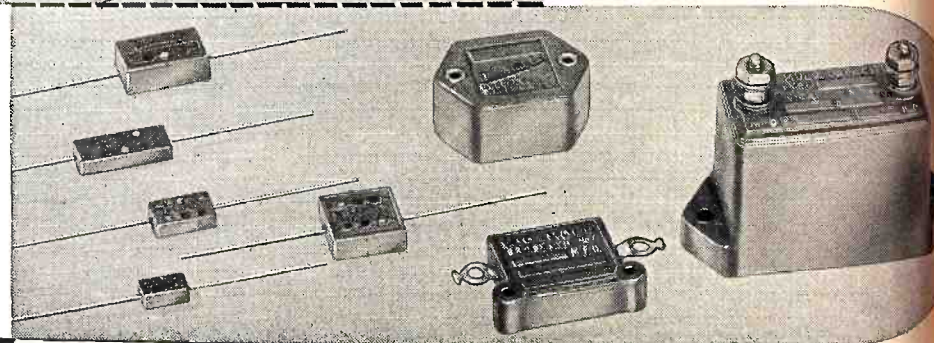
MICAMOLD ELECTROLYTIC CAPACITORS are manufactured in all Military Standard styles, and types for radio, television and industrial applications. The Motorlytics are for capacitor motor starting.

MICAMOLD's exclusive electrolytics include: Thermalytics, the only capacitors capable of operation up to 100°C, and Chromalytics that work at voltage ratings up to 700VDC.



MICAMOLD MOLDED PAPER CAPACITORS — hermetically sealed in rectangular cases are the only complete line of Military Standard styles. A commercial case size is manufactured in the same case sizes for industrial applications. **MICAMOLD TROPICAPS** are molded tubular capacitors that afford protection from exposure to high humidity or even total immersion. The case is non-flammable and not injured by severe mechanical and thermal shocks.

MICAMOLD originated and introduced the first **MOLDED MICA CAPACITORS** thirty years ago. The company manufactures Military Standard styles from CM15 through CM70, and also makes the same types for industrial uses. Another Micamold first — the development and manufacture of high temperature types AO, AW and AV for operation to 150°C.



MICAMOLD manufactures all types of Paper, Electrolytic and Mica Capacitors, Radio Frequency Interference Filters, Pulse Networks and Delay Lines.

The Micamold Catalog giving complete specifications is available upon request.

MICAMOLD RADIO CORPORATION

1087 FLUSHING AVENUE, BROOKLYN 37, N. Y.

SANBORN 150 SERIES OSCILLOGRAPHIC RECORDERS

The **BASIC** four-channel assembly includes: Cabinet, Recorder, and, for each channel, a **BUILT-IN** unit (A), which comprises a Driver Amplifier with frame, and a Power Supply with control panel.

**A NEW
design concept
that brings even
greater versatility
to industrial
OSCILLOGRAPHIC
RECORDING**

You have a **CHOICE** of readily interchangeable, plug-in Preamplifiers (B) for **EACH** channel, as described below.

The new Sanborn 150 Series offers greater operating efficiency and convenience, and encompasses a *variety of uses* which include the accurate recording of almost every phenomenon whose frequency spectrum lies in the range from 0 to 100 cycles per second.

A *wide selection* of plug-in preamplifiers, or "front end" units, such as (B) above, are completely interchangeable in any or all channels of the 150 Series amplifier section, where they simply plug in to the driver amplifier and power supply, (A) above, which are already in place.

Available plug-in Preamplifiers include: AC-DC, CARRIER, SERVO-MONITOR, DC COUPLING, LOG-AUDIO, and LOW LEVEL. Blank plug-in assemblies are also available for users to make input circuits for special measurement problems.

And, there are the popular Sanborn advantages: a high torque movement (200,000 dyne cms per cm deflection), direct *inkless* recording in *true rectangular coordinates*, and provision for code and time markings.

A new catalog on Sanborn Oscillographic Recording Systems and their components will be sent gladly on request.



SANBORN COMPANY

INDUSTRIAL DIVISION

195 MASSACHUSETTS AVENUE

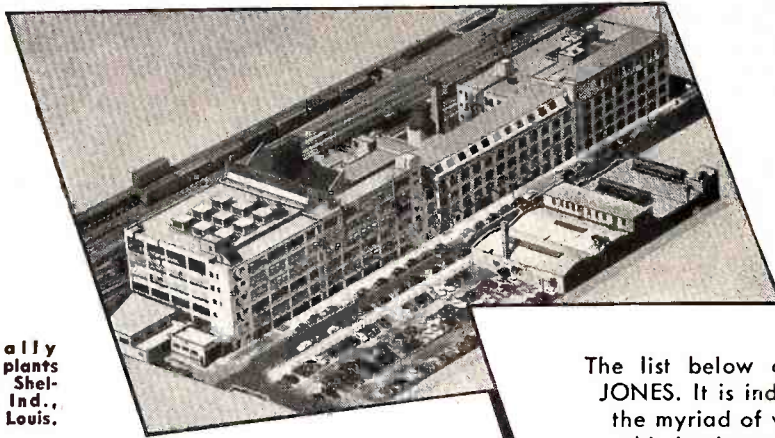
CAMBRIDGE 39, MASS.

OTHER SANBORN IMPROVEMENTS

Extended frequency response.
Improved regulated power supply.
Individual stylus temperature control for EACH channel.
Improved, single control, paper speed selector. Nine speeds — 0.25 to 100 mm/sec.
Recorder slides out, if desired, for better view of recorded events, or for notations on record (illustrated at right).
Improved control of input signals by use of 1, 2, 5 ratios on attenuator.

FOR THE ★ **STANDARD** IN METAL PLASTIC ASSEMBLIES:

CONSULT CINCH-JONES-



Centrally located plants Chicago, Shelbyville, Ind., and St. Louis.

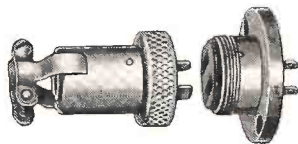
BARRIER TYPE TERMINAL STRIPS, PLUGS, SOCKETS AND FANNING STRIPS

The list below comprises the products of both CINCH and JONES. It is indicative of their wide scope; and also indicates the myriad of variations and redesigning that is possible with this background of production experience.

TERMINAL ASSEMBLIES: Blocks, boards in laminated and molded, assembled with lugs, pins, screw terminals, contacts, clips, turret lugs and other hardware to specifications.

The components are shown here for variety, types and uses, and are not necessarily in comparative size.

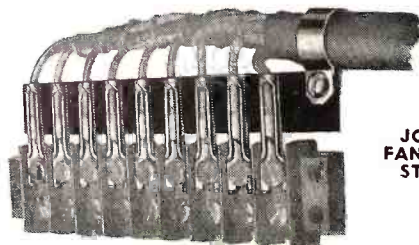
- ANTENNA JACKS
- BANANA PINS AND JACKS
- BARRIER TERMINAL STRIPS
- FANNING STRIPS
- BATTERY PLUGS & SOCKETS
- BINDING POSTS
- DIODE SOCKET
- CONNECTORS, MULTI CONTACT
- FUSE STRIPS, BLOCKS & BOARDS
- GRID CAPS
- GRID CAP SHIELDS
- HERMETICALLY SEALED TUBE SOCKETS
- METAL STAMPINGS
- MICRO-CONNECTORS
- MOUNTING DEVICES
- PHONO TIP JACKS
- PRINTED CIRCUIT, CONNECTORS
- SHIELDS, TUBE-MINIATURE & NOVAL & BASES SOLDERING LUGS—200 VARIATIONS
- STRAP NUTS
- TRANSISTOR SOCKET
- TUBE HOLDERS—SPRING TYPE
- VIBRATOR PLUGS AND SOCKETS



JONES PLUGS AND SOCKETS



JONES BARRIER TYPE TERMINAL STRIPS



JONES FANNING STRIPS

SEND FOR COMPLETE CATALOG

Cat. No. 20 will give you complete data (electrical characteristics, etc.). Your request for this catalogue or for quotes on special products will be promptly answered.

The steadily expanding variety of plugs and sockets produced at the JONES Division has a wide range of the highest quality electrical and mechanical parts to efficiently fill every need.



Jones

HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
1026 S. Homan Ave. • Chicago 24, Illinois

SOCKETS, CONNECTORS- CINCH COMPONENTS

ARE ★ STANDARD —
ADEQUATE FACILITIES
ASSURE SERVICE

SOCKETS:

Printed Circuit T3 Socket
CINCH SUB-MINIATURE

Tube (Receiver, Transmitter and
Special): Battery, all types
Radio Tube
Crystal
Electrolytic
Glass Type; 4 to 7 prong
Laminated
Infrared Ray Tube
High Altitude Airborne Types
Escape; Magnal, Duodecal,
Diheptal
Miniature-Multiplug-
Naval-Octal (Molded bakelite,
stearite, teflon, Kel-F and
laminated)
Mexican
Printed Circuit
Special Sockets to Specs
Sub-Miniature; Hearing Aid
Types
110V Circuit Breakaway
Protector
Vacuum Tube Transistor
Socket



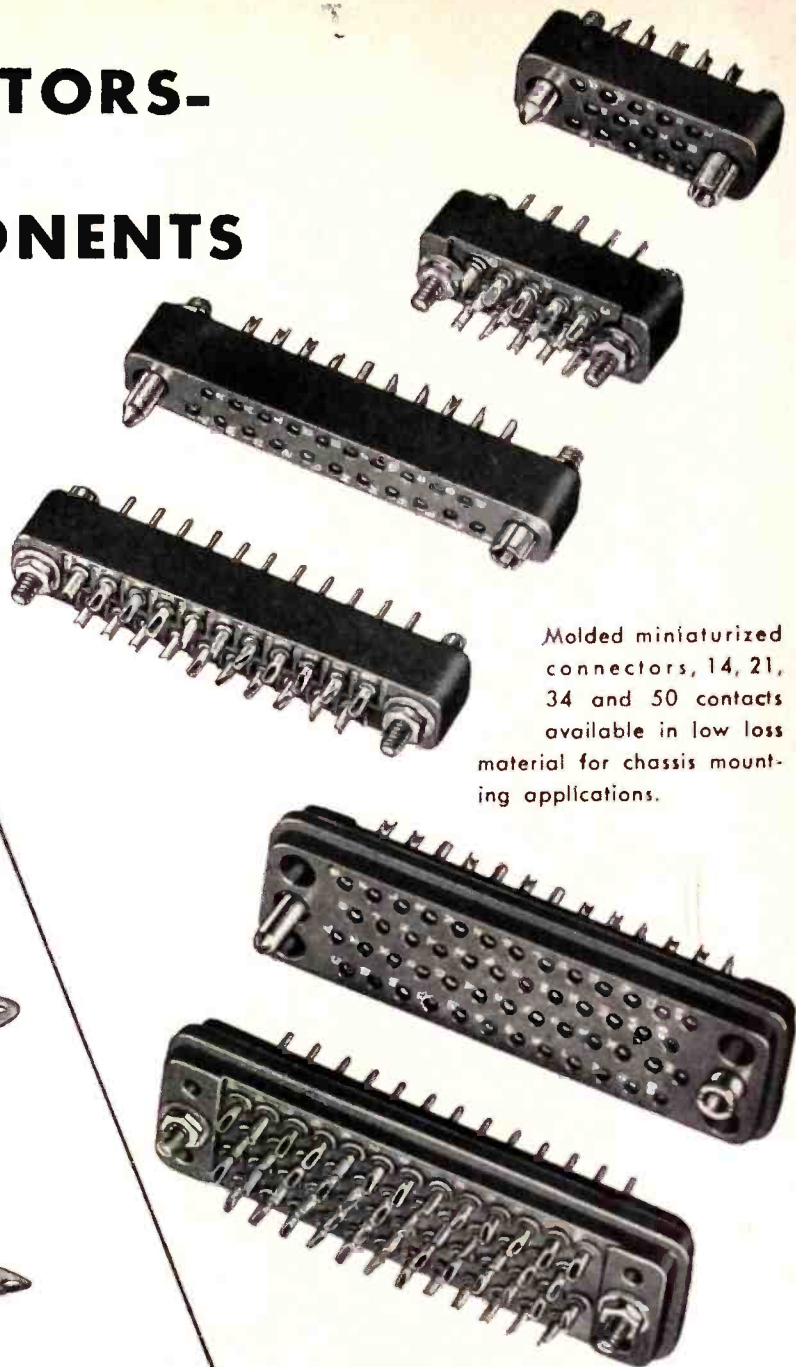
CINCH MOLDED
MINIATURE



CINCH NOVAL
NINE PRONG



CINCH-ERIE
PLEXICON



Molded miniaturized
connectors, 14, 21,
34 and 50 contacts
available in low loss
material for chassis mount-
ing applications.

Cinch ELECTRONIC COMPONENTS

★ CINCH metal plastic as-
semblies fully perform the service for which
they were designed and often have anticipated
the engineering needs of the future. So that
today, judged by demand and usage, CINCH
components are "the standard".

Send for complete catalog,
p. 51; contains data on
all of the CINCH electronic
components. Requests on
company letterheads will be
promptly answered.



Cinch
ELECTRONIC
COMPONENTS

CINCH MANUFACTURING CORPORATION

1026 South Homan Ave., Chicago 24, Illinois
Subsidiary of United-Carr Fastener Corporation, Cambridge, Mass.

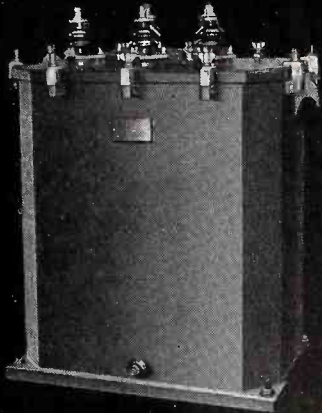
CINCH components available at
leading electronic jobbers —
everywhere.



TRANSFORMERS for...

RADIO • TELEVISION • MILITARY • SPECIAL APPLICATIONS

RADIO & TV

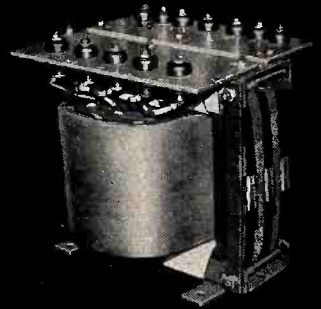


- PLATE TRANSFORMERS
- MODULATION TRANSFORMERS
- REACTORS
- FILAMENT TRANSFORMERS
- UNITIZED RECTIFIERS
- PULSE TRANSFORMERS
- CHARGING REACTORS

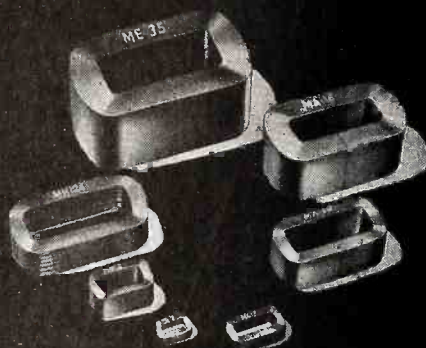
OIL, ASKAREL
DRY TYPE, (CLASS A, B & H)

PER { MIL-T-27 }
{ RETMA } SPEC.

RADIO & TV



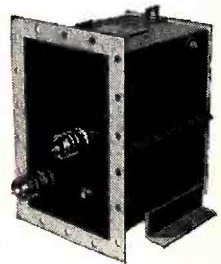
MILITARY



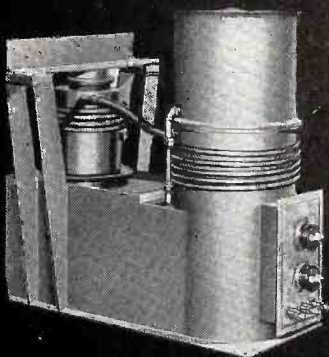
HIPERCORE CORES

for smaller, lighter, low loss transformers. Write for Bulletin SR 205 listing standard cores, weights, dimensions, performance and prices.

MILITARY



MILITARY

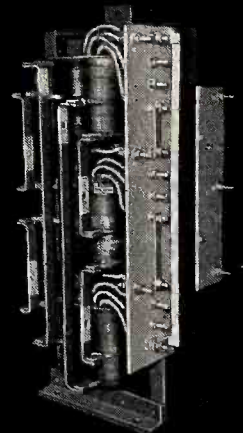


Moloney quality, backed by 58 years of transformer experience, is designed and built into each unit.

This engineering background and experience enables Moloney to produce transformers that offer the maximum in reliability, endurance and efficiency at a minimum of size and weight.

Write for Specialty Transformer Bulletin ST 3505.

SPECIAL APPLICATIONS



MOLONEY ELECTRIC COMPANY

SALES OFFICES IN ALL PRINCIPAL CITIES • FACTORIES, ST. LOUIS, MO., TORONTO, ONT., CANADA



ROBINSON All-Metal Vibration and Shock Mounts for Airborne Electronic Equipment...

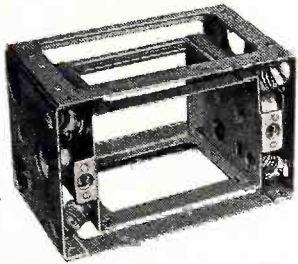
Outstanding feature of Robinson Mounts is the employment of resilient, primary load-carrying cushions of metal wire (MET-L-FLEX). These MET-L-FLEX cushions are fabricated in such a way that all wires are continuous from top to bottom. They are inherently and permanently damped, and do not drift, pack down or wear out.



Robinson Mounts completely lack the faults and failings of outmoded mountings that incorporate rubber, organic or synthetic materials.

ROBINSON COMPLETE ENGINEERED MOUNTING SYSTEMS

For maximum protection, most problems of vibration and shock can best be overcome by a complete Robinson Engineered Mounting System. When such a system is designed for the particular equipment with careful regard to the acceleration forces, frequency characteristics, and other requirements, the greatest possible efficiency is achieved. At the same time, a Robinson Engineered System can effect decided economies. It not only permits simplified construction and "de" ruggedization of equipment, but also contributes to far longer useful life, and eliminates the need of replacements.



Model 728-4

An all-attitude engineered system designed and used for mounting an Antenna Coupler. Excellent damping and snubbing in all directions. Suitable for any small sensitive equipment requiring maximum protection. Provides for easy removal and accessibility of equipment.



Model 1128-2

Single stage mounting system incorporating these Robinson design features: 1) light weight; 2) outstanding stability; 3) high damping; 4) one piece base plate with only four attachment holes; 5) minimum vertical height; 6) complete unit ready for equipment installation.

Model K130

Center-of-Gravity type mounting designed for individual instruments such as the Oxygen Flow Indicator. This mount is the first of its kind to be successfully installed in important military aircraft. Ideal for instruments not provided for on the main instrument panel.



EXAMPLES OF ROBINSON ENGINEERED UNIT MOUNTS

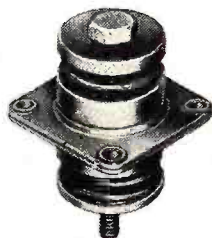


(Cut-away view)

Series No. 1202

Cup type mount with unusual stability and close limiting action provided by extra thick top and bottom MET-L-FLEX buffer pads within the housing. These buffers provide a gradual increase in stiffness plus high damping. *Natural frequency:* 15-30 c.p.s. (vertical). Axial to lateral stiffness ratio selected to provide for maximum isolation compatible with stability.

For detailed information, write us, outlining your requirements.



Series No. 930

Plate type, double-acting mount. Isolates vibration and shock for positive, negative and radial loads. Particularly adapted to installations where mounts can be located about in the plane of the C.G. and where mounting or missile attitude may vary. *Natural frequency:* 12-15 c.p.s. Higher stiffnesses available.

Series No. 809

A small plate type mount, low in installation height, designed to isolate vibration and shock for positive, negative and radial loads. It is particularly adaptable for the mounting of equipment in cramped spaces. *Natural frequency:* 25-30 c.p.s. This assures a high degree of stability to the mounted equipment and effective vibration isolation at high frequencies.

Various adaptations available to meet your particular dimensional and load requirements.



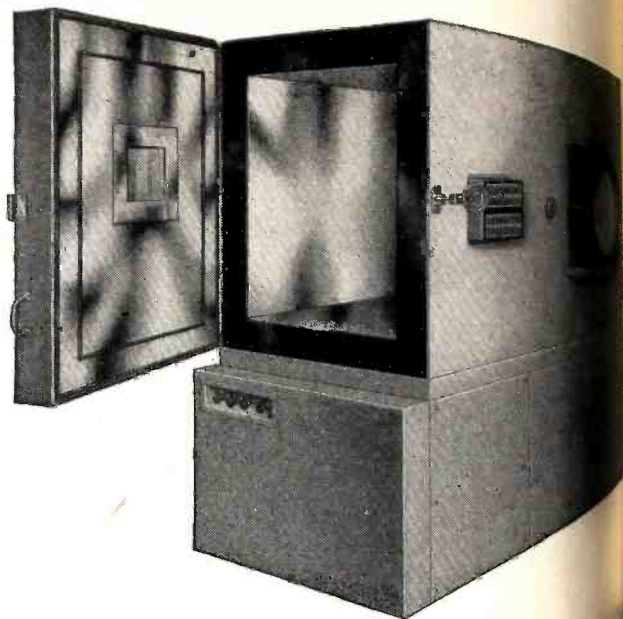
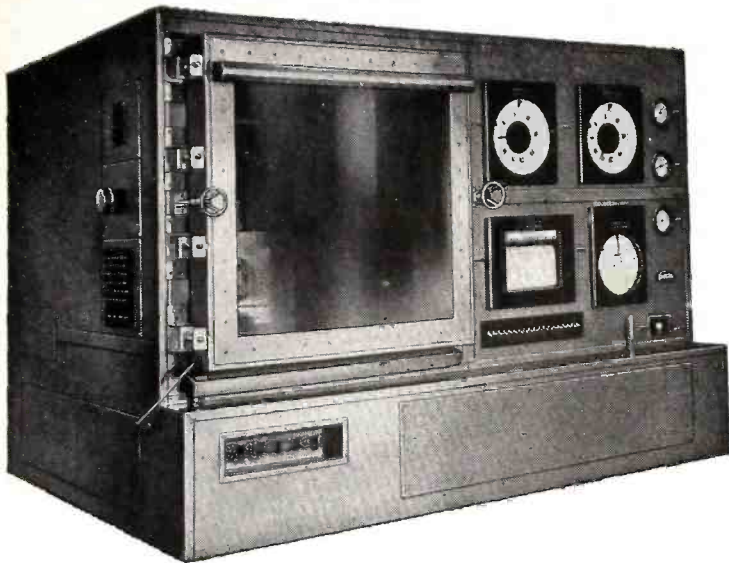
AIRBORNE DIVISION, Dept. EBG.

ROBINSON AVIATION INC.
TETERBORO NEW JERSEY
Vibration Control Engineers

Coast Engineering Offices: 3006 Wilshire Blvd., Santa Monica, Cal.

ENGINEERS IN AIRBORNE, SHIPBOARD, MOBILE, INDUSTRIAL AND PACKAGING MOUNTINGS

Environmental Test Equipment

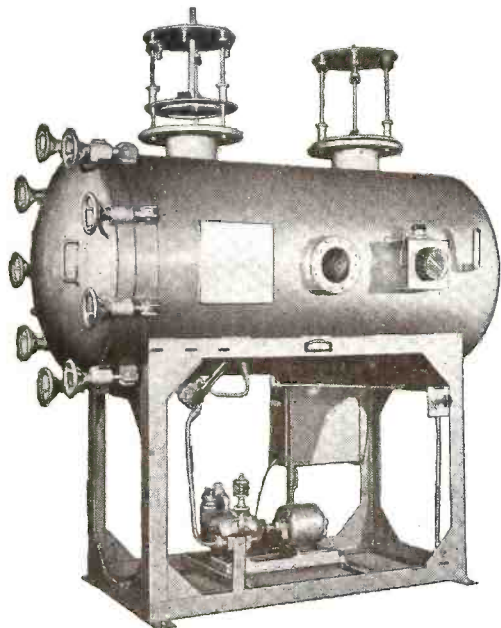


L-SERIES

Laboratory Unit for complete environmental testing of aircraft instruments and equipment at a temperature range from +185°F. to -100°F., relative humidity simulation from 20% to 95%, and altitude from ambient atmospheric pressure to 80,000 feet or higher.

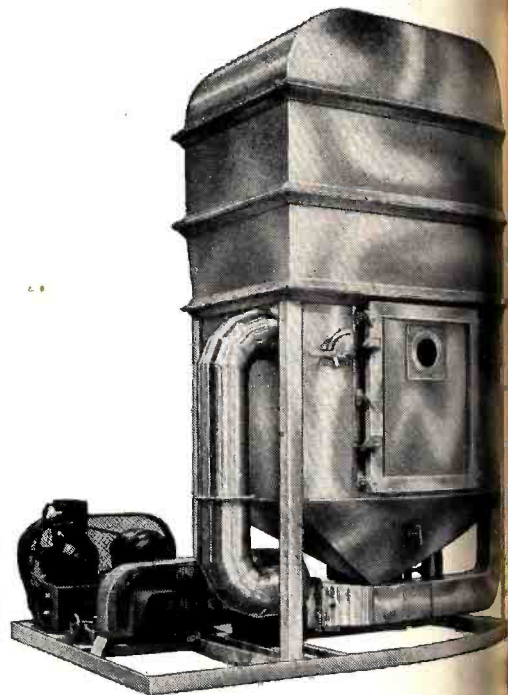
S-SERIES

These units will automatically maintain temperature conditions within a range from -85°F. to +185°F. In addition, units which incorporate humidity conditions will provide humidity from 20% to 95% between +35°F. and +180°F. Dry and wet bulb temperature ranges can be extended to meet other requirements.



Special Engineering

Bowser Technical Refrigeration maintains a complete engineering staff to solve special test problems for the aircraft industry. All test chambers can be furnished with power drives into the test chamber. Also available as accessories are test racks to special design, optical viewing arrangements, pressurized and explosion proof connectors, special high voltage in- and outlets, radio shielding and connections for testing hydraulic equipment. To meet individual requirements, other special instrumentation, accessories and sizes are available.



EXPLOSION

Explosion chamber to meet all MIL, JAN, USAF, AN, and other specifications for testing of instruments and equipment in explosive atmosphere at altitudes up to 50,000 feet. Unlimited altitude simulation available. Bowser ignition system (Patent applied for) and safety devices, plus automatic fuel metering are typical features of this chamber.

SAND & DUST

Sand and dust chamber to meet all MIL, JAN, USAF, AN, and other test specifications for aircraft and electronic components. Provides testing facilities in air-suspended sand and dust at velocities of 100 and 2300 feet per minute. Accurate temperature control of the air is provided by automatic heating and refrigeration equipment. Electronic density indication and control are available.

BOWSER

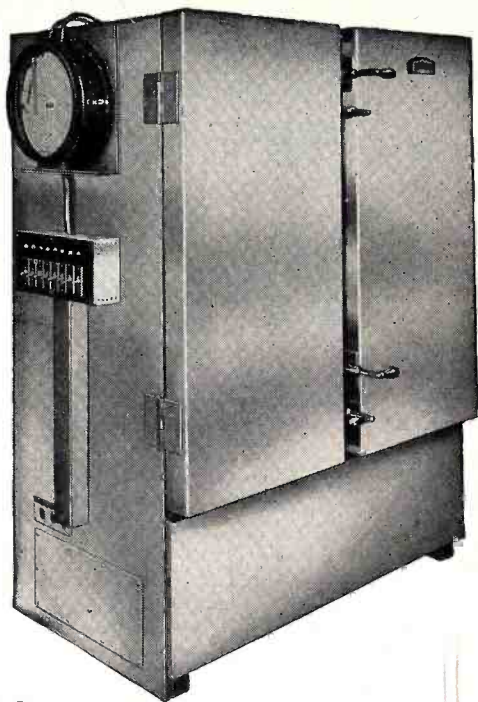
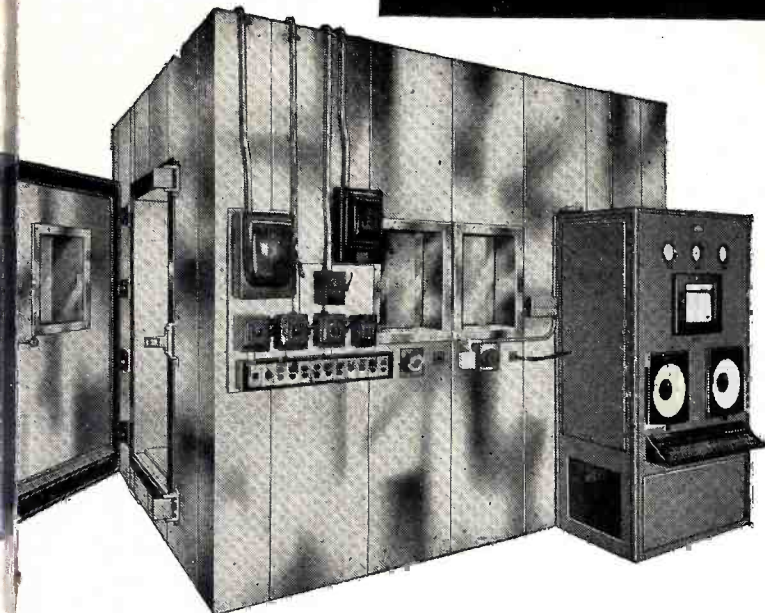
TECHNICAL REFRIGERATION

DIVISION BOWSER INC.

TERRYVILLE • CONN.

← Write for more information NOW

Environmental Test Equipment

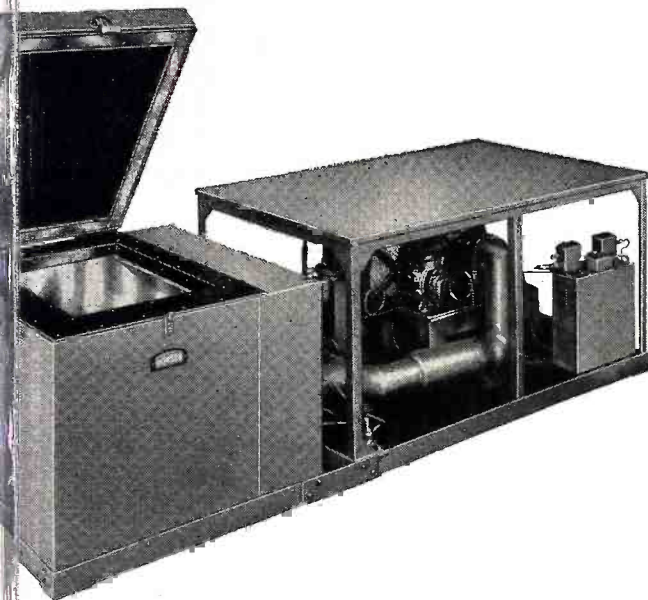


WALK-IN ROOMS

Walk-In Rooms are available with UNLIMITED altitude simulation temperature range from -100° to $+200^{\circ}$ F., and relative humidity from 20% to 95%. With sectionalized panels any size or shape room can be manufactured for use in the field. Smaller sizes are preassembled at the factory. Special accessories and instrumentation can be engineered and installed to individual specifications.

H-SERIES

Relative Humidity Simulation Unit which will automatically maintain humidity conditions from 20% to 95% at temperatures from $+35^{\circ}$ F. to $+185^{\circ}$ F. (Dry Bulb).



COOLERS

These units are ideal for all types of processing requiring precise control of heat. The wide range of temperatures down to -80° F. and lower also allows complete testing of products under conditions of extreme cold. In addition, storage of products is highly effective because of the close control tolerance and stability featured in all Bowser units. Other applications for these units are well suited are stabilization of metals, aging, expansion fitting, conditioning for tensile tests etc.

U-SERIES

These units are designed specifically for production processing of aircraft instruments, accessories and equipment. Temperature ranges from $+158^{\circ}$ F. to -80° F. Relative humidity simulation from 20% to 95% and altitude simulation to 55,000 feet are provided.

Write for more information NOW ---->

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TECHNICAL REFRIGERATION
DIVISION BOWSER INC.
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Engineered Economy Iron

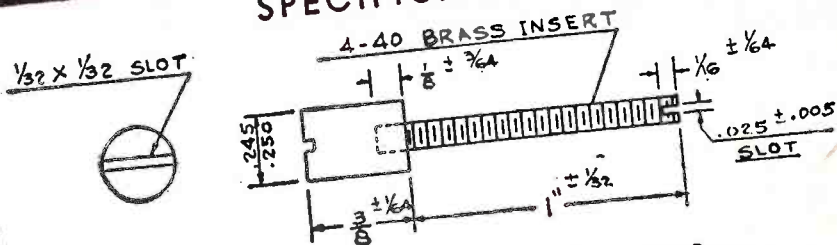
CORES

from

STOCK

SPECIFICATIONS

EE5002



Material: Radio Cores No. 10
 Test Frequency: 1 MC
 Q Tolerance: $\pm 7\frac{1}{2}\%$
 Perm Tolerance: $\pm 2\%$

Concentricity of Screw and Core:
 .015 Maximum at $\frac{3}{4}$ " from end of core
 .007 Maximum at end of core



Engineered
 Economy means:

- HIGHEST PERFORMANCE
- HIGHEST QUALITY MATERIALS
- UNIFORM HIGH QUALITY
- LOWEST COST
- STANDARDIZATION

DELIVERY FROM STOCK:

We maintain an inventory of EE Cores, thus increasing speed of delivery, increasing your inventory turnover, cutting your investment, and eliminating expensive down-time on lines because of inventory "outs."

ENGINEERED ECONOMY IRON CORES . . .
 AT MONEY SAVING VOLUME PRICES . . .
 ARE NOW AVAILABLE FROM STOCK. Two years of research and planning have produced the first concrete approach toward mass production in the iron core field. The EE cores illustrated are based on the most commonly used electrical and mechanical standard specifications, therefore design engineers may adapt them easily to a wide variety of uses.

Literature is available upon request . . . please write for our EE specification sheets.

If your needs are not covered in the above group, ask about our "Custom Engineered Cores", made to your exact specifications.

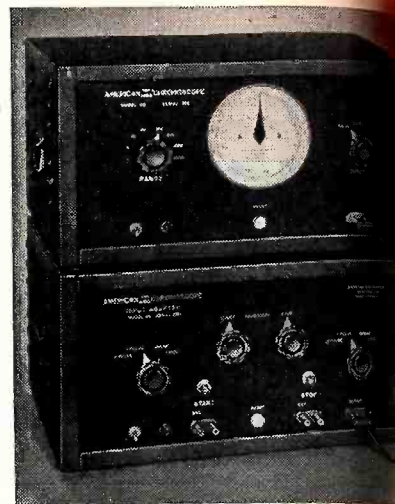
Radio Cores, Inc.

9540 Tulley Avenue Oak Lawn, Illinois



MEASURE TIME

From 10 Microseconds to 3 Seconds



The time interval between any two components in electrical, mechanical or electro-mechanical systems can now be measured simply and accurately, with Model 410 American Chronoscope and Model 211 Adapter.

For complete description on these and other Chronoscopes and Adapters, write for Bulletin 200 A.

AMERICAN CHRONOSCOPE CORPORATION

316 West First St.

Mount Vernon, N.Y.

For

* **ACCURACY**

* **NEW PRODUCTS**

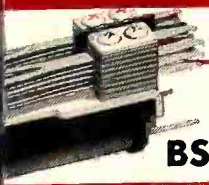




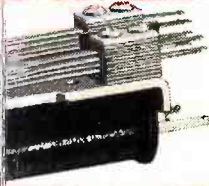
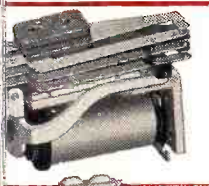


* **COMPLETENESS**

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* The one book that technicians of the industry have come to rely on.

electronics BUYERS' GUIDE
 ABC

You can depend on *Sterling* relays

| | DESCRIPTION | COILS | PILE-UP | SIZE* |
|--|---|--|--|---|
|  BS | The standard long coil telephone type with twin contacts. Also available with a variety of single contacts. | Single and double wound to 52,000 ohms | Max. of 28 springs in two pile-ups | 4 1/8" long 1 3/8" wide 1 9/16-2 3/4" high |
|  GS | The short form telephone type with single contacts of various sizes and metals. | Single and double wound to 25,000 ohms | Max. of 20 springs in two pile-ups | 2 1/2" long 1 1/4" wide 1 5/8-2" high |
|  KS | The miniature type for aircraft and similar applications. Reed bearing support provides extreme life and speed. Not recommended for marginal current applications. | Single to 6500 ohms | Max. of 12 springs in two pile-ups | 1 1/2" long 1 3/8" wide single arm 1" wide double arm 1 1/8-1 7/16" high |
|  LS | The miniature type B, applicable where space is a premium and large pile-ups or greater sensitivity than the KS or TS are required. Available with either single or twin contacts and a variety of mountings. | Single and double wound to 20,000 ohms | Max. of 20 springs in two pile-ups | 2 1/4" long 1 1/8" wide 1 3/16-1 3/4" high |
|  TS | Similar to the type KS with increased coil capacity and larger spring pile-up. Mounts in most of the same enclosures designed for the type KS. | Single and double wound to 14,000 ohms | Max. of 18 springs in two pile-ups | 1 9/16" long 1" wide 1 1/4-1 5/8" high |
|  | The AC modification of type BS. An ideal multi-contact type of AC relay where only AC coil power is available. | To 220 volts 25 & 50/60 cycles Single and double wound | Max. of 18 springs in two pile-ups. Less on low voltages | Same dimensions as Type BS |
|  | The AC modification of type GS where space will not permit the use of the type BAC. | To 220 volts 25 & 50/60 cycles | Max. of 18 springs in two pile-ups. Less on low voltages | Same dimensions as the type GS |
|  MS | General-purpose small power relay. | To 220 volts AC or DC | 1C maximum 3/8" silver contacts | 2 1/4" long 2" wide 1 3/8" high |
|  PS | Compact double-pole, double-throw power relay. | To 220 volts AC or DC | D. P. D. T. 1/4" silver contacts | 1 5/8" long 1 7/8" wide 1 13/16" high |
| SEALED TYPES | Sealed enclosures for STERLING relays are available in a variety of enclosure and header types. | | | |
| | All STERLING relays may be furnished mounted on and wired to the common varieties of radio plugs. | | | |
| | The types BS and GS and their variations are available with snap action switches as well as conventional contact springs. | | | |

* Dimensions are given for height, the smaller is for relays with 2 springs and the larger is for the maximum size pile-up.

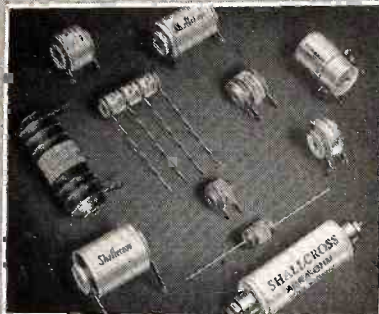
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Special types built to order

ENGINEERING CO., INC., 54 Mill Street, Laconia 9, N.H. • Subsidiary of AMERICAN MACHINE & FOUNDRY COMPANY, New York

SHALLCROSS



AKRA-OHM® PRECISION WIREWOUND RESISTORS

Not only are Shallcross Akra-Ohm precision wire-wound resistors made to extremely close tolerances; equally important, they are physically protected to maintain their accuracy under difficult operating conditions. Standard ceramic bobbin types as well as new "P" Type

epoxy resin encapsulated resistors in sizes and mounting styles for MIL-R-93A and other exacting needs. Guaranteed tolerances to 0.01% and stabilities as low as 0.003% where required. Matched pairs and sets available. Write for detailed engineering bulletins on any type.

MULTI-POSITION SELECTOR SWITCHES

Shallcross regularly manufactures a wide variety of single or multi-deck selector switches having up to 180 positions and designed for dependable performance up to 250 volts 10 amperes, or 2500 volts 1 ampere A.C. Contact resistance ranges from as low as 0.0005 ohm to a maximum

of 0.005 ohm depending upon the size and material of the contacts. Standard types readily adaptable to over a thousand variations are described in Engineering Bulletins L-31, L-32. Outline your special requirements on Specification Sheet No. 6 for prompt recommendation.



PRECISION AUDIO ATTENUATORS

Improved materials and production techniques and careful quality control for Shallcross Attenuators have resulted in a line that sets higher standards of attenuation performance for practically every audio and communications use. Included are single and dual potentiometers, variable im-

pedance matching networks, V. U. meter multipliers, cueing attenuators, fixed pad, pre-emphasis and de-emphasis networks, attenuation boxes, ladder and balanced ladder controls, bridged T, straight bridged H, and straight H attenuators. Write for Attenuator Bulletin 4-A.

PRECISE MEASURING INSTRUMENTS

As long-time specialists in standard and special electrical measuring instruments.

Shallcross welcomes your inquiry for any desired types. Standard instruments include

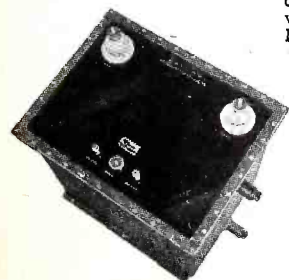
Resistance standards • Decade Potentiometers • Decade Resistance Boxes • Wheatstone Bridges • Combined Kelvin-Wheatstone Bridges • Wheatstone-Megohm Bridges • Wheatstone-Limit Bridges • Percent-Limit Bridges • Capacitor Analyzers • Decibel Meters • Tone Generators • Telephone Test Equipment • Low-Resistance Test Sets • High-Voltage Test and Measuring Equipment.

Write for Shallcross Bulletin DC



GASTOHM® POWER RESISTORS

These tab terminal fixed power resistors dissipate more power with less weight and smaller diameters than vitreous enamel resistors. No heavy core is used. Windings are imbedded in ceramic which forms an integral coating and core. Available in 8, 12, 28, 60, 125, & 225 watt styles to MIL-R-10566 specs. Write for Engineering Bulletin L-29.



HIGH VOLTAGE MEASURING APPARATUS

Precision Shallcross kilovoltmeters, kilovoltmeter multipliers, corona-protected kilovoltmeter multipliers, hermetically sealed tubular resistors, Surge resistors, and Taylor Type corona-protected resistors. Combine close accuracy with safety and dependability. Types for voltages up to 200,000 volts or higher if required. Write for data on any type.

BOROHM® BORO-CARBON PRECISION RESISTORS

Produced by exclusive Shallcross process using automatic machine handling of resistors for maximum stability and accuracy. Temperature coefficient: 200 ppm per °C above 20K ohms; 100 ppm below 20K. 1/2, 1, & 2 watt sizes to MIL-R-10509A, Char. R. Write for Bulletin L-33.



CUSTOM-BUILT SPECIALTIES AND ENGINEERING SERVICE

Sealed networks, high voltage measuring equipment, special test sets, thermally controlled networks, precise decades and networks for computer devices, high resistance standards, and critical coil-assemblies are designed by Shallcross Engineers and built to meet your requirements. Forward your specifications for further information.



SHALLCROSS MANUFACTURING CO., 10 Jackson Ave., Collingdale, Pa.

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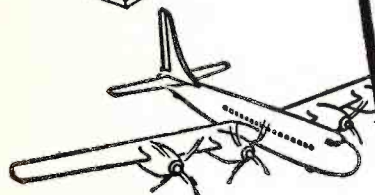
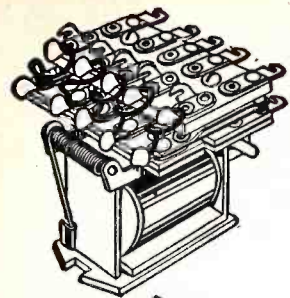
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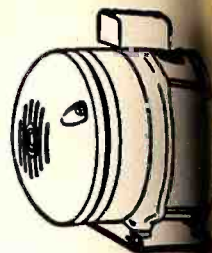


HUDSON TOOL and DIE COMPANY • Inc
118-122 SO. FOURTEENTH ST., NEWARK 7, NEW JERSEY



WANTED

Tough Insulation Problems



Put BH Fibreglas Sleeving or Tubing to work on tough insulation problems in your product or plant equipment and eliminate the possibilities of insulation breakdown. Whether the problem is excessive current load, vibration, extreme temperatures, greases, oils or moisture — or when flexi-

bility is essential — there is a BH product to solve it. Write for samples for laboratory and production testing. Include a few facts about your product, requirements, voltages and temperatures encountered. Let BH Fibreglas insulations do a better job for you. BENTLEY HARRIS MFG. CO., CONSHOHOCKEN, PA.

BH EXTRA FLEXIBLE FIBERGLAS SLEEVING

Remarkably flexible because no hardening varnish is used. Cuts without fraying and is non-combustible. Available in all colors. Basic sleeving withstands heat to 1200°F. Color unaffected up to 300°F.

BH SPECIAL TREATED FIBERGLAS SLEEVING

Heat resistant to 1200°F. Supplied in natural color only. Where colors are required, specify BH Extra Flexible. Cuts clean. Maximum flexibility. Unsaturated. Also available in 1/32" and 1/16" minimum wall.

OTHER BH FIBERGLAS PRODUCTS

Ben Har Special Treated Fibreglas Tubing: available in Grade A-1 — 7000V and Grade B-1 — 4000V. Flexibility combined with toughness. *Saturated Fibreglas Sleeving:* available in Grades C-1, C-2 and C-3. Special treated to prevent fraying.

BH "649"

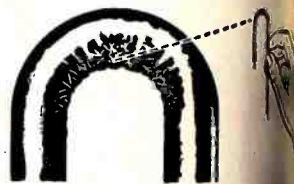
A superior Fibreglas insulation at the price of ordinary cotton-base or rayon-base insulations. Available in Grades A-1, B-1, C-1, C-2. In all sizes from No. 24 to 3/8" inclusive. Retains rated dielectric strength even after rough handling, bending. Little or no dielectric loss in product assembly or use. Non-burning, non-fraying, non-stiffening. Stays supple after baking 12 hours at 300°F. No flowing, softening or blistering after 15 minutes at 425°F. Unimpaired after baking at 220°F. to 230°F. for 1,500 hours.

BH "1151" SILICONE RUBBER FIBERGLAS TUBING AND SLEEVING

A revolutionary, new flexible Class H (inorganic) Silicone insulation suitable for continuous operation at 400°F. No dielectric loss despite handling or bending. Won't craze or crack when used to cover bent wire. No deterioration at high spot temperature of 500°F. for 4 hours. Grades H-A-1 through H-C-2. Available in colors — in continuous coils for economical cutting.



KNOT IT . . . Take a length of BH "649". Knot it. Pull it as tight as you can. Twist it. Then loosen the knot. There is no cracking. No change in the dielectric strength.



INSULATING A BEND? . . . This is proof of BH "649" superiority. Lengths of BH "649" and Varnished Cotton-base Tubing were slipped over wire of corresponding Awg. Samples were bent to a "U" with a 1/2" radius — then baked for 98 hours at 221°F. Visible failure occurred at the bend of the varnished tubing — not in BH "649." Tests showed that — the varnished tubing dropped to a voltage strength of 12,000 volts. The BH "649" tubing only dropped from 10,400 volts to 9,400 volts.

BH Fibreglas* SLEEVINGS

*BH Non-Fraying Fibreglas Sleeveings are made by an exclusive Bentley, Harris process (U. S. Pat. No. 2393530). "Fibreglas" is Reg. TM of Owens-Corning Fibreglas Co.

COUPON

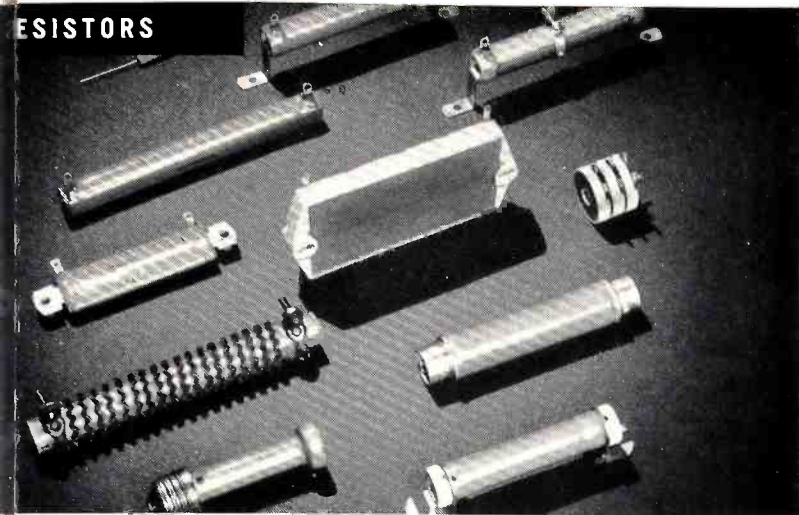
Bentley, Harris Manufacturing Company, Dept. BG-6, Conshohocken, Pa.

Please send literature and samples on BH "649" Fibreglas Tubing and Sleeving. BH "1151" Silicone Rubber Fibreglas Tubing and Sleeving. BH Special Treated Fibreglas Sleeving. BH Extra Flexible Fibreglas Sleeving. Ben Har Special Treated Fibreglas Sleeving. BH Rayon or Cotton-base Tubing and Sleeving.

Name _____ Company _____

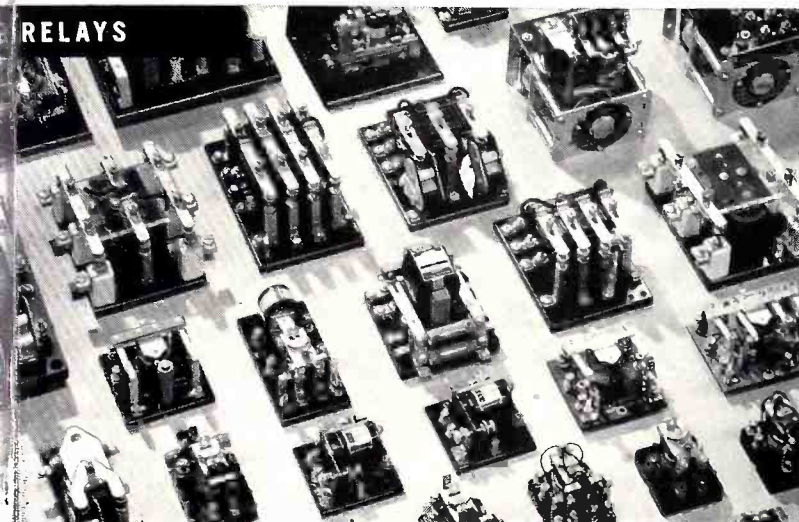
Street _____ City _____ Zone _____ State _____

RESISTORS



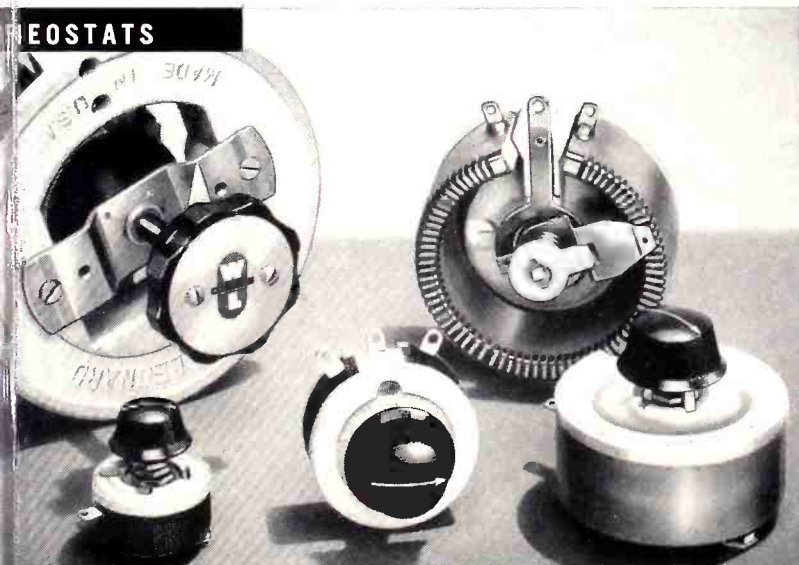
LARGEST SELECTION OF STOCK RESISTORS ever offered by any manufacturer is presented in W/L Catalog 15.

RELAYS



EXCEPTIONALLY LONG, TROUBLE-FREE LIFE is standard for W/L a-c and d-c magnetic relays. Write for data-packed Relay Catalog.

RHEOSTATS



CHROMIUM RING RHEOSTATS in 25 to 300 watt sizes are designed for smooth, gradual resistance change. Send for Bulletins 1105-16.

Know your three R's in control components ?

That's resistors, relays and rheostats we're talking about — and a man looking for these devices earns his A when he shops at Ward Leonard.

You get more performance per dollar . . . a wider selection of stock items . . . and quicker service on made-to-order controls from Ward Leonard than from anyone else.

Take a look at our basic three R's here. Then find out how well one of our components can meet your product's requirements by writing us. Ward Leonard Electric Co., 23 South St., Mount Vernon, N.Y.

4.38

**WARD LEONARD
ELECTRIC COMPANY
MOUNT VERNON, NEW YORK**



RHEOSTATS



RESISTORS



RELAYS



MOTOR CONTROLS



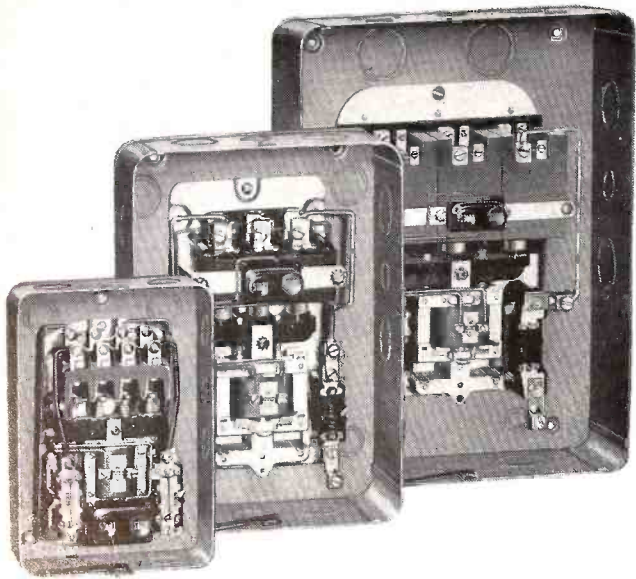
DIMMERS



CHROMASTER

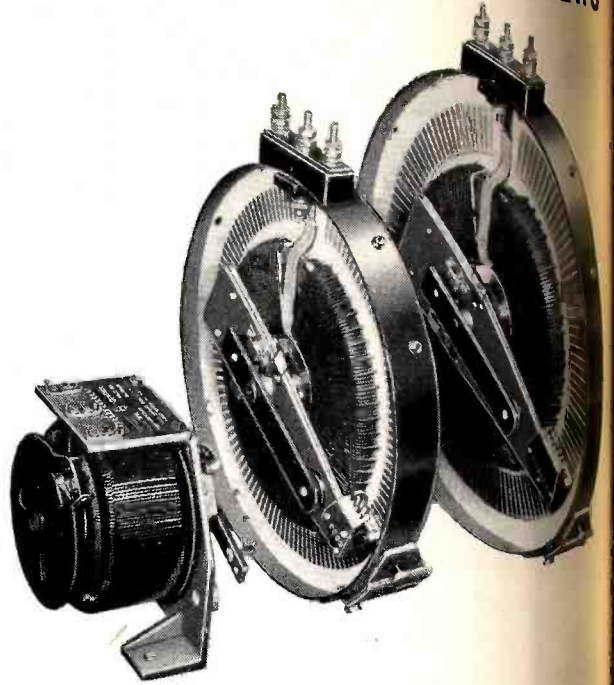
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MOTOR CONTROLS



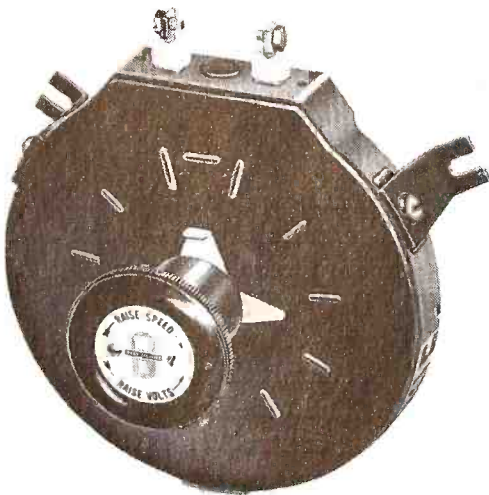
Full line of a-c and d-c Ward Leonard motor starters and controllers, magnetic contactors and control accessories.
Write for Ward Leonard Motor Control Catalog.

DIMMERS



Auto-transformer, reactance and resistance type dimmers for theatre, auditorium, studio lighting control.
Write for Ward Leonard Dimmer Bulletins 71-78.

RHEOSTATS—Plate Type



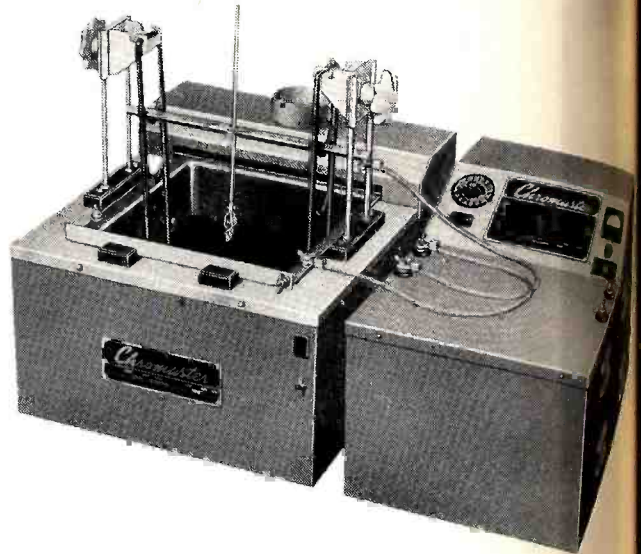
Complete line of Ward Leonard VITROHM pressed steel plate type rheostats meets every requirement.

Ward Leonard field rheostats are offered in several multiples of field resistance values to meet various operating conditions. They are designed for a straight line relation between the steps of the rheostat and the field current.

VITROHM rectangular contact rheostats have been developed where a finer degree of control in electrically operated equipment is necessary.

Write for Ward Leonard Rheostat Bulletin 60a.

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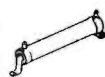
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MODEL PR-1000



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REGULATED OUTPUTS:
 0-100 VDC $\pm 10\%$ adj. Maximum current 1 amp. continuous.
 0-10 VDC $\pm 10\%$ adj. Maximum current 50 milliamperes.
 0-6.3 Volt @ 6.3 Amp.
REGULATION: Better than .03 of one percent.
RIPPLE: Less than 3 millivolts.
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 Product Listings in the
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 list of more than

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MODEL 330 • 250W OUTPUT

The Model 330 is a complete, crystal controlled, amplitude modulated transmitter specifically designed for continuous-service operation in Radio Paging or similar applications. The self-contained modulator unit has ample capacity to permit 100% voice modulation at the rated carrier power output of 250 watts. This Transmitter is available for operation on 35.58 or 43.58 megacycles or on any other spot frequency within the range of 30 to 50 megacycles. Special filters and equipment shielding combine to reduce spurious and harmonic emissions to a very low value.

GROUND-TO-AIR

MODEL 310 • 50W OUTPUT

The Model 310 provides a complete two-way fixed station for operation on any single frequency from 118 to 132 mcs. within the aviation bands. The elements contained within the single compact housing include an amplitude modulated transmitter rated at 50 watts output, a crystal controlled receiver, speech with audio limiting control equipment and necessary power supplies.

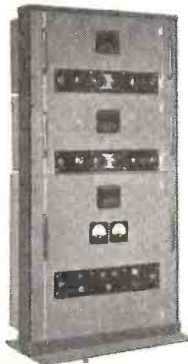
The equipment is not limited in scope to this specific application however since its dependability and excellent performance characteristics are equally applicable to point-to-point, base station-to-vehicular mobile or similar VHF services.



EXCITERS

FREQUENCY SHIFT (F S K)

CONVERTERS



MODEL A4920

Model A4920 is a complete frequency shift terminal offering extremely high selectivity. Uses two separate crystal controlled receivers to permit dual diversity reception. Commercial type construction throughout. Highly conservative component rating . . . trouble-free and proven performance.



MODEL 5123

Model 5123 is a low-cost FSK converter offering excellent selectivity and S-N-R. Provides DC output to operate teletype as well as tone output. Three, optional frequency, audio tones are available for operation directly into carrier telephone systems.



MODEL A4722

Model A4722 provides a standard FSK transmitting keyer with exceptional stability at a moderate cost. Range 2 to 6 or 2.5 to 7 mcs. Separate power supply is included.

OTHER FREQUENCY SHIFT EQUIPMENT
Fixed frequency receiver for use with Model 5123 Converter . . . Crystal controlled oscillator for general purpose communications receivers . . . tone keyers . . . line amplifiers.

6 METER, 50 WATT

CIVIL DEFENSE

2 METER, 50 WATT

MODEL 234 • 50W OUTPUT



The Model 234 is a complete xtal controlled transmitter with a power output of 50 watts, intended for C-D or amateur operation within the frequency range from 50 to 54 mcs. This unit is designed to fully meet FCDA specs. Has output filter for harmonic reduction, modulation clipper/limiter followed by BP filter. Audio range is limited to 3 kcs. Emission is 6A3, amplitude modulated with band-width attenuated beyond 6 kcs. Excellent construction, conservatively rated components. Unit is similar to Model 309.

MODEL 309 • 50W OUTPUT

Model 309 is a complete xtal controlled transmitter with a power output of 50 watts, intended for C-D or amateur operation within the frequency range from 144 to 148 mcs. This unit is designed to fully comply with FCDA specs. Has LP output filter for harmonic reduction, modulation clipper/limiter followed by BP filter. Audio range limited to 3 kcs. Emission is 6A3, amplitude, modulated with band-width attenuated beyond 6 kcs. A carefully designed, conservatively rated transmitter. Unit is similar to Model 234.



OTHER EQUIPMENT FOR C-D OR AMATEUR

Model 237, 250W output transmitter, 1.75 to 1.8 mcs . . . Model 222 Mobile Transmitter, 144-148 mcs . . . Model 226 Mobile Receiver, 144-148 mcs

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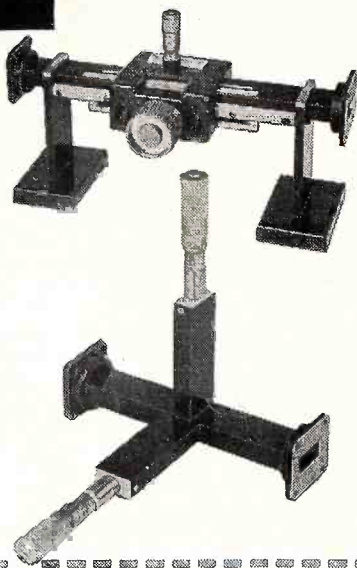
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Such as impedance measuring units incorporating the last word in precision ...

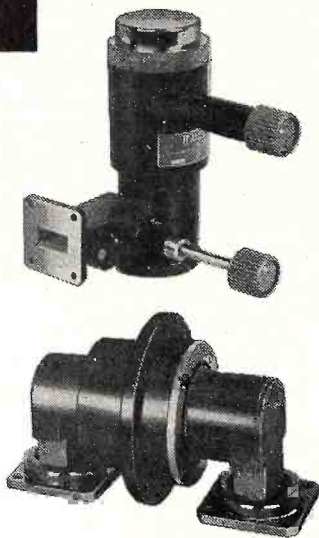
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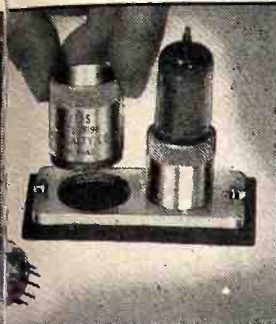
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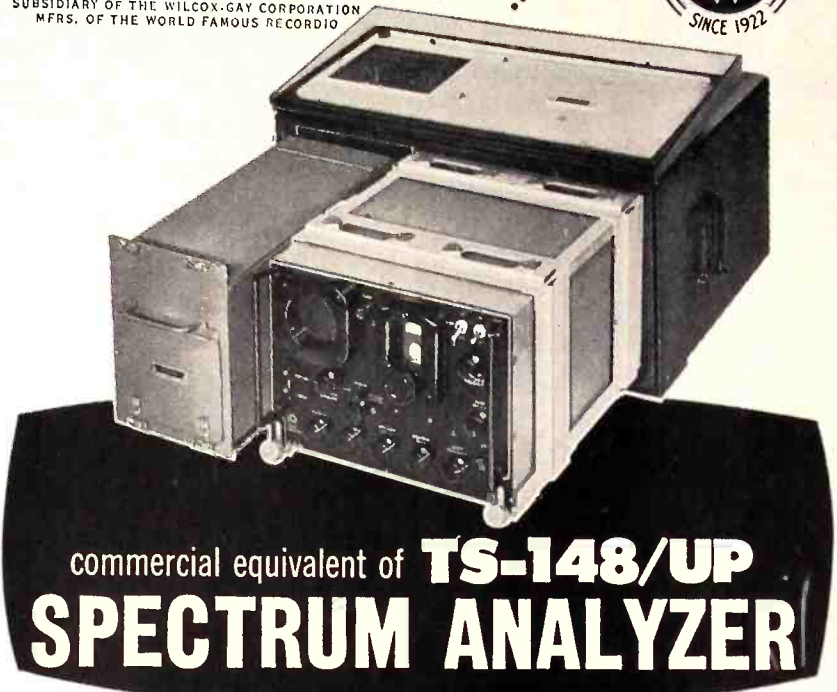
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SPECTRUM ANALYZER

ELECTRICAL DESCRIPTION—The Spectrum Analyzer, a self contained portable unit, is a very sensitive microwave receiver whose output is displayed on a 3 inch cathode-ray tube. The analyzer employs a resonant cavity type frequency-meter calibrated to read directly in megacycles, a frequency-swept (Velocity Modulated) R-F oscillator, a crystal mixer and associated plumbing, narrow band I-F amplifiers, and both regulated and unregulated power supplies.

This versatile equipment provides a visual indication of the spectra of R-F oscillators within the range of 8470 to 9630 megacycles per second as a function of power versus frequency. Other uses are:

1. As a frequency meter for measuring frequencies of resonant cavities, echo boxes, magnetrons, and local oscillators within the range of 8470 to 9630 MC/S. The Analyzer is so sensitive that a magnetron signal can usually be picked up at some distance from the source without the use of connecting cables.
2. As a measuring device for setting the frequency of radar and beacon local oscillators in radar sets.
3. As a frequency modulated oscillator for tuning T/R Boxes and R/T Boxes in transmitter converters. It can be used to check magnetron pulling and AFC circuits.
4. As a performance tester for local oscillator tubes. Type 2K25 and 723A/B tubes may be tested by inserting them in the analyzer R-F oscillator socket and checking their output curves on the analyzer scope.
5. As a means of measuring band-widths of resonant cavities.

MECHANICAL DESCRIPTION—The equipment is built into a sheet aluminum housing. The electrical components are built on an aluminum chassis located inside the removable dust cover. As many components as possible are mounted on terminal boards to facilitate quick and easy servicing. The Analyzer is transported with an Auxiliary and Spare Parts Box in a carrying case. The Analyzer is cushioned in a shock mounted carriage. This carriage can be removed from the carrying case if it is necessary to provide a shock mounting for the Analyzer when it is used outside of the carrying case.

SPECIFICATIONS

POWER SUPPLY: 50-1200 CPS; 105-125 volts; 125 watts.
TUNING RANGE at least 8470 MC/S to 9630 MC/S.
FREQUENCY METER RANGE: 8470 MC/S to 9630 MC/S.
SWEEP FREQUENCIES continuously variable from 10 to 30 CPS.
SPECTRUM AMPLITUDE ATTENUATION variable from 3 to 70 db, uncalibrated.
OPERATING TEMPERATURE RANGE: -40°C. to +55°C.
FREQUENCY SWING OF ANALYZER RF OSCILLATOR: 40 to 50 MC/S.
OVERALL I-F BANDWIDTH AT HALF-POWER POINTS: 50 KC/S.
R-F SENSITIVITY at least -40 dbm for 1 inch scope deflection.
MAXIMUM DISPERSION OF SPECTRA: 1.5 MC/S per inch.
POWER OUTPUT: Approx. 1 milliwatt.

TUBE COMPLEMENT

| | |
|-----------|---------------|
| 1 — 2K25 | 1 — 6SA7 |
| 1 — 2X2A | 3 — 6S17 |
| 1 — 3BP1A | 3 — 6SN7 — GT |
| 1 — 5R4GY | 1 — 6Y6 |
| 1 — 6AC7 | 1 — 884 |
| | 4 — 991 |

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- 1 — FLEXIBLE WAVEGUIDE 18" LENGTH
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- 1 — ANTENNA HORN
- 1 — POWER CABLE
- 1 — MIXER INPUT CABLE
- 1 — ANTENNA HORN CABLE

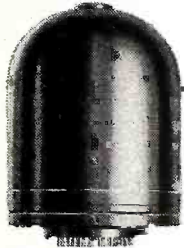
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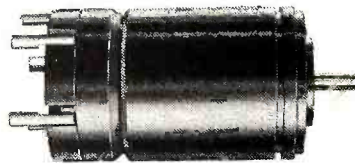
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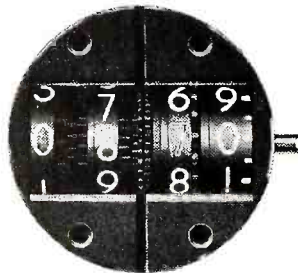
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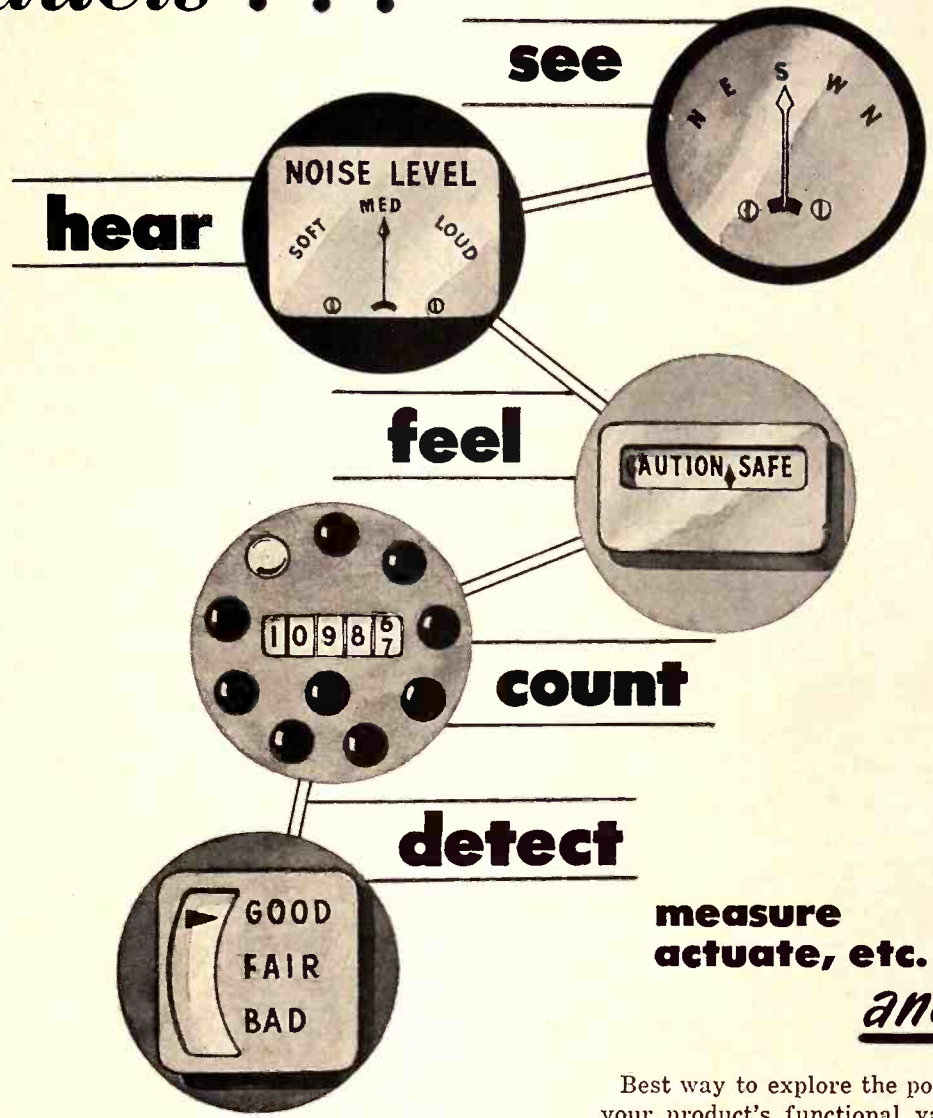
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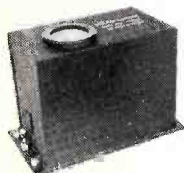
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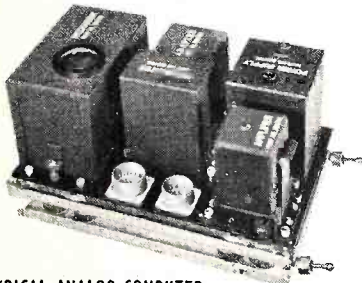
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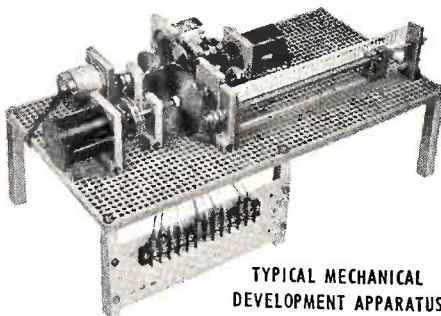
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BLILEY BH8
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SOLID ULTRASONIC DELAY LINES

Bliley solid ultrasonic delay lines provide precise delay intervals for electronic equipment.

Standard models, SDL-15 and SDL-16, are available immediately from production. Each unit is in an hermetically sealed case. Carrier frequency is 30 mc. Attenuation is 26 db into 1,000 ohms. Bandwidth is 8 mc.

Custom delay lines are engineered to specific requirements. When requesting quotations, please send full specifications.

Typical Bliley Custom-built Delay Line
(1,000 microseconds)



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2,000 yards, 6.102 microseconds



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Bliley ovens hold crystal temperatures within close limits for high stability. Designed especially for use with Bliley crystal units.



BLILEY TCO-1A

TECHNICAL LITERATURE AVAILABLE:

- Bulletin No. 47—Crystals, Ovens, Frequency Standards, MIL-type Specification Index
- Bulletin No. 45-A—Solid Ultrasonic Delay Lines
- Bulletin No. 46-A—"Bantam BX" Crystals
- Bulletin No. 44-A—Amateur, Standard Frequency, Ship-To-Shore, and TV Service Crystals

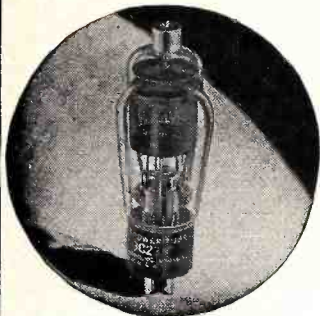


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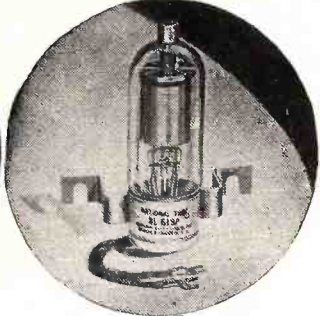
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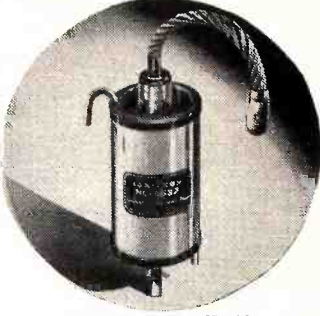
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3C23 THYATRON



NL-618P RECTIFIER
IGNITRONS



NL-5552 IGNITRON

MAXIMUM RATINGS

| Type Number | Supply Volts | Maximum Demand | Corresponding Current DC-Amps. | Maximum Current DC-Amps. | Corresponding Demand |
|-------------|--------------|-----------------|--------------------------------|--------------------------|----------------------|
| NL-1051 | 250-600 AC | 600 Kva | 30.2 | 56 | 200 Kva |
| NL-1052 | 250-600 AC | 1200 Kva | 75.6 | 140 | 400 Kva |
| NL-5551 | 250-600 AC | 600 Kva | 30.2 | 56 | 200 Kva |
| NL-5552 | 250-600 AC | 1200 Kva | 75.6 | 140 | 400 Kva |
| NL-5822 | 1500 peak | 1200 peak amps. | 16.0 | 56 | 336 peak amps. |

THYATRONS

| Type Number | Gas Filling | DC Output Amperes | Peak Amps. Rating | Peak Inverse Voltage | Filament Volts | Filament Amperes |
|-------------|--------------|-------------------|-------------------|----------------------|----------------|------------------|
| NL-3C23 | Arg. & Merc. | 1.5 | 6 | 1250 | 2.5 | 7 |
| NL-710/6011 | Arg. & Merc. | 2.5 | 30 | 1250 | 2.5 | 9 |
| NL-714 | Arg. & Merc. | 1 | 3 | 1250 | 2.5 | 5 |
| NL-715/5557 | Mercury | 1 | 3 | 5000 | 2.5 | 5 |
| NL-740 | Arg. & Merc. | 4 | 50 | 1250 | 2.5 | 16 |
| NL-741 | Mercury | 4 | 50 | 5000 | 2.5 | 16 |
| NL-760 | Arg. & Merc. | 6.4 | 77 | 1500 | 2.5 | 21 |
| NL-761 | Mercury | 6.4 | 77 | 5000 | 2.5 | 21 |

HALF-WAVE RECTIFIERS

| | | | | | | |
|------------------|---------|-----|-----|------|-----|-----|
| NL-249C | Mercury | .64 | 2.5 | 7500 | 2.5 | 7.5 |
| NL-615 | Mercury | 2.5 | 10 | 2000 | 2.5 | 7 |
| NL-617 | Mercury | 5 | 20 | 1000 | 2 | 12 |
| NL-618 | Xenon | 6.4 | 40 | 750 | 2.5 | 18 |
| NL-623 | Mercury | 15 | 45 | 500 | 2.5 | 20 |
| NL-627 | Mercury | 20 | 120 | 1000 | 2.5 | 26 |
| NL-633 | Mercury | 30 | 225 | 900 | 2.5 | 50 |
| NL-649/5834/249R | Mercury | 2 | 10 | 900 | 2.5 | 7 |

FULL-WAVE RECTIFIERS

| | | | | | | |
|--------|--------------|-----|------|-----|-----|----|
| NL-600 | Arg. & Merc. | 1 | 4 | 900 | 2.5 | 6 |
| NL-604 | Arg. & Merc. | 2.5 | 10 | 900 | 2.5 | 12 |
| NL-606 | Arg. & Merc. | 6.4 | 25.6 | 900 | 2.5 | 17 |

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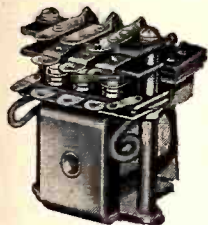
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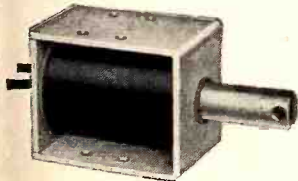
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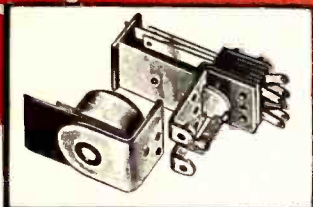
SERIES 335 RELAY



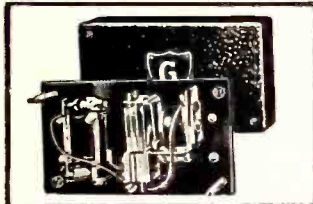
SERIES 395-P RELAY



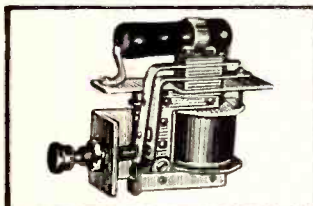
4AC SOLENOID



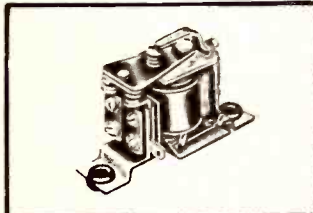
SERIES 200 with interchangeable coil and contact



T-110 TIME DELAY



X-100 ADJUSTABLE OVERLOAD

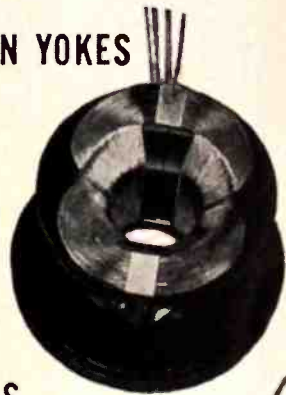


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Wound to form by a special process eliminating neck shadows, wire stresses and the usual difficulties encountered with power forming methods. Highest quality performance assured at lowest possible cost. Available from production for 70° or 90°.



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Over a million Focus Coils have rolled off Guardian's production lines into TV sets of leading manufacturers. With more than 75 types established as *Guardian Standard*, speedy delivery to meet today's replacement needs is a matter of routine.



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Stock these popular* attractively packaged Guardian radio relays. Write for Catalog R9-J.

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RELAYS SHOWN ABOVE CAN BE SUPPLIED WITH VARIOUS CONTACT ARRANGEMENTS. WRITE FOR DETAILS.

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✓ HERMETICALLY SEALED



✓ MIDGET LATCHING RELAY



✓ RADIO AND HIGH VOLTAGE



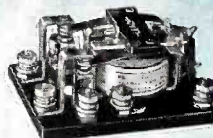
✓ ANTENNA TRANSFER



✓ MULTIPOLE RELAY



✓ MIDGET RELAY



✓ CIRCUIT CONTROL

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A. Fixed Wire-Wound—JAN and MIL approved in both inductive and non-inductive round and flat types.

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E. Wire-Wound Bobbin can be held to $\pm 0.1\%$ of specified re-

sistance tolerances or closer. Power ratings from $\frac{1}{4}$ watt.

F. Potentiometer Strip a flexible component designed for antenna rotators.

G. Specialized resistors designed by our engineering staff to answer circuit problems where size and space are factors.

H. CIMALOHM metal case chassis mounting resistors—wide ohmage and wattage ranges. Mounting centers made to specifications. Single, tapped and tapped-spaced.

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I. HAN-D-OHM 5 and 10 watt ceramic encased resistors to 5,000 ohms. Available with silicone coating for extra moisture-proofing and shock resistance.

Send your specifications for quantity prices

Resistors illustrated are some of the many specialized wire-wound resistors designed and mass-produced by CIMA for leading makers of electronic equipment.

CIMA has or can make a resistor to solve your wire-wound resistor problems. Resistors we manufacture comply with and exceed JAN and MIL specifications and standards of quality. CIMA'S lower price and dependable 10-day delivery puts the name CIMA first on the lists of many purchasing agents.

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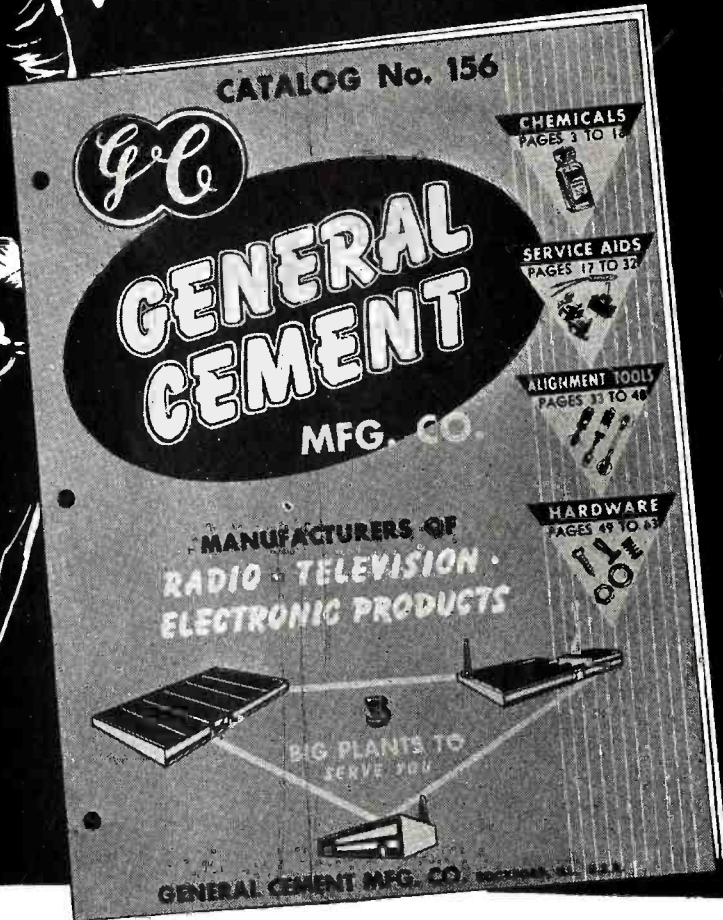
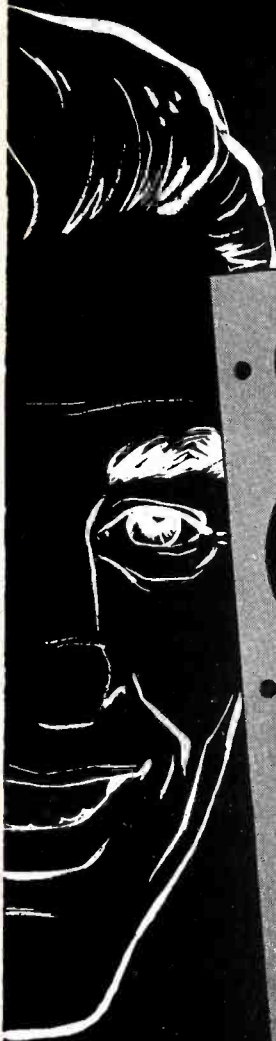
119 BRAINTREE STREET
ALLSTON 34, MASS.



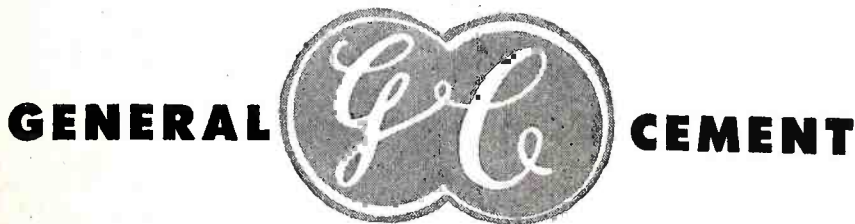
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* The one book that the technicians of the industry have come to rely on.

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ABC

History's first practical silver-zinc battery — Yardney Silvercel makes full use of ion exchange techniques perfected through Yardney research—and is available in capacities from 1/2 to over 100 ampere-hours. Models up to 1000 ampere-hours and more now under evaluation. Three series meet specific application needs:

LR — for long life at discharge currents smaller than the one-hour rate.

HR — for very high discharge currents.
 HRV* (*—longer life) — approaching high discharge requirements where extended life is desired.

Yardney Silvercel Batteries feature

LIGHT WEIGHT—up to 1/6 that of conventional batteries of comparable capacity.

SMALL SIZE—up to 1/5 that of conventional batteries of comparable capacity.

LONG LIFE—compares favorably with conventional batteries.

FLAT VOLTAGE—at any current drain to the end of full capacity.

HIGH DISCHARGE—continuous currents of more than ten times the numerical ampere-hour capacity value available, with little attendant capacity loss—substantially greater discharges for pulse applications.

EFFICIENT CHARGE—at currents up to one-hour-rate magnitudes.

WITHSTANDS STRESS—proven dependable under severe conditions of shock, vibration and acceleration.

WIDE TEMPERATURE RANGE—operates efficiently at 165° F; for low-temperature operation, may be short-circuit preheated within minutes at temperatures approaching—60° F with negligible capacity dissipation.

EXTENDED SHELF LIFE—up to one year in charged or discharged condition, with minimal preparation.

MINIMUM MAINTENANCE—requires little or no attention.

SPILL-PROOF CONSTRUCTION—essentially gas-free operation.

BATTERIES—available in cells or batteries of any voltage.

TYPICAL MODELS OF YARDNEY SILVERCEL



HR 85

| | |
|---------------------------------|--------------------|
| Nominal Capacity | 100.0 ampere-hours |
| Weight (filled) | 53.0 ounces |
| Height (overall) | 9.43 inches |
| Width (overall) | 2.81 inches |
| Depth (overall) | 1.81 inches |
| Recommended charging rate | 10.0 amperes |

Performance at discharge rate of 100.0 | 400.0 amperes:

| | |
|------|--------------------------------|
| 1.50 | 1.35 volts |
| 45.0 | 40.0 watt-hours per pound |
| 3.12 | 2.76 watt-hours per cubic inch |

**LIGHTEST
 MOST COMPACT
 STORAGE
 BATTERY
 EVER
 DEVELOPED**
Yardney
SILVERCEL



HR 05

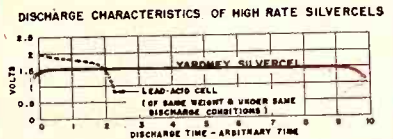
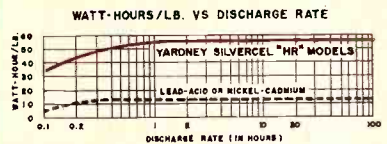
| | |
|---------------------------------|------------------|
| Nominal Capacity | 0.5 ampere-hours |
| Weight (filled) | 0.72 ounces |
| Height (overall) | 1.52 inches |
| Width (overall) | 1.10 inches |
| Depth (overall) | 0.55 inches |
| Recommended charging rate | 0.07 amperes |

Performance at discharge rate of 1.0 | 3.0 amperes:

| | |
|------|--------------------------------|
| 1.45 | 1.36 volts |
| 25.8 | 21.2 watt-hours per pound |
| 1.26 | 1.03 watt-hours per cubic inch |

For reserve-type Primary Batteries, Dry-Charged Secondary Batteries or Special Cell Models, as well as specific information on standard Yardney Silvercel batteries for your power requirements, won't you write our Engineering Department? There's no cost or obligation, of course.

Intensive research by the world-wide Yardney team of top scientists promises continuous progress in the battery field.



TYPICAL COMPARISON OF ELECTRO-CHEMICAL SYSTEMS
 (for approx. 40 AH output at approx. 120 amps, ±5 volts)

| | YARDNEY SILVER-ZINC | LEAD-ACID | NICKEL-CADMIUM | |
|-------------|---------------------|-----------|----------------|--------------|
| Size Req'd. | 100 | 550 | 400 | cubic inches |
| Wgt. Req'd. | 8 | 41 | 40 | pounds |

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headquarters for the world's largest line of Piezo crystal types, shapes, sizes and mounting styles

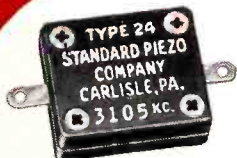


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It is quite possible that you are
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such presentation before one of
the fastest growing fields in the
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They have much evidence pointing
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NUCLEONICS

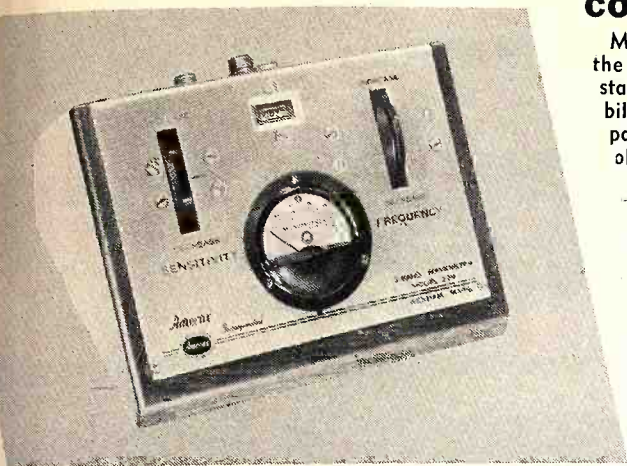
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Precision

MICROWAVE TEST EQUIPMENT . . . by Amerac



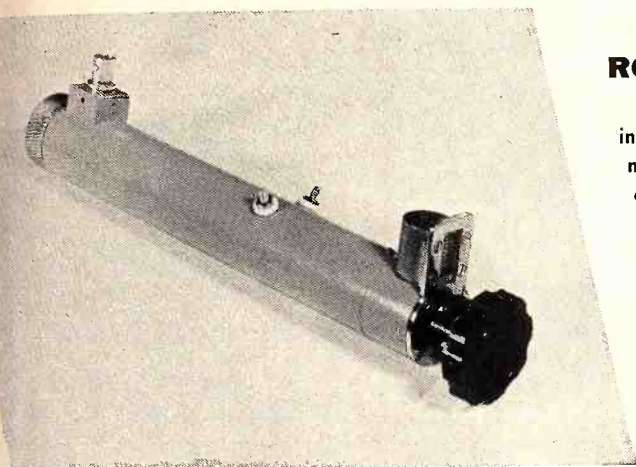
CO-AXIAL LINE WAVEMETERS

Models #227, #228, #229, #230 and #231—for use by either the transmission or absorption method, feature extreme mechanical stability, high accuracy of measurement and excellent frequency stability throughout the temperature range of 10°C to 40°C. Sloping panel, with easy-to-read Root counter and large meter makes for easy observation from most any angle.

Specifications

| Model | Frequency | Approximate Loaded Q | Length | Depth | Height |
|-------|-------------|----------------------|--------|--------|--------|
| #227 | 600-1800MC | 1000 | | | |
| #228 | 1700-2500MC | 1500 | 14" | 6-1/2" | 5-1/2" |
| #229 | 2300-4600MC | 2000 | 8" | 6-1/2" | 5-1/2" |
| #230 | 3500-6500MC | 2500 | 8" | 6-1/2" | 5-1/2" |
| #231 | 5800-8200MC | 2500 | 8" | 6-1/2" | 5-1/2" |

Type N constant impedance connectors for input.
BNC or UHF co-axial fittings for external video connection.
Power handling capability from 0.5mw to 1 watt (absorption).
Power handling capability from 1mw to 25 watts (transmission).

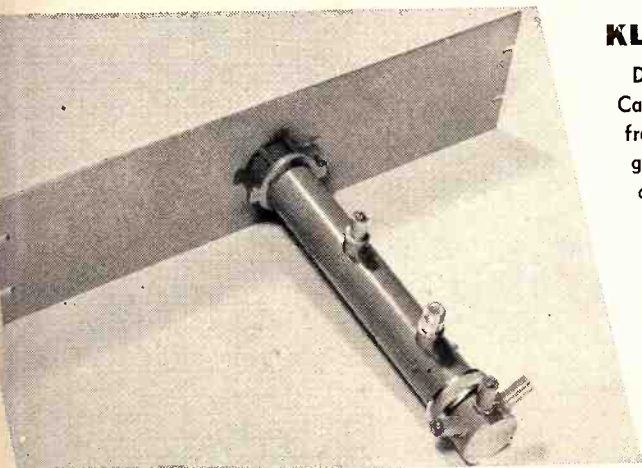


ROCKET TUBE CAVITY OSCILLATOR

The #192A is a small-size co-axial line cavity oscillator employing the Sylvania UHF Planar Triode, which provides a stable R.F. signal source in both a CW and a pulse model. It features a single knob control and utilizes fixed feedback.

SPECIFICATIONS

Frequency coverage—1000 to 4000 MC.
Tuning range—400 MC/S.
Pulse operation and max. plate operation—2000 V.
CW operation—250 V.
Output power—100 m.w. (average) at 4 Kmc.
Size—8" long, 1-5/16" diameter.



KLYSTRON CAVITY OSCILLATOR

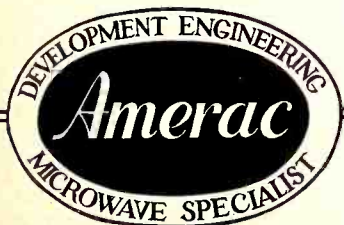
Designed to accommodate 6BL6 and 6BM6 klystrons, the Type 198 Cavity Oscillator gives a CW signal, tunable over a frequency range from 1 Kmc to 4 Kmc. Full performance from these tubes can be gained, due to Amerac's exacting accuracy of precision machining of component parts.

FEATURES and SPECIFICATIONS

Tuning accuracy in center frequencies of ± 1 MC.
A quick-release tube socket assembly for easy tube changing.
Standard rack panel for neat assembly into your equipment.
Silver plated conducting surfaces for high RF surface conductivity.
Rhodium flash for minimum corrosion.
Female type N co-axial output connection.
Size (including panel)—19" wide, 5-1/4" high, 12" deep.

Amerac also designs and manufactures—

Directional Couplers, Transmission Line Components, Antennas, Crystal Mixers, Attenuators, Waveguide Terminations (low and high power), Co-axial Tuners, Adapters and other precision microwave equipment.



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AMERICA'S LEADING MANUFACTURING SOURCE

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HANDSETS



**HANDSET
STYLE No. 333**

Designed to meet exacting requirements of specific, as well as general telephone applications. Made of polished "impact" phenolic. Available in numerous combinations of receivers and transmitters, switches, cordage, and termination—to meet all requirements.



HANDSET SWITCH—STYLE No. 238

Compact, positive-acting, long-life, shorting type switch with detent action. Contacts and shorting bar made of solid silver. Designed specifically for Roanwell Handsets, but can be used in many other applications.



HANDSET SWITCH—STYLE No. 961

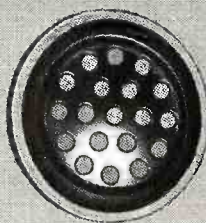
Exclusive leaf-type detent switch designed for long life, ease of operation, and reliability. Life to exceed 1 million operations under normal operating conditions. Similar switches available with detent soft-type action.



**CONFIDENCER
STYLE No. 916**

Noise-cancelling carbon microphone — designed, developed, manufactured exclusively by Roanwell. Permits speech to be transmitted clearly while neutralizing unwanted noises. Excellent anti-feedback characteristics.

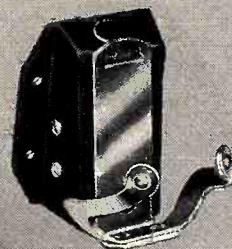
APPROVED FOR USE
BY THE BELL TELEPHONE COMPANIES



**CARBON
TRANSMITTER RF-1
STYLE No. 0037**

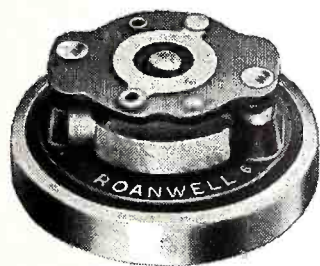
Newly developed, this extremely dependable microphone combines high output with long life.

Weather resistant, made to meet or exceed usual government specifications regarding humidity, salt spray and immersion. Electrically and mechanically interchangeable with most F-1 type transmitters.



**SWITCH BOX
HANGER ASSEMBLY
STYLE No. 916**

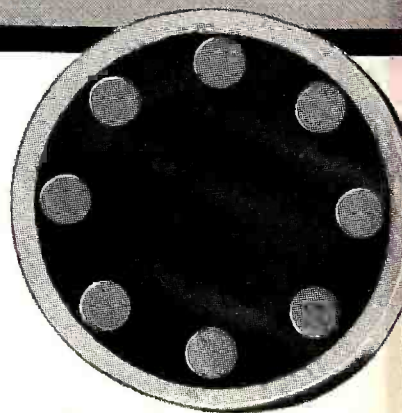
Main housing sturdily constructed of cast aluminum black wr... finish. Patented three point snap action prevents accidental ejection of handset. Sw... ing combinations from S.P.D.T. to T.P.



New

RA-1H RECEIVER

- Provides optimum audibility.
- Almost 4 times the acoustical energy supplied by receivers commonly in use.
- 5 D.B. higher output than standard receivers.
- Maximum performance even in high humidity.



PARTICULARLY USEFUL IN: Rural areas • Noisy locations
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telephones are connected in parallel • Centralized
dictating systems • Mobile radio equipment.

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PICTURE TUBES



RADIO TUBES



TV TUBES



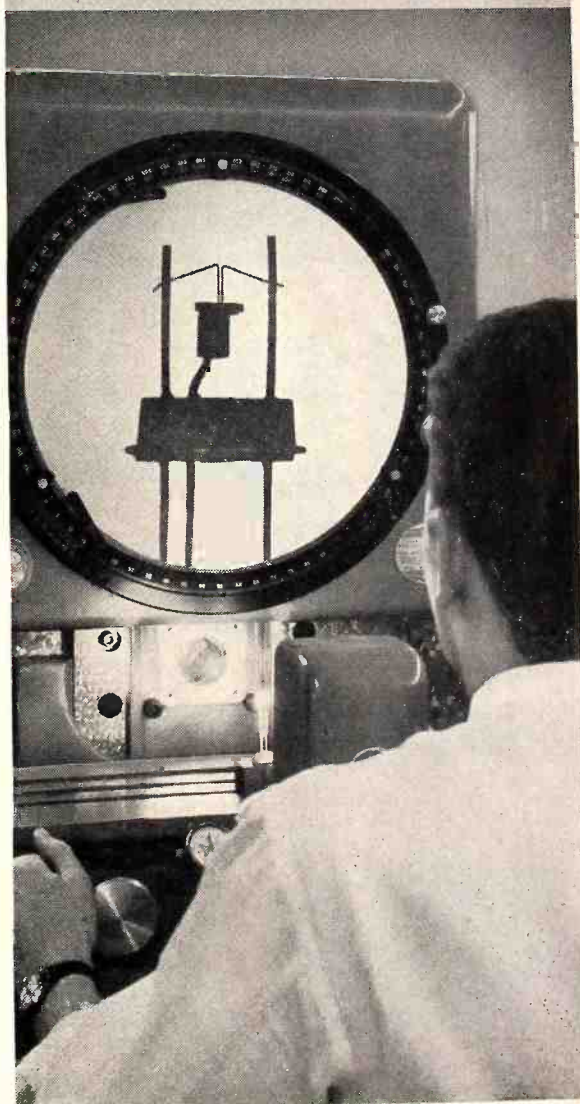
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**PLUS—ALL THE
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**TUNG-SOL ALSO MAKES ALL-GLASS SEALED BEAM LAMPS,
MINIATURE LAMPS AND SIGNAL FLASHERS.**



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THE MB MANUFACTURING COMPANY, INC.

1070 State Street, New Haven 11, Conn.

FOR VIBRATION TESTING



MODEL C-25

MB VIBRATION EXCITERS and CALIBRATORS

Producing results quickly, dependably, and often *visually*, MB Exciters have many important applications. For example: (1) Fatigue testing of mechanical and electrical structures to destruction under dynamic loads . . . (2) Determination of noise sources in automobiles, bodies and chassis, air conditioning equipment, blowers and similar equipment . . . (3) Shake testing of electrical components such as relays, switches or radio chassis to determine the ability of components to operate under high vibratory loads . . . (4) Determination of damping characteristics of rubber, steel, brass, plastics and other materials . . . (5) Identification of resonant frequencies and modes. These exciters also provide a convenient means for determining natural modes of wings, stabilizers, fin and control surfaces on aircraft structures.

These exciters are designed to conduct vibration tests to MIL-E-5272 and 41065-B and other specifications.

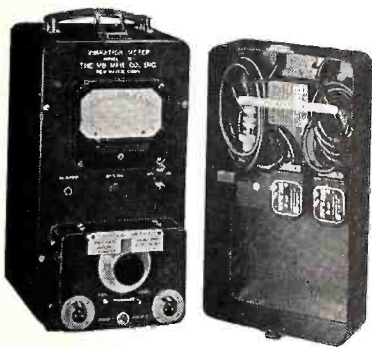
| Model No. | Rated Force | Total Stroke | Power Supply | Usable Range c.p.s. |
|-----------|-------------|--------------|--------------|---------------------|
| S-D. | 10 lb. | 1/2 in. | Electronic | 20 to 20,000 |
| C-31* | 25 lb. | 1/2 in. | Electronic | 4 to 70,000 |
| C-1* | 50 lb. | 1/2 in. | Electronic | 4 to 70,000 |
| C-11* | 50 lb. | 1/2 in. | Electronic | 4 to 70,000 |
| S-3 | 200 lb. | 1 in. | [Rotating] | 3 to 500 |
| C-5 | 750 lb. | 1 in. | [Rotating] | 3 to 2000 |
| C-25 | 2500 lb. | 1/2 in. | [Rotating] | 3 to 1000 |
| C-100 | 10,000 lb. | 1/2 in. | [Rotating] | 3 to 1000 |
| C-250 | 25,000 lb. | 1/2 in. | [Rotating] | 3 to 1000 |
| C-500 | 50,000 lb. | 1/2 in. | [Rotating] | 3 to 1000 |

* Also suitable for calibration of vibration pickups.

Model ACS-25 automatic cycling system for MB Models C-5 and C-25 Vibration Exciters. Exceeds requirements of MIL-E-5272. Provides for (1) Automatic control of frequency and acceleration or amplitude. (2) Automatic amplitude or acceleration control, manual frequency variation.



FOR VIBRATION MEASUREMENTS

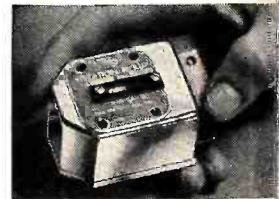


MB VIBRATION METERS

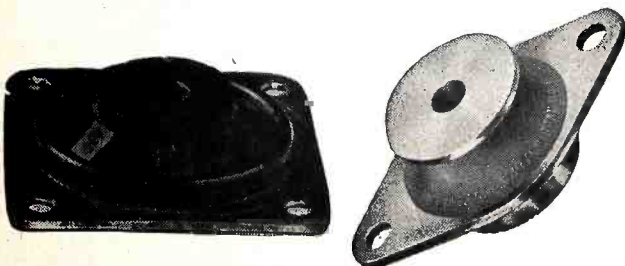
Precision Model M-1 and M-3 meters offer complete, compact units for vibration measurements when used in conjunction with the MB vibration pickup. Provide for accurate readings of accelerations, velocities, amplitudes. Simple, rugged, battery- or AC-operated, and portable, these instruments are outstanding for quality control or research.

MB VIBRATION PICKUPS

Are sensitive to low amplitude vibration . . . can be used with wide range of equipment . . . simple field adjustment converts from horizontal to vertical use . . . electrically damped . . . maintains calibration over wide temperature ranges . . . resonant frequency below 5 c.p.s. Several models including Type 122 which is usable at temperatures up to 500°F.



FOR VIBRATION ISOLATION



MIL-I-5432 (AN-I-16a) can be met with Isomode* Type 17 vibration isolator which are available for loadings of 1/2 to 100 pounds per unit. An outstanding feature is the equal spring rate in every direction.

ISOMODE* INDUSTRIAL-TYPE ISOLATORS—these units provide large deflection ratings together with high load capacity, small size, and exceptional stability. Have equal spring rates in all directions—mount at any angle—absorb vibration for every plane. Unit load-range 50 lbs. to 2500 lbs. Write for the *Isomode Design Chart*.

OTHER TYPE ISOLATORS also available, including units for special applications Isomode grommets; mounts with small dimensions. Contact us on your specific requirements.

* Reg. U. S. Pat. off.

THE **14** TH YEAR

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Only Karp can offer you these deep cuts in your enclosure costs

- Over 3000 stock tools and dies to cut your new tooling costs.
- Modern 88,000 sq. ft. plant and facilities make possible *mass production techniques*...cut your costs to the bone.
- Complete "one-stop" service: fabrication, finishing and assembly done in *one* plant—eliminates extra hidden handling costs.
- Our production output can be geared to your needs—cutting your inventory needs.
- Competent engineering and design counsel available.

Whether you need ten or ten thousand units, we can prove to you that our initial cost is low, and all the extra hidden costs are eliminated. Send us your blueprints, samples or sketches. Phone or write. A prompt quotation will follow.



KARP METAL PRODUCTS CO.

Division of H & B American Machine Company
215 63rd Street, Brooklyn 20, New York



KARP

enclosures reflect the skills within

FACILITIES FOR ENGINEERED SHEET METAL FABRICATIONS: In aluminum or steel • long run or short • spot, arc, gas or hellarc welding • any type finish.

- Modern plant—3 city blocks long
- Thousands of dies available
- Most modern of sheet metal fabricating equipment
- U. S. Air Force Certified Welding Facilities
- Air-conditioned spray room . . . complete baking facilities
- Complete sub-assembly facilities



MOST COMPLETE
FACILITIES FOR

ENGINEERED SHEET METAL FABRICATION



SILVER GRAPHALLOY BRUSHES

Silver GRAPHALLOY Brushes have been widely used because of LOW and CONSTANT CONTACT DROP, EXTREMELY LOW ELECTRICAL NOISE and LONG LIFE . . . especially for *rotating strain gages, thermocouple circuits, synchros, guided missiles, fire control equipment, transducers, radar and sonar equipment, servo-mechanisms, selsyns and dynamotors.*

The GRAPHALLOY process was patented 40 years ago and the name GRAPHALLOY has been our copyrighted trademark since that time. While this company has been selling GRAPHALLOY for the past 40 years recent developments have added materially to its properties. Over 30 grades are now used in a wide variety of applications. Silver GRAPHALLOY Brushes on 1/2"-diameter coin silver slip rings have been used successfully in highly critical electrical circuits at speeds up to 100,000 R.P.M. *Our Engineering Department will assist in determining the exact grade of GRAPHALLOY for your needs.*

BRUSH AND SPRING ASSEMBLY

Silver GRAPHALLOY Brushes are available for the standard Brush Holders described in the next column. Springs are supplied, as part of the assembly, to give the correct brush pressure for each brush application. Shunts are provided to insure extremely low electrical noise level and for carrying heavy currents.



COIN SILVER SLIP RINGS

Standard Coin Silver Slip Rings, both *cylindrical* and *flat* types, are illustrated below. We recommend the cylindrical type ring with three brushes per ring . . . spaced at 120°. The cylindrical type are designed for press fitting over standard steel shafting. The flat type rings are designed for nesting either on an insulated plate or for molding into insulation. Insulated slip rings of either type or slip ring assemblies can be furnished with leads attached.



FLAT



CYLINDRICAL

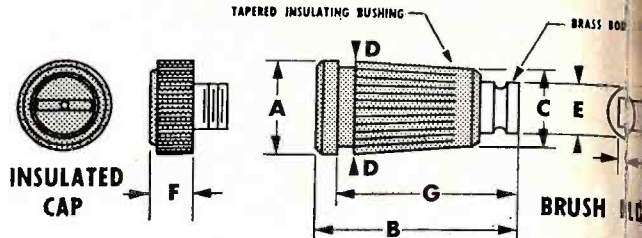
Standard "Flat" rings have 1/4" radial contact surface and 1/8" radial spacing between adjacent rings.

| Part No. | OD | ID | Thickness |
|----------|--------|--------|-----------|
| 168-20 | 1 1/4 | 3/4 | 3/16 |
| 168-32 | 2 | 1 1/2 | 3/16 |
| 168-44 | 2 3/4 | 2 1/4 | 3/16 |
| 168-56 | 3 1/2 | 3 | 3/16 |
| 168-68 | 4 1/4 | 3 3/4 | 3/16 |
| 168-80 | 5 | 4 1/2 | 3/16 |
| 168-92 | 5 3/4 | 5 1/4 | 3/16 |
| 168-104 | 6 1/2 | 6 | 3/16 |
| 168-116 | 7 1/4 | 6 3/4 | 3/16 |
| 168-128 | 8 | 7 1/2 | 3/16 |
| 168-140 | 8 3/4 | 8 1/4 | 3/16 |
| 168-152 | 9 1/2 | 9 | 3/16 |
| 168-164 | 10 1/4 | 9 3/4 | 3/16 |
| 168-176 | 11 | 10 1/2 | 1/4 |
| 168-188 | 11 3/4 | 11 1/4 | 1/4 |
| 168-200 | 12 1/2 | 12 | 1/4 |
| 168-212 | 13 1/4 | 12 3/4 | 1/4 |
| 168-224 | 14 | 13 1/2 | 1/4 |
| 168-236 | 14 3/4 | 14 1/4 | 1/4 |
| 168-248 | 15 1/2 | 15 | 1/4 |
| 168-260 | 16 1/4 | 15 3/4 | 3/16 |
| 168-272 | 17 | 16 1/2 | 3/16 |
| 168-284 | 17 3/4 | 17 1/4 | 3/16 |
| 168-296 | 18 1/2 | 18 | 3/16 |
| 168-308 | 19 1/4 | 18 3/4 | 3/16 |
| 168-320 | 20 | 19 1/2 | 3/16 |

| Part No. | OD | ID | Width |
|----------|---------|--------------|-------|
| 116-4** | 1/4 | .127/.123 | 3/16 |
| 116-6** | 3/4 | .252/.248 | 3/16 |
| 116-8** | 1/2 | .377/.373 | 3/16 |
| 116-10** | 5/8 | .502/.498 | 3/16 |
| 116-12** | 3/4 | .627/.623 | 3/16 |
| 116-14** | 7/8 | .752/.748 | 1/4 |
| 116-16** | 1 | .877/.873 | 1/4 |
| 116-18** | 1 1/8 | 1.000/.996 | 1/4 |
| 116-19 | 1 3/16 | 1.000/.996 | 1/4 |
| 116-23 | 1 1/4 | 1.250/1.246 | 1/4 |
| 116-27 | 1 11/16 | 1.500/1.496 | 1/4 |
| 116-35 | 2 3/16 | 2.000/1.996 | 1/4 |
| 116-43 | 2 11/16 | 2.500/2.496 | 1/4 |
| 116-52 | 3 1/4 | 3.000/2.996 | 5/16 |
| 116-60 | 3 3/4 | 3.500/3.496 | 5/16 |
| 116-68 | 4 1/4 | 4.000/3.996 | 5/16 |
| 116-76 | 4 3/4 | 4.500/4.496 | 5/16 |
| 116-84 | 5 1/4 | 5.000/4.996 | 5/16 |
| 116-92 | 5 3/4 | 5.500/5.496 | 5/16 |
| 116-102 | 6 1/4 | 6.000/5.996 | 5/16 |
| 116-118 | 7 1/4 | 7.000/6.996 | 5/16 |
| 116-134 | 8 3/4 | 8.000/7.996 | 5/16 |
| 116-150 | 9 3/8 | 9.000/8.996 | 5/16 |
| 116-166 | 10 3/4 | 10.000/9.996 | 5/16 |

**Available either in solid coin silver or coin silver .025 thick inlaid over brass.

BRUSH HOLDER AND CAP



| Brush Holder & Cap. No. | Brush Size | Suggested Minimum Ring Width | **Mounting Hole Diameter | Distance of Brush Holder to Slip Ring | A | F | B | C | G |
|-------------------------|------------|------------------------------|--------------------------|---------------------------------------|------|------|--------|------|--------|
| 14326 | 1/4 sq. | 3/16 | 1 3/32 | 1/16 min. | .437 | 3/16 | 7/8 | .406 | 2 5/32 |
| 11509* | 5/32 sq. | 3/16 | 1 3/32 | 1/16 min. | .437 | 3/16 | 7/8 | .406 | 2 5/32 |
| 11570* | 3/16 sq. | 1/4 | 7/16 | 1/16 min. | .484 | 3/16 | 7/8 | .438 | 2 5/32 |
| 11527* | 1/4 sq. | 5/16 | 9/16 | 1/8 min. | .615 | 3/16 | 1 5/16 | .563 | 1 7/16 |

Other sizes available.

*Shunts are provided. **Mounting hole diameter for brush holder dimension.

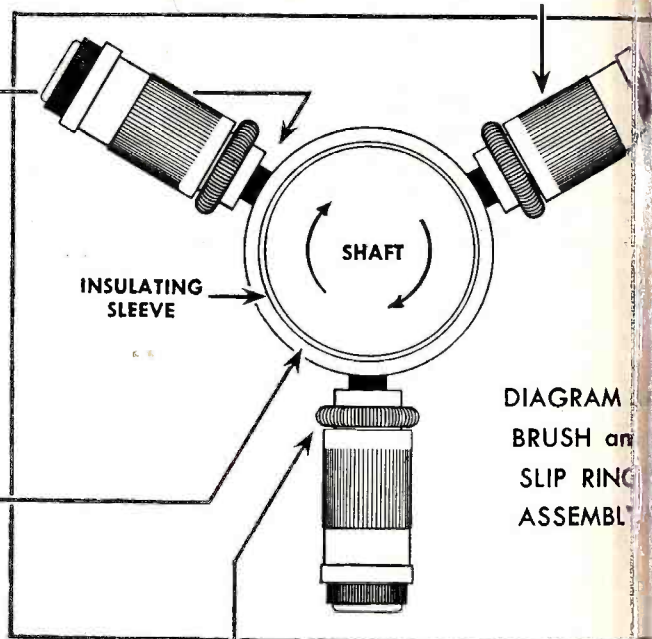


DIAGRAM BRUSH and SLIP RING ASSEMBLY



CONNECTOR (GARTER SPRINGS)

| Garter Spring Connectors | Brush Size | Brush Holder |
|--------------------------|------------|--------------|
| 127-9 | 1/8 sq. | 14326 |
| 127-9 | 5/32 sq. | 11509 |
| 127-10 | 3/16 sq. | 11570 |
| 127-14 | 1/4 sq. | 11527 |

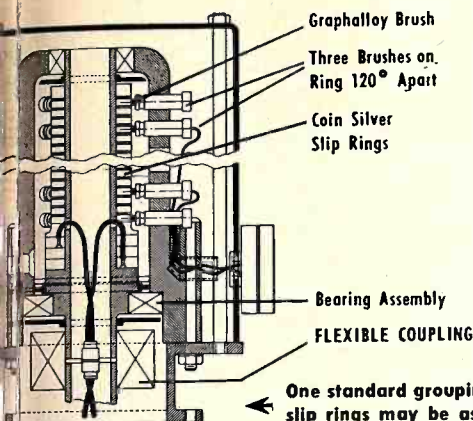
These silver plated coil spring Connectors make for positive electrical connection to the brass body of the brush holder by snapping into the groove on the holder. The connecting lead can be pre-soldered to the Connector.

***CALL ON OUR 40 YEARS OF DESIGN EXPERIENCE FOR HELP IN SOLVING YOUR BRUSH PROBLEMS**

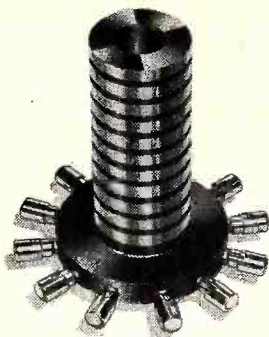
and SILVER GRAPHALLOY Brush assemblies

for your "TOUGH"
electrical
requirements

CYLINDRICAL SLIP RING and BRUSH HOLDER ASSEMBLY



CYLINDRICAL SLIP RING ASSEMBLY

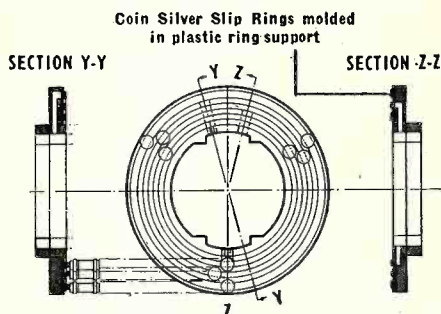
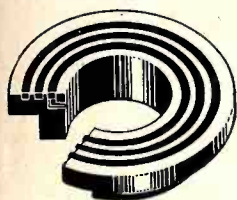


GRAPHALLOY BRUSHES

are used on
such equipment as . . .

- SERVO SYSTEMS
- SYNCHROS
- SELSYNS
- CHOPPERS
- RADAR
- GYROS
- INVERTERS
- PULSE SYSTEMS
- GUIDED MISSILES
- DIGITAL COMPUTERS
- WAVE GUIDES
- SONAR
- TRANSDUCERS
- TORQUE INDICATORS

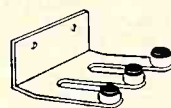
FLAT SLIP RING ASSEMBLY



ating equipment, the measure-
of changes in resistivity or emf
be brought out by means of slip
and brushes. To obtain intelli-
information under these condi-
the extraneous circuit noise level
be kept below the signal level.
Silver GRAPHALLOY Brushes, in
ination with Coin Silver Slip
n, reduce the extraneous noise
to extremely low values, they have

been used extensively in rotating strain
gage and thermocouple applications.
Noise levels as low as 20-50 microhms
in a 100-ohm circuit have been obtained
with Silver GRAPHALLOY Brushes. (We
will develop and manufacture your
complete assembly!) Commutators and
choppers for the production of square
wave signals or for pulse systems can
be manufactured to meet your circuit
requirements.

"We Specialize in
Special Designs"

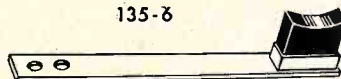


135-18



135-10

135-8



Our Engineering Department
will develop or
assist you in developing
special components
and assemblies.

GRAPHALLOY CONTACTS

GRAPHALLOY, because of its inherent non-weld-
ing and arc-quenching characteristics, is used
for contacts . . . especially where positive
action of a circuit is required.

GRAPHALLOY BUSHINGS

With military requirements demanding operation
from -100° to $+250^{\circ}$ F., GRAPHALLOY Bush-
ings, which are inherently oilless, have been used
successfully in potentiometers, synchros, cameras,
instruments and missiles. Properly designed
GRAPHALLOY Bushings will take considerable
shock (50 g.). They have replaced oil-lubricated
bushings for the following reasons:

- 1) Lower friction at room temperatures.
- 2) No oil to solidify at low temperatures.
- 3) No oil to carbonize at prolonged elevated temperatures.



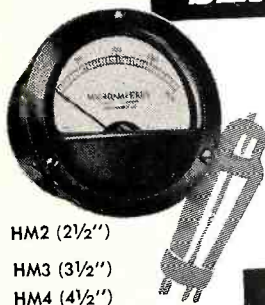
GRAPHITE METALLIZING CORPORATION

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YONKERS, N. Y.

marion

ELECTRICAL INDICATING INSTRUMENTS

HERMETICALLY SEALED METERS



HM2 (2½")
HM3 (3½")
HM4 (4½")

HM Series

Marion true glass-to-metal hermetic sealing . . . long accurate life under adverse conditions of humidity, dust and hazardous atmospheres. Magnetically shielded.

MARION "REGULARS"

phenolic and metal cases — designed for commercial application where hermetic sealing or ruggedization is not required. All Alnico construction. Reliable high torque performance in moderate price range.



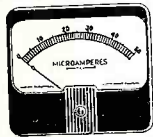
MODEL 52N Series 52

Accurate dependable service in smallest practical form. Model 52N (JAN MR24, MR25) 2½" round phenolic case. 52S, 2½" rectangular phenolic case. Model 52 RM, narrow flange brass case. Also available in brass case without flange, 52RMS.



MODEL 53SN Series 53

Standard 3" commercial rectangular type (Model 53SN). Also available in 3½" round phenolic case (Model 53RN) (JAN MR34, MR35).



MODEL 55

Large 4½" x 4½". Critical readability on 100° scale. Extremely accurate. Most popular case style in test equipment field.



MODEL 56

6½" x 5¼" phenolic case. Large open face with 100° scale in 5½" arc.

MODEL 57

8½" x 7" open face, extra long scale. More than a mere overgrown 3" meter. Enlarged pole shoes — higher torque movement — higher damping factor. Accurate within 1%.

marion

ELECTRICAL INSTRUMENT COMPANY

402 Canal Street, Manchester, New Hampshire, U. S. A.

RUGGEDIZED METERS



HS Series

HERMETICALLY SEALED



HS1 (1½")



HS2 (2½")

HS3 (3½")

Exceptionally accurate and sensitive even under extreme conditions of shock, vibration, mechanical stress or strain, weather and climate. Outstanding performance in any application. 2½" and 3½" types have standard A.S.A. dimensions.

RELATED PRODUCTS

NULL INDICATORS



HS2 (2½") HS3 (3½")

Ruggedized, Hermetically Sealed. Used primarily as bridge and potentiometer balance indicators and where an instrument with very high sensitivity about 1 µa per mm. or higher; the meter's shaded pole face shielded core construction give sharply logarithmic attenuation as it departs from null point and provides ample overload protection.



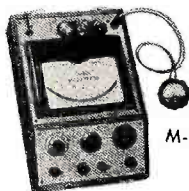
HM2ET (2½")



HM3ET (3½")

ELAPSED TIME INDICATORS

Two sizes, 2½" and 3½" standard JAN dimensions panel mounting. Operating range -55°C to +85°C. Hermetically sealed. Magnetically shielded. Registers in 1/10 hour steps to 9999.9 or hours to 99999. Durable, self-starting synchronous motor. Available for 110-125, 220-250 volts, 50 or 60 cycles A.C.



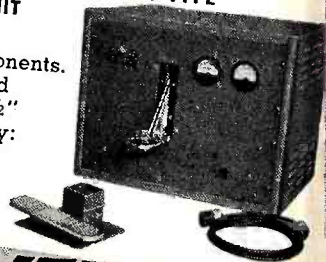
M-2

MULTI-RANGE METER TESTER

The only instrument of its type available today. Used for production inspection and calibration of electrical indicating instruments and to maintain high measuring standards in the laboratory. It is also used as a precise production limit bridge permitting acceptance tolerances to be set for any value from ±½% to ±20%. Overall accuracy for current measurements better than ¼ of 1%. Resistance range 0-5000 ohms. Power source 115V AC 60 cycles. Complete, no accessories required.

MARION MODEL PM1 PORTABLE BENCH TYPE INDUCTION SOLDERING UNIT

Improves and speeds up production of small components. Low cost, low powered and portable. Size: 15¾" x 21½" x 15". 150 lbs. Power supply: 115 volts 60 cycles. Draws 775 watts full load, 100 watts standby.



NEW CONFUSION-PROOF MARION MULTI-DIALER

A multi-scale instrument which exposes only one scale to view at a time. At the same time, it automatically switches the appropriate internal or external circuitry associated with that scale. Five self-contained ranges in volts, milliamperes, microamperes and amperes. Ideal for panel, bench or field.

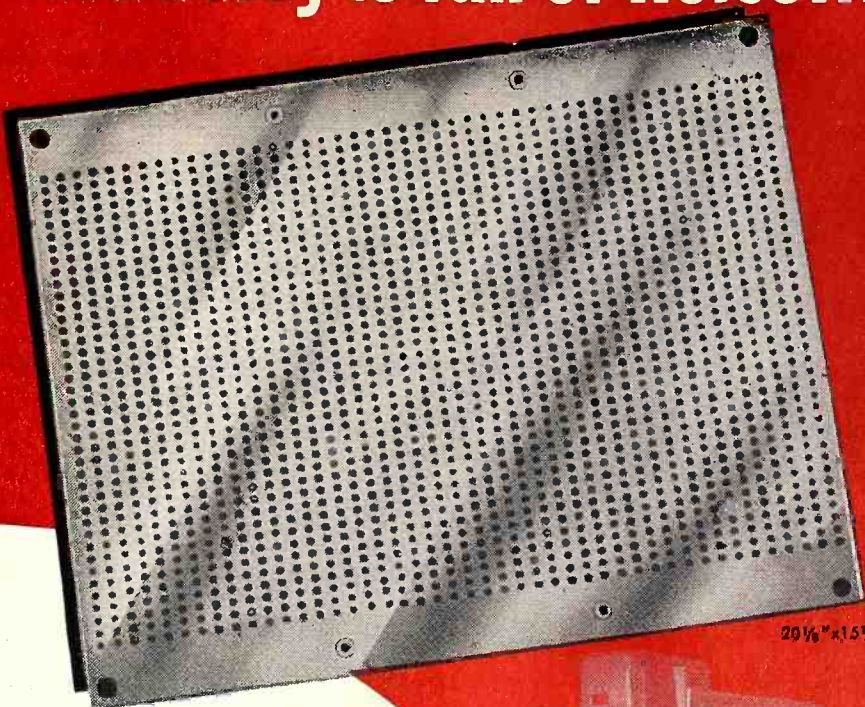
Ready reference
 throughout
 the year . . .
 this Mid-June
 issue of
 electronics
 serves
 the industry
 in the
 exacting manner
 that it
 requires.

The
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BUYERS'
GUIDE

provides
 users
 with the
 only
 accurate and
 reliable
 product source
 available
 in the
 electronic
 industry . . .

They refer
FIRST
 to the
'GUIDE.'

This Story is full of Holes...



20 1/8" x 15 1/8"

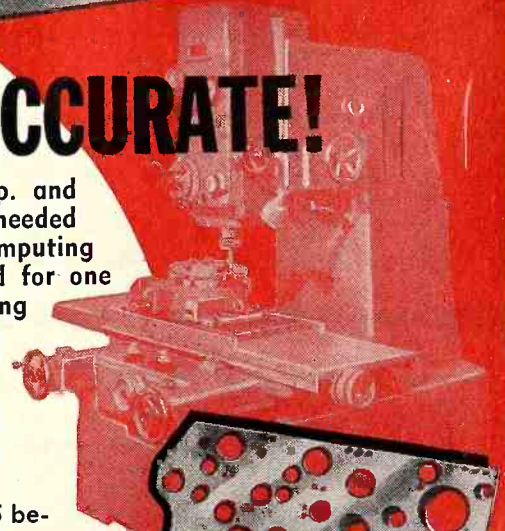
1808 to be ACCURATE!

WHEN the W. L. Maxson Corp. and Electronic Associates, Inc., needed gear train panels for their computing machines, *Universal* got the nod for one important reason! Notwithstanding our years of experience and an enviable record for producing precision work—this job came to us primarily because we had the equipment* to do the job best!

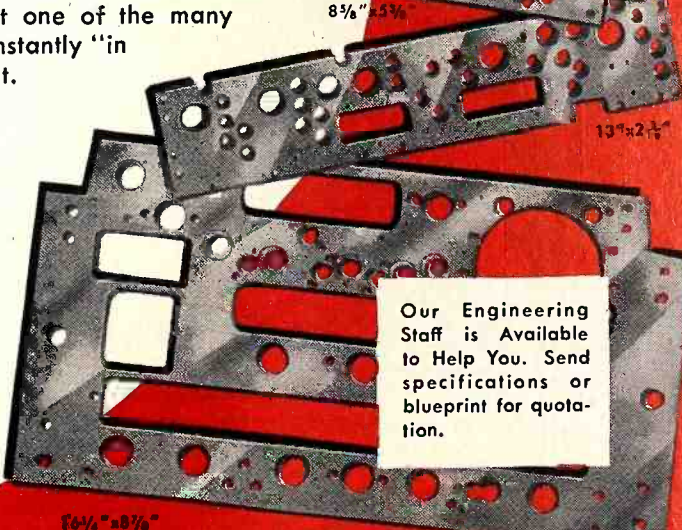
Working to tolerances of $\pm .0005$ between holes, and tolerances of $\pm .0002$ on the holes themselves, interior of holes finished to 4 to 6 micro-inches, this precision boring operation on 24 ST aluminum sheets, is just one of the many jobs of its kind constantly "in work" at our plant.

*The Jig Boring Machine that handled this job, employs an optical measuring system instead of the usual threaded spindle, this machine attains an accuracy undreamed of in other machines.

"Accuracy Is A
 UNIVERSAL Word"



8 3/8" x 5 3/8"



13" x 2 1/2"

Our Engineering Staff is Available to Help You. Send specifications or blueprint for quotation.



Universal Manufacturing Company, Inc.

402 HILLSIDE AVENUE • HILLSIDE, NEW JERSEY

Thomas A. Edison, Inc.



Hermetically Sealed Time Delay Relay Model 501

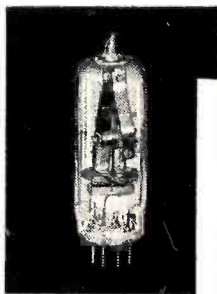
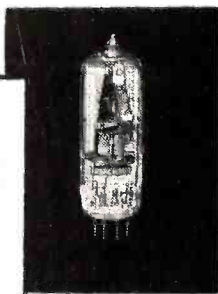
Glass-sealed thermal action Time Delay Relay for cathode protection in high voltage electronic tubes, gyro erection in fire control stabilizers and aircraft autopilots and hundreds of other uses involving a time delay in an electrical circuit

Time delays: 2 seconds to 300 seconds
 Heater voltages: 6.3, 26.5, and 117 (intermediate voltages available in special circumstances)
 Heater input: 5 watts nominal (continuous excitation)
 Contacts: SPST normally open or closed. Rated for 6 amperes max. at 450 volts a.c. or d.c.
 Ambient: Compensated for -60°C to $+85^{\circ}\text{C}$

Vibration: Resists $\frac{1}{16}$ " overall amplitude at 55 cps
 Tolerances: Heater voltage: Positive contact operation with variation of $\pm 10\%$. Operating time at 25°C : $\pm 15\%$
 Weight: $1\frac{1}{4}$ to $2\frac{1}{4}$ oz.
 Seated height: $3\frac{1}{4}$ "
 Diameter: 1.275 " max.
 Shock: Resists impact of 50g

Model 207

Time delays: 5 seconds to 75 seconds
 Heater voltages: 6.3 and 27.5
 Heater input: 2.0 watts (continuous excitation)
 Contacts: SPST normally open or closed. Rated for 2.5 amperes at 125 volts a.c.; 1.0 ampere at 125 volts d.c.
 Ambient: Compensated for -60 to $+85^{\circ}\text{C}$
 Base: 7-pin, miniature button
 Seated height: $2\frac{1}{4}$ "
 Diameter: $\frac{3}{4}$ "



Model 216

Time delays: 5 seconds to 75 seconds
 Heater voltages: 6.3 and 27.5
 Heater input: 2.0 watts (continuous excitation)
 Contacts: SPST normally open or closed. Rated for 2.5 amperes at 125 volts a.c.; 1.0 ampere at 125 volts d.c.
 Ambient: Compensated for -60 to $+85^{\circ}\text{C}$
 Base: 9-pin, miniature button
 Seated height: $2\frac{3}{8}$ "
 Diameter: $\frac{7}{8}$ "

Hermetically Sealed Thermostats



STANDARD TYPE S1-1A

Manufacturing tolerance: $\pm 0.5^{\circ}\text{C}$
 Control sensitivity: Will hold temperature within $\pm 0.1^{\circ}\text{C}$ at low contact load when properly applied.
 Maximum load: 1.0 ampere
 Maximum voltage: 250 a.c. or d.c.
 Maximum temperature: 150°C
 Diameter: .388 inches
 Length: $2\frac{1}{2}$ inches

STANDARD TYPE S1-2A

Manufacturing tolerance: $\pm 2.5^{\circ}\text{C}$
 Maximum load: 0.5 ampere; 1.0 ampere in alarm service
 Maximum voltage: 250 a.c. or d.c.
 Maximum temperature: 190°C
 Diameter: .388 inches
 Length: $2\frac{1}{2}$ inches
Approved by Underwriter's Labs for fire alarm service with spacing 15 feet between centers.

MECHANICALLY SEALED Miniature, Model 210

Manufacturing tolerance: $\pm 5^{\circ}\text{F}$
 Maximum load: 1 ampere at 115 volts a.c.; 0.5 ampere at 115 volts d.c.
 Maximum voltage: 125 a.c. or d.c.
 Maximum temperature: 350°F
 Adjustability: $\pm 60^{\circ}\text{F}$ from original setting
 Diameter: .318 inch
 Length: $1\frac{1}{4}$ inches



STANDARD TYPE D8-2A

Manufacturing tolerance: $\pm 2.5^{\circ}\text{C}$
 Maximum load: 8.0 amperes
 Maximum watts: 1000
 Maximum voltage: 250 a.c. or d.c.
 Maximum temperature: 320°C
 Diameter: .550 inch
 Length: $2\frac{1}{4}$ inches

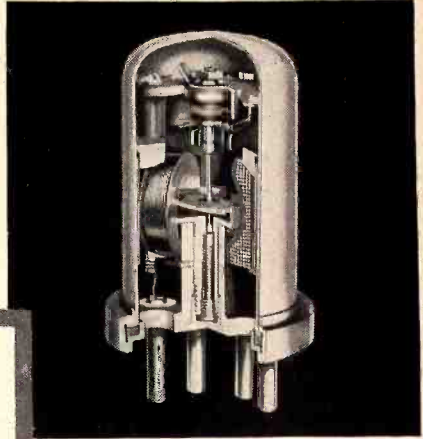


These precision-made bimetallic thermostats are permanently sealed in glass and enclosed with an inert arc-quenching gas fill. Because of their lifetime protection from corrosion and contaminating substances, these thermostats are widely used as fire detectors in marine and industrial applications. Their close temperature control and exceptional stability make them ideal for crystal oven ambient compensation and other exacting temperature control requirements.

When ordering any thermostat, give following information:
 Operating voltage and current
 Temperature setting
 Contact arrangement—are contacts to open or close on rising temperature?
 Medium to be used in
 Load—resistive or inductive

Magnetic Control Relay

Operates directly from thermocouple, photocell or vacuum tube plate current. Polarized operating characteristic makes it ideal for use as a null detector in a universally-used bridge circuit. Power consumption is so low that this Relay can be used in servo control circuits without danger of draining power from other system components. These relays have proved their reliability in military and commercial airborne applications.



Closing current: Contacts close on input currents from 30 microamperes d.c. to 12.5 milliamperes d.c. Lower closing currents available in special circumstances.

Coils: Formvar-coated copper. Resistances from 0.5 ohm to 23,600 ohms. Normal closing current may be increased 10,000 times without adverse effects.

Contacts: SPST or SPDT normally open or closed. Rated for 1/3 ampere at 28 volts d.c.

Hermetically sealed: Model 220

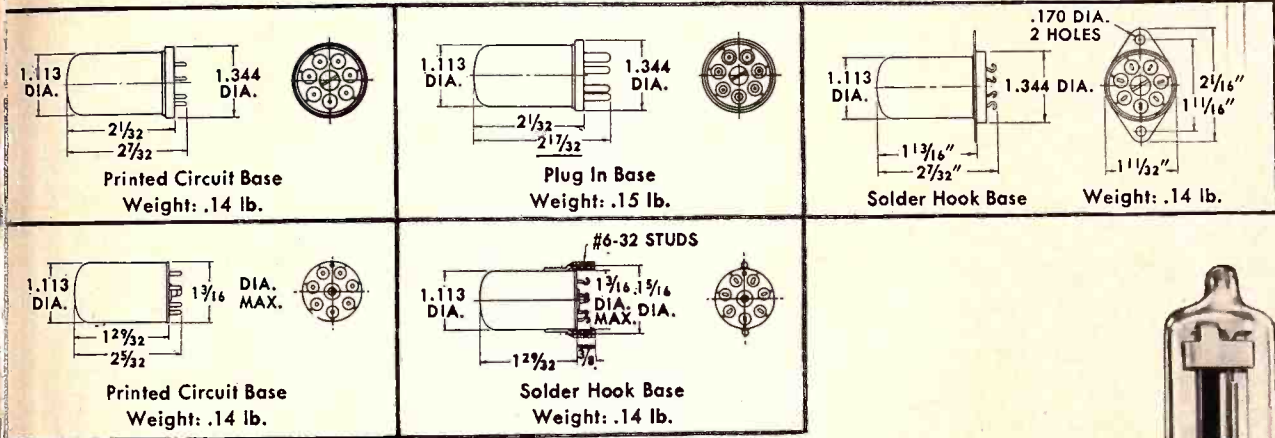
Gasket sealed: Model 219

Vibration and shock resistant: Relay unenergized will withstand shock of 50g in all planes without damage or change in calibration.

When ordering, specify:

MODEL NO. TYPE OF BASE CONTACT STYLE COIL RESISTANCE CLOSING CURRENT IN MILLIAMPERES D.C.

Model 219—Gasket Sealed



Model 220—Hermetically Sealed

Antenna Cutout

Hermetically sealed in glass

A SPST normally closed hot-wire type of switch designed to open when the current through the wire reaches 125 milliamperes. This switch serves to protect the input circuits of radio receivers from over-currents induced by nearby transmitting equipment.

Operating current: 125 milliamperes ± 0.25
 Ambient: Compensated for 0 to 90° C
 Shock: No damage under 60g in all directions
 Diameter: 9/16 inch nominal
 Length: 2 1/8 inches



A GREAT NAME CONTINUES GREAT



NEW ACHIEVEMENTS

Thomas A. Edison

OTHER EDISON INSTRUMENT DIVISION PRODUCTS

Aircraft Fire Detection • Temperature Monitors • Electrical Resistance Temperature Detectors
 Aircraft Temperature Indicators & Engine Gages

Thomas A. Edison, Inc.

INSTRUMENT DIVISION

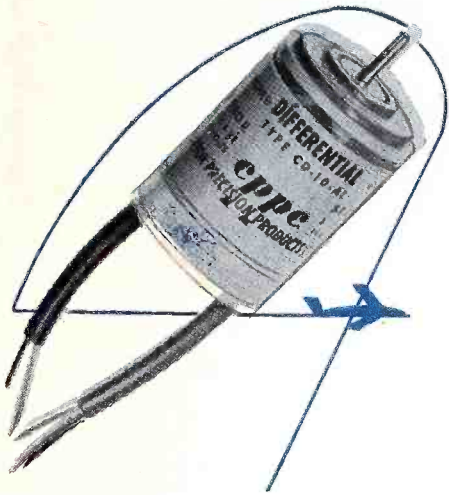
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NEW **HIGH** ACCURACY

Low Weight

SYNCHRO SERIES . . .



Now available for the first time is the accuracy of the Size #15 1.437" diameter synchro in a Size #10 unit, at a saving of almost $\frac{2}{3}$ the weight.

Product of the same engineering team which designed and put into production the original high precision synchro, this complete synchro series is immediately available on a production basis at comparable cost.

SYNCHRO PROGRESS

| Year | Error Spread | Weight | Cost |
|--------|--------------|--------|---------|
| 1917 | 6° | 5 lbs. | ? Marks |
| 1934 | 6° | 10 oz. | \$65.00 |
| 1941 | 2½° | 5 oz. | \$20.00 |
| 1944 | 20' | 5 oz. | \$35.00 |
| 1954 | 10' | 1¼ oz. | \$25.00 |
| Coming | 5' | 5 oz. | ? |
| Coming | 15' | 1¼ oz. | ? |

For full engineering information, drawings, electrical characteristics, etc., of these, also of our size #11 and size #15 — synchro series — and miniature A.C., servo and D.C., motors, write or telephone A. E. Hayes Sales Dept. Telephone MAdison 6-2101.

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CLIFTON PRECISION PRODUCTS CO., INC.
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CARDWELL

- UHF Converters
- Air Capacitors
- Meteorological Systems
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THE ALLEN D. CARDWELL ELECTRONICS PRODUCTIONS CORP.

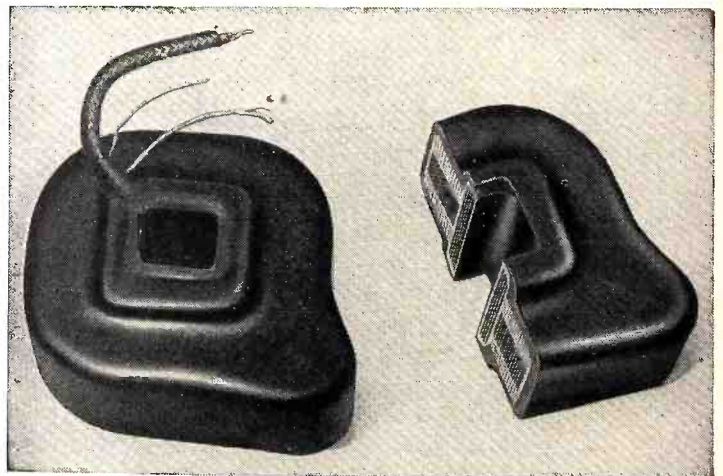
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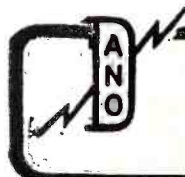
DANO COILS WITH MOLDED COVERS MEAN EXTRA ELECTRICAL INSULATION



The tough, rugged cover on these Dano coils gives your assurance of *extra* electrical insulation with freedom from moisture—another Dano feature insuring coil quality and dependability. Makers of wide variety of coils, Dano is always ready to accommodate your exact coil specifications. Quotations without obligation!

- Form Wound
- Paper Section
- Acetate Bobbin
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- COILS FOR HIGH TEMPERATURE APPLICATIONS

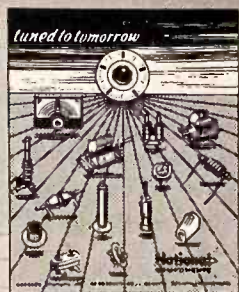
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National

NATIONAL COMPANY, INC., 61 SHERMAN ST., MALDEN 48, MASS.



Products

**SPECIAL PURPOSE
INSULATED WIRE**

THE WILLIAM

AND CO., INC., WILLIMANTIC, CONN.

MINIATURIZATION WIRE

Specially developed for use in electronic equipment within the range of -55°C to $+105^{\circ}\text{C}$, and maximum operating voltage of 600 volts rms. This wire is ideal for use in miniaturized equipment as both hook-up wire and lead wire for transformers, chokes and other components, where space is at a premium and operating temperatures are high. Available in both standard and flexible . . . in solid colors or candy striped with 1, 2 or 3 tracers.

The primary insulation is Turbo 540, an extruded polyvinyl chloride compound that is resistant to the effects of water, aircraft engine fuels, hydraulic fluids, ethylene glycol, dilute acids, alkalis and fungus. Over the primary insulation there is an extruded jacket of nylon to give added mechanical protection and abrasion resistance.



| Brand Part No. | Approx. AWG | Stranding | Nom. Cir. Mil Area | Pri. Ins. Min. Wall | Nylon Min. Wall | Max. O.D. |
|----------------|-------------|-----------|--------------------|---------------------|-----------------|-----------|
| MM300607N | 30 | 7/38 | 110 | 0.006 | 0.002 | 0.035 |
| MM270607N | 27 | 7/35 | 221 | 0.006 | 0.002 | 0.040 |
| MO2606N | 26 | Solid | 254 | 0.006 | 0.002 | 0.040 |
| MO2406N | 24 | Solid | 404 | 0.006 | 0.002 | 0.048 |
| MM240619N | 24 | 19/36 | 475 | 0.006 | 0.002 | 0.048 |
| MM240607N | 24 | 7/32 | 442 | 0.006 | 0.002 | 0.048 |
| MO2207N | 22 | Solid | 642 | 0.007 | 0.003 | 0.058 |
| MM220719N | 22 | 19/34 | 754 | 0.007 | 0.003 | 0.058 |
| MM220707N | 22 | 7/30 | 707 | 0.007 | 0.003 | 0.058 |
| MO2007N | 20 | Solid | 1020 | 0.007 | 0.003 | 0.068 |
| MM200719N | 20 | 19/32 | 1200 | 0.007 | 0.003 | 0.068 |
| MM200707N | 20 | 7/28 | 1120 | 0.007 | 0.003 | 0.068 |
| MO1807N | 18 | Solid | 1620 | 0.007 | 0.003 | 0.079 |
| MM180719N | 18 | 19/30 | 1920 | 0.007 | 0.003 | 0.079 |
| MM180707N | 18 | 7/26 | 1780 | 0.007 | 0.003 | 0.079 |
| MO1607N | 16 | Solid | 2580 | 0.007 | 0.003 | 0.088 |
| MM160719N | 16 | 19/29 | 2410 | 0.007 | 0.003 | 0.088 |
| MO1408N | 14 | Solid | 4110 | 0.008 | 0.003 | 0.103 |
| MM140819N | 14 | 19/27 | 3840 | 0.008 | 0.003 | 0.103 |
| MM120819N | 12 | 19/25 | 6080 | 0.008 | 0.004 | 0.126 |

LOW TENSION AIRCRAFT WIRE & CABLE

The conductor consists of a stranded tinned copper wire. The primary insulation is an extruded polyvinyl chloride compound that is resistant to the effects of water, oils, aircraft engine fuels, hydraulic fluids, ethylene glycol, alcohol, dilute acids, alkalis and fungus. This wire has excellent electrical properties and has a

rated working voltage of 600 volts rms. This wire has a protective nylon jacket, with or without shield.

For general use. Low tension construction has excellent electrical and physical characteristics, light weight, and low space

BULLETIN A-4662 GIVES MORE INFORMATION ABOUT TURBO INSULATION. COPIES AVAILABLE ON REQUEST.

Made To MIL-W-5086 & MIL-C-7078 Specifications

| Brand Part No. | | Type | Wire Size | Stranding | Nom. Ins. Thickness | Max. O.D. Mil-W-5086 | N. Lbs. MIL-C-7078 |
|----------------------|------------------------|-------|-----------|-----------|---------------------|----------------------|--------------------|
| No Shield MIL-W-5086 | With Shield MIL-C-7078 | | | | | | |
| 6622AN19N | 6622AN19NS | AN-22 | 22 | 19/34 | .015 | .076 | |
| 6620AN19N | 6620AN19NS | AN-20 | 20 | 19/32 | .015 | .086 | |
| 6618AN19N | 6618AN19NS | AN-18 | 18 | 19/30 | .015 | .096 | 1 |
| 6616AN19N | 6616AN19NS | AN-16 | 16 | 19/29 | .015 | .109 | 1 |
| 6614AN19N | 6614AN19NS | AN-14 | 14 | 19/27 | .015 | .124 | 2 |
| 6612AN19N | 6612AN19NS | AN-12 | 12 | 19/25 | .015 | .144 | 3 |



Products

**GENERAL PURPOSE
HOOK-UP WIRE**

THE WILLIAM AND CO., INC., WILLIMANTIC, CONN.

HOOK-UP WIRE FOR RADIO & TELEVISION INDUSTRY

| Approx. AWG Size | Stranding | Min. Ave. Ins. Thickness | Nom. Plastic O.D. | 80°C Brand Pt. No. | 90°C Brand Pt. No. | 105°C Brand Pt. No. |
|------------------|-----------|--------------------------|-------------------|--------------------|--------------------|---------------------|
| 26 | Solid | 0.016 | 0.050 | 802616 | 902616* | 502616*** |
| 26 | 10/36 | 0.016 | 0.052 | 88261610 | 99261610* | 55261610*** |
| 24 | Solid | 0.016 | 0.054 | 802416 | 902416* | 502416*** |
| 24 | 7/32 | 0.016 | 0.057 | 88241607 | 99241607* | 55241607*** |
| 22 | Solid | 0.016 | 0.059 | 802216 | 902216* | 502216*** |
| 22 | 7/30 | 0.016 | 0.065 | 88221607 | 99221607* | 55221607*** |
| 20 | Solid | 0.016 | 0.067 | 802016 | 902016* | 502016*** |
| 20 | 10/30 | 0.016 | 0.071 | 88201610 | 99201610* | 55201610*** |
| 18 | Solid | 0.016 | 0.074 | 801816 | 901816* | 501816*** |
| 18 | 16/30 | 0.016 | 0.080 | 88181616 | 99181616** | 55181616*** |
| 16 | Solid | 0.016 | 0.086 | 801616 | 901616* | 501616*** |
| 16 | 26/30 | 0.016 | 0.095 | 88161626 | 99161626* | 55161626*** |
| 14 | 41/30 | 0.016 | 0.112 | 88141641** | 99141641** | 55141641** |
| 26 | Solid | 0.031 | 0.080 | 802631 | 902631 | 502631 |
| 26 | 10/36 | 0.031 | 0.084 | 88263110 | 99263110 | 55263110 |
| 24 | Solid | 0.031 | 0.084 | 802431 | 902431 | 502431 |
| 24 | 7/32 | 0.031 | 0.088 | 88243107 | 99243107 | 55243107 |
| 22 | Solid | 0.031 | 0.089 | 802231 | 902231 | 502231 |
| 22 | 7/30 | 0.031 | 0.094 | 88223107 | 99223107 | 55223107 |
| 20 | Solid | 0.031 | 0.096 | 802031 | 902031 | 502031 |
| 20 | 10/30 | 0.031 | 0.102 | 88203110 | 99203110 | 55203110 |
| 18 | Solid | 0.031 | 0.104 | 801831 | 901831 | 501831 |
| 18 | 16/30 | 0.031 | 0.111 | 88183116 | 99183116 | 55183116 |
| 16 | Solid | 0.031 | 0.115 | 801631 | 901631 | 501631 |
| 16 | 26/30 | 0.031 | 0.126 | 88163126 | 99163126 | 55163126 |
| 14 | Solid | 0.031 | 0.129 | 801431 | 901431 | 501431 |
| 14 | 41/30 | 0.031 | 0.142 | 88143141 | 99143141 | 55143141 |
| 12 | 65/30 | 0.031 | 0.162 | 88123165 | 99123165 | 55123165 |

NOTE—All wire available with an overbraid. Add suffix to Part No. to indicate required overbraid

| Overbraid | Suffix | Approximate O.D. Increase |
|-----------|--------|---------------------------|
| Cotton | "C" | 0.030 |
| Rayon | "R" | 0.015 |
| Glass | "G" | 0.015 |

OTHER FAMOUS TURBO INSULATING PRODUCTS

- 1. TURBO OZONE—low temperature plastic tubing
- 2. TURBO OLEX—General purpose plastic tubing
- 3. TURBO "PE"—High frequency plastic tubing
- 4. TURBO THERM 105—High temperature (105°C) plastic tubing
- 5. TURBO TRANS 105—Special high temperature (105°C) plastic tubing
- 6. TURBO 117 SILICONE RUBBER—glass braid tubing
- 7. TURBO SIL—High temperature (200°C) silicone varnish impregnated glass braid tubing
- 8. TURBO MARKERS—Long-life slip-on identification markers for electrical uses
- 9. TURBO INSULATED WIRES
- 10. TURBO GLASS SLEEVING AND TUBING
- 11. TURBO HT GLASS SLEEVING—Specially-treated unimpregnated glass braid to minimize fraying.
- 12. TURBO VARNISHED SATURATED SLEEVING & TUBING
- 13. TURBO CAMBRIC CLOTHS, TAPES, PAPERS
- 14. TURBO MICA

INSTRUMENT Power Supply TRANSFORMERS



These transformers, developed by Triad especially for voltage regulated power supplies, cathode ray tube supplies, preamplifiers, and VT voltmeters, are among the more than

50 NEW Items in
Triad's **NEW** 1954
Catalog



Write for your copy of Catalog TR-54 — it completely describes the finest line of transformers made.



4055 Redwood Ave. • Venice, Calif.



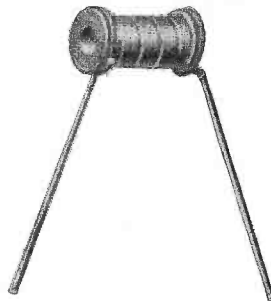
put your mind at ease with ... METAL FILM RESISTORS

NOBLELOY TYPE NF

A miniature type precision resistor with metal film deposited on a low loss ceramic carrier. A layer of vitreous enamel protects metal film against unusual atmosphere conditions. Specifically designed to insure initial accuracy and high stability. Available in ½ watt ratings, resistance range 1 ohm to 3 megohm and tolerances of 1%, 2% and 5%.



NOBLELOY TYPE X & PX



Another resistor with metal film deposited on low loss ceramic carrier with excellent characteristics for critical applications. Available in two styles type X and PX. Watt ratings ½, 1, 2 and 5 watt. Resistance range 1 ohm to 30 megohm. Tolerances of ½%, 1%, 2% and 5%.

Write for catalog

CONTINENTAL CARBON, INC.

13900 LORAIN AVE. CLEVELAND 11, OHIO CLEARWATER 1-6



i.e.r.c.

heat-dissipating
sub-miniature
TUBE CLAMPING SHIELDS
give lowest bulb temper-
atures and increased
tube reliability!



Patents Applied For

I.E.R.C. tube clamping shields solve electron tube flex and vibration problems. Temperature reduction is made possible by conducting heat directly from bulb to the chassis or heat sink providing greater reliability.

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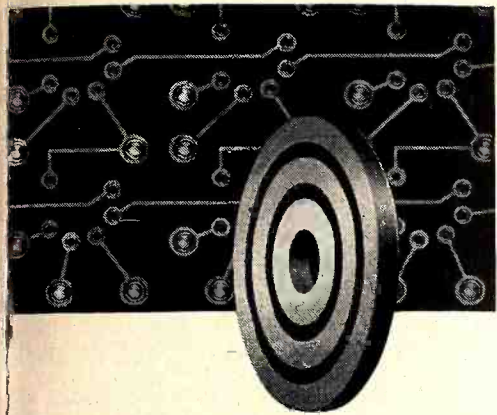
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HELPS YOU IMPROVE DESIGN
HELPS YOU SIMPLIFY PURCHASING
HELPS YOU SPEED PRODUCTION

METAL CLADS

For Printed Circuit Metal Clad Stock



Metal Clad laminates are finding wide usage in printed circuit applications. Printed circuit technique involves the printing of an electronic circuit upon a metal clad laminate surface using an acid resisting ink. In a subsequent acid etching operation, the unwanted metal foil surface which is not under the printed portion of the foil, is etched away leaving only the circuit pattern or, that part of the metal foil which is under the inked portion of the laminate. Write for technical bulletin.

Dilecto METAL CLADS

Printed circuits depend upon stable, uniform core material and Dilecto has years of proven insulation service (Dilecto is a lamination thermo-setting plastic made only by C-D-F from paper, cotton, or asbestos fabric base, or a mat base). Normally, only the electrical grades of phenolic resin laminates, such as grades XXP-24 and XXXP-26, are used for metal clad sheet stock. Grades such as XXP-13, XXX-13, or GB-28M may be supplied with copper clad surfaces upon special order. Outstanding are metal clad C-D-F grades XXXP-24 and XXXP-26. These are hot pressing grades with high insulation resistance. New C-D-F Catalog E-54 gives complete data on these and other Dilecto grades of glass base metal clad laminates. Write for your copy today.

Teflon* METAL CLADS

Fiber cloth is coated with Teflon resin and laminated into GB-112T sheet stock. This base withstands high heat (C. maximum operating temperature) with the dissipation and dielectric constant extremely low over a wide frequency range. The adhesive film used to bond the metal to the Teflon base, does not degrade the inherently good electrical properties of the core material. GB-112T has practically zero water absorption. A METAL CLAD with this core offers consistent high insulation resistance with excellent dimensional and electrical stability.

Registered Trade Mark.

METAL CLAD Surfaces

Copper foil (usually .0014" or .0028" thick) is bonded on one or both faces of the sheet grade of Dilecto selected. The foil used is a special grade of electrolytic deposition copper particularly adaptable for cementing onto laminated materials. An adhesive film is placed between the metal and the Dilecto, and cemented during the pressing and curing cycle. When closer tolerances are required, C-D-F sands the Dilecto to the required thickness before bonding. Aluminum or other metal alloys may be supplied.

Better Bond Strengths

One of the most important physical properties of a metal clad product is its peel strength, the pounds pull required to separate the foil surface from the core material. Working with years of laminating know-how, C-D-F has been successful in obtaining the following average test values for its METAL CLAD sheet stocks:

| | Lbs. pull per 1" wide |
|--|--------------------------|
| XXXP-26 plus .00135" copper..... | 5 to 8 |
| XXXP-26 plus .0027" copper..... | 7 to 10 |
| XXXP-26 plus .0015" aluminum..... | 9 to 12 |
| GB-112 Teflon plus .00135" copper..... | 6 to 9 |
| Sheet sizes: Dilecto grades—38 x 38", 38 x 42" | |
| Teflon grades—16 x 36" | |

MICABOND

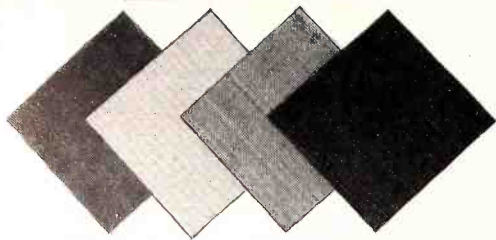
Only the finest mica splittings are used in Micabond tapes, plates, and fabricated parts. They are placed for completely leak-proof coverage, with strong binders used. Available in a wide range of thicknesses with many different backings including fiberglass, silk, cellophane, cotton and paper. Micabond Tapes are hand laid; flexible tapes are both hand and machine laid; both retain their electrical insulating properties at elevated temperatures.

New . . . Micabond Fiberglass! When you need maximum reliability under high temperature service, resistance to mechanical abuse, coupled with the maximum safety factor, specify Micabond Fiberglass sheets, tapes, wrappers. Composed of India Mica splittings, bonded with flexible resin and faced on one or both sides with impregnated Fiberglass cloth, these new C-D-F products are superior to varnished fiberglass combinations in deeply imbedded "hot spot" applications. Write for technical bulletin and samples.

MOLDED AND LAMINATED PLASTICS—FOR ELECTRICAL INSULATION

LAMINATED PLASTICS

DILECTO



POST-FORMING: Certain Dilecto grades (CF-1, XF, GB-SF, MEC-1F) may be formed to special shapes by heating and placing in an inexpensive cold mold. The thermoelastic properties of these Dilecto laminates open many production and design opportunities. Already widely used by the aircraft industry, Post-Forming Dilecto merits full investigation by every alert manufacturer. Write for complete C-D-F engineering service.

DILECTO ROLLED OR MOLDED TUBING finds wide usage in radio and electrical equipment because of excellent insulating and mechanical properties. Impregnated paper or fabric is rolled on a mandrel between heated pressure rolls, then oven baked or press cured in a heated mold to set up the resin.

Dilecto, a laminated phenolic material, meets the need for a non-metallic lightweight insulating material that is moisture resistant, good electrically, strong and adaptable to all fabricating operations. Some grades have exceptionally high mechanical strength, tensile, flexural, impact; others have high dielectric strength, high insulation resistance, high arc resistance and low loss factor.

Dilecto is a laminated material made from a base of either cellulosic paper; heavy fine weave woven cotton fabric or mat; asbestos paper, woven asbestos fabric or woven glass fabric or mat; and is coated with a synthetic resin.

The selection of the proper base material, the proper resin in the correct proportions is C-D-F's job, but the end user must realize how important it is that he fully understands what dividend results can be gained mechanically, and electrically, and from a cost standpoint, by getting the very best C-D-F material for the project. Here is a complete listing of Dilecto sheet grades, each one with a combination of characteristics built into the material for the specific job.

SHEET GRADE CLASSIFICATIONS (Rod and Tubing similar to sheet)

- X For mechanical applications when electrical properties are secondary.
 - P For punching (paper-based grades).
 - XX For electrical applications requiring mechanical strength.
 - XXX For high humidity applications with minimum cold flow.
 - L For mechanical applications requiring fine machining.
 - C For mechanical applications requiring toughness plus impact strength.
 - CE and LE For electrical uses requiring greater toughness than based grades.
 - GB For applications requiring high resistance and high mechanical strength. For high heat applications.
- Note: Various C-D-F grades, identified by numbers affixed to the grade classification, are available. Ask for catalog.

TEFLON

INSULATION

OUTSTANDING PROPERTIES

HEAT RESISTANCE: Due to the non-flammability and high heat resistance of Teflon,* it easily meets both Class B and Class H, AIEE standards for maximum hot spot insulation temperature. Teflon coated glass fabric laminates withstand 250°C. continuously and up to 300°C. intermittently. One factor which influences the heat resistance of Teflon is that there is no apparent degradation from oxygen, which has a definite degrading effect on silicone materials.

* Du Pont Trade Mark

MOISTURE RESISTANCE: A Teflon laminate has practically zero water absorption and its electrical properties are little affected after long exposure to high humidity. Teflon is unaffected by fungus and temperature changes. Not only has it lower moisture absorption than any other laminate known, but it tends to repel water . . . retaining high surface insulation resistance properties even under extreme humidity conditions.

DIELECTRIC STRENGTH: The dissipation factor and dielectric constant of Teflon laminates are both extremely low over the frequency range. From 60 to 100 megacycles, the dissipation factor range is between .005 to .0005 and the dielectric constant ranges from 2.8 to 2.5 when measured in a field perpendicular to laminations. As corona will slightly degrade Teflon, care should be taken in designing parts used at voltages over 2500V. Sharp corners, and other contributing factors to corona should be avoided.

CHEMICAL INERTNESS: Resistant to hot corrosive salts and most concentrated acids. Pure Teflon is unaffected by all chemical agents, excepting molten alkali metals and, under certain conditions, fluorine and chlorine trifluoride. Glass supports Teflon, when exposed at cut edges, is affected only by chemicals which attack glass. Otherwise, its properties are the same.

TEFLON TYPICAL PROPERTY VALUES COMPARED WITH GLASS-BASED LAMINATES

| | TEFLON (Unsupported) | TEFLON GB-28T (teflon resin) | DILECTO GB-112S (Silicone resin) | DILECTO GB-28M (Melamine resin) | DILECTO GB-112D (Phenolic resin) |
|---|-------------------------|------------------------------------|--|---------------------------------------|--|
| Dissipation Factor, 1 megacycle | .0005 | .0007 | .001 | .012 | .018 |
| Dielectric Constant, dry, 1 megacycle | 1.90 | 2.60 | 3.4 | 7.2 | 5. |
| Loss Factor, 1 megacycle | .001 | .002 | .004 | .090 | .090 |
| Dielectric Strength, (Short time) | 900 | 700 | 450 | 500 | 700 |
| Perpendicular to Laminations (Step by step) | 800 | 500 | 400 | 350 | 600 |
| (1/32" thick) VPM | | | | | |
| Arc Resistance, Seconds | 250* | 160* | 225 | 195 | 4 |
| Maximum Constant Operating Temp. C° | 250 | 250 | 200 | 175 | 140 |
| Flexural Strength (Thousands of psi) | | | | | |
| Lengthwise | | 13 | 30 | 48 | 24 |
| Crosswise | | 11 | 27 | 40 | 20 |
| Water Absorption, %, 24 hours (1/16" thick) | Negligible | .03 | .20 | 1.7 | 2. |

* Will not form complete conducting path. Arc continues indefinitely but material gradually erodes away on full time continuous arc.

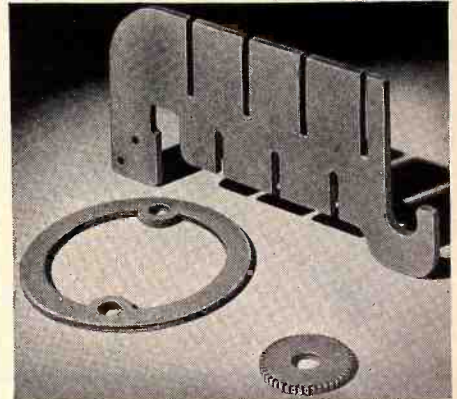
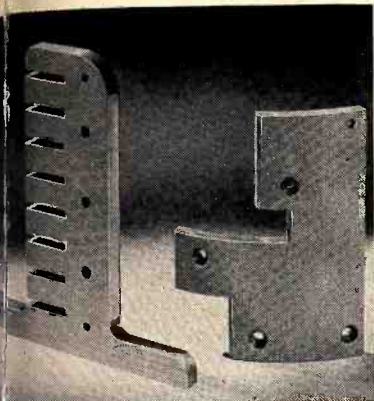
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... FOR EVERY APPLICATION IN ELECTRONIC MANUFACTURING

FABRICATED AND FORMED

VULCANIZED FIBRE

FAST AT LOW COST DEPENDABLY



Sheet stock, sand, smooth saw, drill, smooth saw, radius three corners, gang saw notches. Sheet stock, band saw rough blanks, form, saw width, length and shape, radius edges, mill jig, countersink.

A. Tube, automatic screw machine, turn shoulders, chamfer and thread end, thread other. B. Tube (long pieces), smooth saw, tap threads, screw machine, (small pieces) auto. screw machine, thread, knurl, chamfer, cut off. C. Tube, smooth saw to length, punch twice, countersink. D. Tube, automatic screw machine, chamfer, cut off, punch.

A. Sheet stock, shear strips, punch. B. Sheet stock, shear, punch blank, gang saw notches. C. Sheet stock, shear strips, punch blank, mill notches.

SHEETS

TUBES

RODS

RECEPTACLES

Vulcanized Fibre is a wonderful material if you know where to find and how to buy it. We suggest on many jobs that it's best to have the fabrication and forming in C-D-F's shops. Why? Because C-D-F knows how. Since 1895 the company has put fibre to work in everything from buggy axle bushings to metal clad radio tubes. The handling of thousands of set-ups for high speed, low cost production runs gives C-D-F an "experience bank" to draw on. Shop supervisors have a wealth of short cuts, little tricks that result in lower prices for you. They know the material and its peculiarities.

LIGHT, RESILIENT, STRONG

How long has it been since you examined the unique properties of this wide range of C-D-F fibre grades? Vulcanized Fibre is arc resistant, mechanically strong, non-corroding, half the weight of

aluminum. Repeated moistening and drying in forming insignificantly alters the nature, structure or quality of the fibre.

Since C-D-F has their own paper mill, uniform, quality control is made possible. Special grades are more easily developed.

A BIG, RELIABLE SOURCE

C-D-F does business with the largest tonnage users of sheet, rod and tube fibre in the world. This means good deliveries, good prices, reliable products for every new customer. You deal with a materials engineer, a C-D-F man who knows how to give you the most value in Diamond Vulcanized Fibre. If you want to improve design, simplify purchasing, speed production, use Diamond Fibre and the facilities of C-D-F. Write for catalog, free test samples, or send us your print for quotation.

MECHANICAL PROPERTIES OF DIAMOND VULCANIZED FIBRE

| Property | Sheet thickness, tube wall or rod diameter | SHEETS | | | | TUBES | RODS | |
|-----------------------------------|--|---------|---------|------------|---------|--------|--------|------------|
| | | Bone | | Commercial | | | Bone | Commercial |
| Tensile Strength | Up to 1/8" | CW 6500 | LW 8500 | CW 6000 | LW 8000 | 6500 | 8500 | 8000 |
| | Over 1/8 to 1/2" | 6000 | 8000 | 5500 | 7500 | 6500 | 8000 | 7500 |
| | Over 1/2" | .... | .... | 5000 | 7000 | 6500 | .... | 7000 |
| Flexural Strength | Up to 1/2" | 13,000 | 15,000 | 12,000 | 14,000 | | 15,000 | 14,000 |
| | Over 1/2" | .... | .... | 11,000 | 13,000 |  | .... | 13,000 |
| Compressive & Torsional Strengths | Up to 1/8" | | | | | 10,000 | | |
| | Over 1/8 to 5/16" | | | | | 9000 | | |
| | All thicknesses or diameters | 30,000 | | 20,000 | | | 8000 | 6,000 |

RESIN-IMPREGNATED FIBRE

VULCOID

C-D-F supplies Vulcoid in sheets, tubes, rods, and fabricated parts. Made from Diamond Vulcanized Fibre that has been uniformly impregnated with a special resin, Vulcoid is a material approved and identified by the Underwriters' Laboratories as Class 1 insulation. Natural greenish-tan in color, it is economical, easy to machine and punch. Property-wise, Vulcoid is an intermediate between Commercial Fibre and XX phenolic Dilecto.

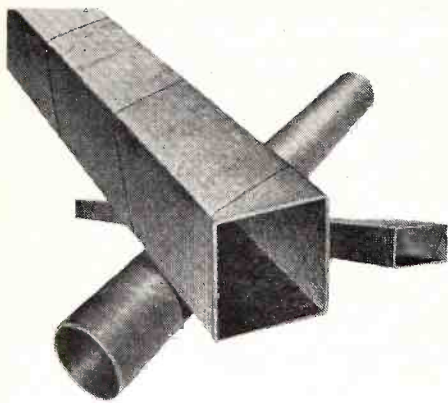
USES: (requiring arc resistance and mechanical strength)—contact and connectors panels, knife switch arms and guides, arc deflector spacer bushings; (requiring dielectric strength and moisture resistance)—electrical fixture insulation, wiring devices, plugs, receptacles; (requiring moisture and arc resistance)—motor and transformer lead bushings and terminal blocks.

CONTINENTAL-DIAMOND FIBRE CO.

MOLDED AND LAMINATED PLASTICS . . . FOR THE ELECTRONIC INDUSTRY

ENGINEERING UNLIMITED

SPIRAL TUBING



GOOD DIELECTRIC STRENGTH • LOW DIELECTRIC LOSS PROPERTIES
GOOD MECHANICAL STRENGTH & MOISTURE RESISTANCE

C-D-F is a dependable source of supply for all of your coil form spiral tubing needs. Uniform, high product quality is maintained by rigid standards of manufacture. C-D-F offers you fabricating skill, backed by exacting technical and inspection control. A major C-D-F development is Grade 5 Constant Torque Tubing for use in coil forms. After threaded iron tuning core is inserted and finally adjusted, you obtain the same stable tuning rating. Constant Torque features: exact internal threading . . . every thread engaged. 3-point contact with core prevents binding and permits positive tuning and re-tuning. Outer surface of tube has no weak spots, no external embossing to cause cement leakage. Available in lengths up to 14" to take .248" to .250" core with 28 threads per inch and also 6-32, 8-32 and 10-32 screw sizes. Write for samples. Grade 5 Tubing is also custom fabricated by C-D-F in conventional shapes to accommodate other sizes of tuning cores. C-D-F produces spiral tubing in grade to meet most requirements. Use the Grade Selection Chart when requesting samples and additional information. Write for folder S-3.

AVAILABLE GRADES

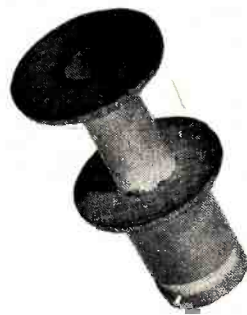
IMPREGNATED

- 1 General Electrical and Mechanical Grade. ○
- 1A Electrical and Mechanical Grade—Special Punching. ○
- 2 Mild Stapling, Riveting, and Post Forming Quality. ○
- 2A Intermediate Fabricating and Stapling Quality. ○
- 3 Severe Stapling, Riveting, and Post Forming Quality. ○
- 5 Constant Torque and Formed-to-Shape Coil Form Tubing. △
- 6 Special for High Humidity Applications. ○
- 6A Extra Hard, High Strength Tubing. ○
- 7 Soft Varnished Kraft Tubing. ○ □
- 7A Hard, Rigid Rectangular Tubing. □
- 8 Varnished Diamond Insulation—Tubing. ○
- 9 "Deflection Coil" Tubing. ○
- 10 Larger Size, Heavy Wall Tubing for Mechanical Uses. ○

UNIMPREGNATED

- 20 Special Wound in Specified Combinations of kraft paper, fish paper, etc. ○ □
 - 21 Plain Kraft Paper Tubing. ○ □
 - 22 Plain Diamond Insulation Tubing. ○
 - 23 Plain Chipboard Tubing. ○
- Round □ Formed (fluted shape) △ Formed and Notched Square, Rectangular

SPOOLS SMALL, ECONOMIC



A radio coil manufacturer would use small spools, less costly than those machined down from round stock, but stronger than molded bobbins. C-D-F supplied this: a rolled Dilecto tube grooved on one end . . . stepped in the middle . . . then notch cut on other end for a flush fit. C-D-F uses special adhesive to bind the three (the body and two Dilecto spool heads) together. The assembly is sufficient strong to withstand the outward pressure of the wire. The spool never it's head! Because Dilecto is resistant to high heat and high humidity, corrosive and chemical actions, it can be used for many coil and electronic applications.

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TRinity 5-0335

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BR 1-2980

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Continental-Diamond Fibre

CONTINENTAL-DIAMOND FIBRE COMPANY
NEWARK 41, DELAWARE

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Executive Offices: NEWARK, DELAWARE
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CONTINENTAL-DIAMOND FIBRE CO.



HIGH-SPEED ELECTRONIC COUNTING, TIMING AND DATA-HANDLING EQUIPMENT

PREDETERMINED COUNTERS

- HIGH COUNTING RATES
- ABSOLUTE ACCURACY
- COMPLETE RELIABILITY



MODEL 244 PREDETERMINED COUNTER
 Preetermined Counters offer precise control of length, flow, weight, revolution, time intervals, and other phenomena that can be expressed as a count. A complete line of accessory count detectors is also available.

PREDETERMINED COUNTER SPECIFICATIONS

| | | | | | | | |
|----------|--|-----|-----|-------|--------|---------|-----------|
| | Single | 114 | 124 | 134 | 144 | 154 | 164 |
| | Dual | 214 | 224 | 234 | 244 | 254 | 264 |
| Capacity | | 16 | 100 | 1,000 | 10,000 | 100,000 | 1,000,000 |
| Rate | (available for each sequence in dual models) | | | | | | |
| | up to 60,000 per min. (higher rates are available) | | | | | | |
| Input | Photoelectric, electromagnetic, contact, pulse, etc. | | | | | | |
| Output | Relay contact and 50-volt pulse | | | | | | |
| Control | Automatic, panel pushbutton, or remote contact closure | | | | | | |

FREQUENCY-TIME COUNTERS

FOR DIRECT MEASUREMENT OF

- FREQUENCY
- TIME INTERVALS
- TIME DELAYS
- PERIOD
- REVOLUTIONS
- FREQUENCY RATIOS



MODEL 820
 100 KC, 10-LAMP FREQUENCY COUNTER

Model 820 Frequency Counter uses the 60 cycle line frequency as reference time for intervals of 0.1 and 1.0 second. Maximum count is 10,000; input range is 0 to 150 kc.

Model 830 Frequency Counter is same as 820 except that a 100-kc crystal oscillator time base provides additional gate intervals of 0.001 and 0.01 second.

Model 840 Frequency-Time Counter is a versatile 100-kc instrument for measuring frequency, period, intervals, frequency ratios, rpm, etc. Input range is 0 to 150 kc; maximum count is 100,000 (extendable with 6-digit register).

Model 850 Frequency-Time Counter provides direct frequency measurements to 1 mc, plus features listed for 840.

The above instruments are available with 4- or 10-lamp readouts. Crystal ovens, preamplifiers, rack-mounting kits, and mechanical registers can also be provided.

TOTALIZING COUNTERS

- COUNTS UP TO 10,000,000,000
- RATES TO 1,000,000 PER MINUTE
- RUGGEDIZED INDUSTRIAL DESIGN



TOTALIZING COUNTER
MODEL 335

Straight counting and scaling, Potter Electronic Counters combine advantages of electronic and mechanical techniques. Special purpose counters (for radiation measurements, etc.) also available.

TOTALIZING COUNTER SPECIFICATIONS

| | | | | |
|----------------|--|-------------|-----------|------------|
| | 315 | 325 | 335 | 345 |
| Capacity | 10 Million | 100 Million | 1 Billion | 10 Billion |
| Rate (per min) | 6,000 | 600,000 | 600,000 | 1,200,000 |
| Input | Photoelectric, electro magnetic, contact, pulse, etc | | | |

DIGITAL MAGNETIC-TAPE HANDLERS

- TAPE SPEEDS TO 60 IN./SEC.
- 5 MSEC. START-STOP TIMES
- 2, 6, OR 8 CHANNELS



DIGITAL MAGNETIC-TAPE HANDLER

Designed for high-density temporary or permanent storage of information in digital data-handling systems. Fast starts and stops permit intermittent tape movement; 3/8-inch tape provides simultaneous 8-channel recording.

TAPE HANDLER SPECIFICATIONS

| | | | | | |
|----------------------------|--------|--------|-------|--------|-------|
| Model | 902AJ | 902BJ | 902BK | 92CJ | 902CK |
| Number of Channels | 2 | 6 | 6 | 8 | 8 |
| Tape Width (inches) | 3/8 | 1/2 | 3/8 | 3/8 | 3/8 |
| Tape Speed (in./sec.) | 15/30 | 15/30 | 15/60 | 15/30 | 15/60 |
| Reel Size (dia. in inches) | 10 1/2 | 10 1/2 | 8 | 10 1/2 | 8 |
| Reel Capacity (feet) | 2,400 | 2,400 | 1,200 | 2,400 | 1,200 |

COUNTER CHRONOGRAPHS

- SPLIT μ SEC. ACCURACY
- DIRECT DECIMAL INDICATION
- COMMON-LINE OPERATION



MODEL 471 8 MC COUNTER CHRONOGRAPH

High-speed electronic counters count number of pulses produced by crystal-controlled time-base oscillator during unknown interval. Ideally suited for timing projectiles, missiles, relays, solenoids, etc.

COUNTER CHRONOGRAPH SPECIFICATIONS

| | | | | | |
|----------------|----------------|--------------|-------------|---------------|---------------|
| | 432 | 453 | 463 | 456 | 471 |
| Counting Range | Up to 1 second | | | | |
| Time Base | 100,10 or 1 KC | 100 KC | 1 MC | 1.6 MC | 8 MC |
| Accuracy | 10 μ sec | 10 μ sec | 1 μ sec | 3/8 μ sec | 3/8 μ sec |

RECORDERS and PRINTERS



MODEL 960
 DIGITAL RECORDER

COUNTER TRANSLATION MATRIX AND PRINTER MODEL 950/190 prints 8-column lines of Arabic numerals corresponding to data registered on binary-coded decimal counters. Printing rate is 3 lines per second.

DIGITAL "TELEDELTO" RECORDER MODEL 960 provides permanent visual record of 8-digit numbers at rates to 150 per second on sensitized paper. Over 50,000 eight-digit numbers can be recorded on a single roll.

FLYING TYPEWRITER offers the ultimate in high-speed printing. Prints five 80-character lines a second, including letters, numbers, math symbols, and punctuation. Magnetic core memory system is used for optimum reliability.

COMPLETE SYSTEMS

The Potter Instrument Company specializes in design and manufacture of complete digital data-handling systems, including magnetic tape, magnetic core, and electronic storage systems; shift registers and shift-register accessories; adding and subtracting counters; and high-speed input and printout devices. Potter systems designers work with clients in solving data-handling problems.

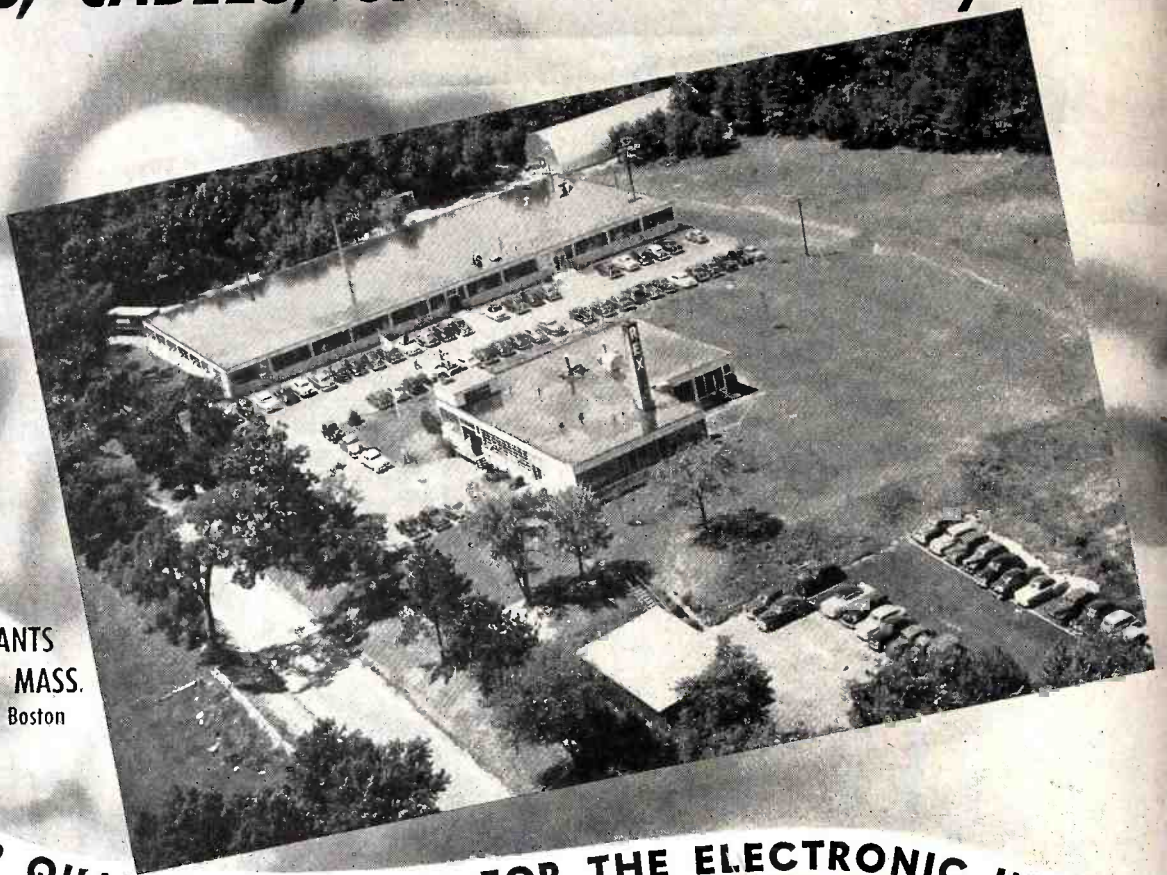
"FLYING TYPEWRITER"

Write Dept. L-13



POTTER INSTRUMENT COMPANY 115 CUTTER MILL ROAD GREAT NECK, NEW YORK

WIRES, CABLES, UHF INSULATION by **REX**



The **REX** PLANTS
at WEST ACTON, MASS.
35 minutes N.W. of Boston

TRY OUR QUALITY PRODUCTS FOR THE ELECTRONIC INDUSTRY

UHF INSULATION

REXOLITE 1422

Sheets and rods with the electrical properties of polystyrene and the machinability of free-turning brass. Rexolite 1422 is a thermosetting cross linked styrene copolymer. Dielectric constant 2.5. Dissipation factor .00015 — .0003 at one megacycle.

REXOLITE 2101 — NEW

A glass reinforced laminate with fine UHF electrical properties in the same general range as Rexolite 1422 (see left) but with the added properties of good punchability, high impact strength and surprisingly low price.

WIRES & CABLES

SPECIALTY CABLES

Communication and control cables of all types. Excellent cable engineering. Fine cabling, shielding and jacketing work.

COAXIAL CABLES

Quotations on request for both special and standard coaxial cables.

REX K-F INSULATED WIRE AND CABLES

REX K-F WIRE insulated with trifluoro monochloroethylene (per Mil-W 12349) sets new high standards for hook-up wire. Write for full information.

TEFLON INSULATED WIRE AND CABLES

Write for full information on Rex Teflon insulated wire.

REX MICROWALL WIRES AND CABLES

High precision miniature wire for up to 120° C. Continuous operation. Write for full information.

TELEPHONE WIRES AND CABLES

Quotations on request for all plastic types.

REX VJN MINIATURE WIRE

Vinyl with Nylon jacket for -55°C . to 110°C . and 300 V to 2500 V. Write for full information.

MIL-SPEC WIRES

We make practically all of the plastic insulated military specification wires.

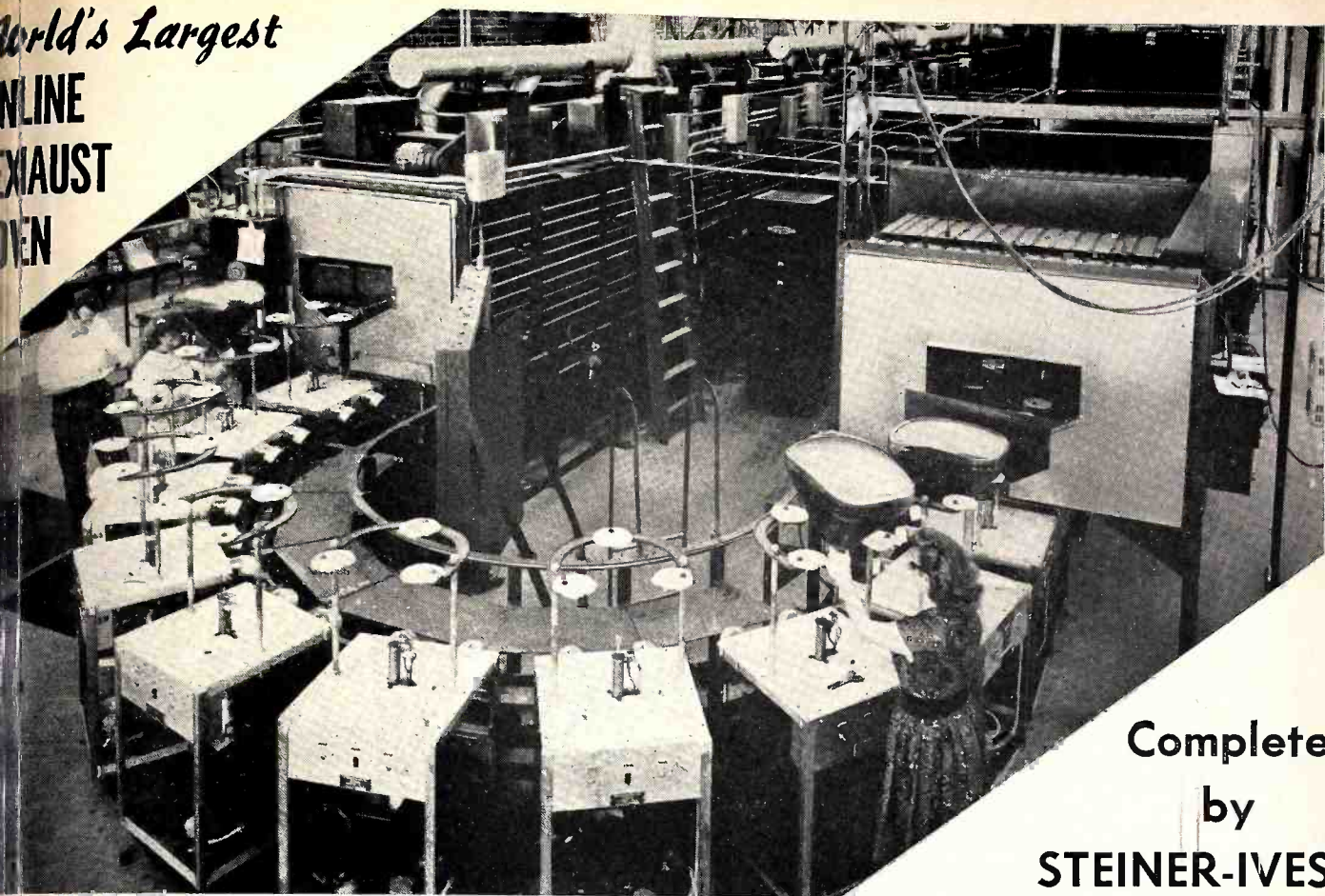
UL WIRES

Quotations on request.



THE **REX** CORPORATION
WEST ACTON, MASS.

World's Largest
ONLINE
EXHAUST
OVEN



Complete
by
STEINER-IVES

Over 300 Feet of EXHAUST OVEN

This cathode ray tube Exhaust Oven in use at RAYTHEON is one example of the versatility of the Steiner-Ives Company as builders of ovens for the Electronics Industry. The entire system was designed and built by Steiner-Ives and installed in record time for the production of

21", 24" and 27" T.V. picture tubes. 130 Specially designed tube Exhaust Carts move tubes through heated zones and forced cooling zones where temperatures are independently and automatically controlled.



Steiner-Ives Ovens range in size and application from the smallest laboratory type to the largest used in the electronics field. The Multi-Purpose Laboratory Oven shown at the left gives an idea of this wide scope. Used for Processing, Curing, Baking, Heat Treating, Annealing, Paint Testing and Normalizing and for other work within a 200° F to 1000° F temperature range. Well insulated, welded steel construction with stainless steel interiors, these ovens are recognized for their efficiency.

The S-I Portable Belt Annealer (Model No. TS-6) shown at the right is another example of intermediate equipment used for production annealing for temperatures up to 600° C. A six inches wide endless conveyor belt carries the parts through the annealing process for a desired heat curve determined by the variable controls. Widely versatile because of its mobility (mounted on rubber wheels) and efficiency.



Write for latest literature regarding Steiner-Ives Ovens for the Electronics Industry or ask for nearest representative to call.

"We can make it hot for you."

STEINER-IVES COMPANY

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TRADE MARK



Brush Electronics Company comprehensive service offers you the advantages of an expertly staffed, modern electronics and electromechanical laboratory. All the skill and knowledge Brush is applying to the broad field of electronics is available for the solution of your particular design problems. Your inquiries are invited.

Instruments for:

ELECTRICAL MEASUREMENTS

A.C. and D.C. Amplifiers and High Speed Direct Writing Oscillographs

PHYSICAL MEASUREMENTS

Vibration Pickups
Displacement Analyzers
Carrier Amplifiers and Oscillographs

RESISTANCE WELDING MEASUREMENTS

Welding Analyzer

SURFACE ROUGHNESS MEASUREMENTS

Surfindicator*
Surface Analyzer
Faxfilm* Comparator

TEXTILE MEASUREMENTS

Uniformity Analyzer*

ELECTRO-ACOUSTICAL MEASUREMENTS

Bruel & Kjaer Instruments

Equipment for:

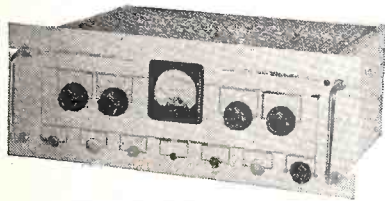
MAGNETIC RECORDING:

Multichannel Communication Recorders

ULTRASONIC ENERGY APPLICATIONS:

Hypersonic* Generators and Transducers

*Trade Mark



Rack Mounting

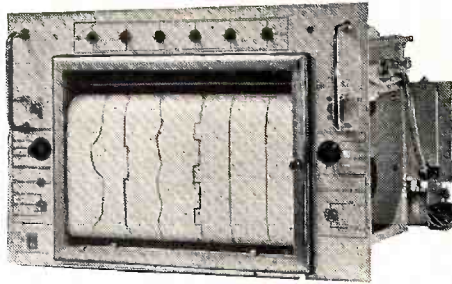
A program of redesigning the present line of amplifiers and oscillographs so they may be mounted in standard 19-inch racks is now under way. The unit above is the BL-962 Rack Mounting D. C. Amplifier.

ACOUSTIC AND

TEST INSTRUMENTS

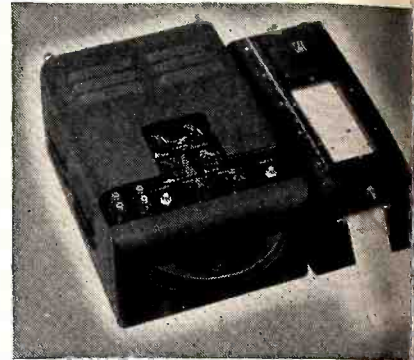
The following instruments are manufactured in Denmark by the A/S Bruel and Kjaer Company and distributed exclusively in the United States and Canada by Brush Electronics Company:

- BL-1012 Beat Frequency Oscillator
- BL-1502 Deviation Test Bridge
- BL-1604 Integration Network for Vibration Pickup BL-4304
- BL-4304 Vibration Pickup
- BL-2002 Heterodyne Voltmeter
- BL-2105 Frequency Analyzer
- BL-2109 Audio Frequency Spectrometer
- BL-2304 Level Recorder
- BL-2423 Megohmmeter and D.C. Voltmeter
- BL-3423 Megohmmeter High Tension Accessory
- BL-4002 Standing Wave Apparatus
- BL-4111 Condenser Microphone
- BL-4120 Reciprocity Calibration Apparatus and Accessory
- BL-4708 Automatic Frequency Response Tracer



Direct Writing, Multi-Purpose 4 and 6 Channel Oscillographs

These new oscillographs provide a choice of up to 16 chart speeds—from 10 mm. per hour to 250 mm. per second. This permits excellent resolution of a great variety of signals with economy in chart paper. Chart drive is electrically controlled; thus, speeds can be changed instantaneously. The four and six channel units are furnished in identical chassis, which may be mounted in a standard 19-inch rack or bench top console. Available with ink writing or combination ink and electric writing.



BL-320 Universal Amplifier

When used with Brush Magnetic Direct Inking Oscillograph, it is a complete package unit for measurement of strains. Simply operated, producing records which are immediately available and easily interpreted. Records either static or dynamic strains up to 100% and direction as well as magnitude of measured strain can be read from the chart.

Portable Oscillographs

- BL-201 Single channel magnetic direct-inking
- BL-202 Double channel magnetic direct-inking
- BL-221 Single channel combination magnetic oscillograph
- BL-222 Double channel combination magnetic oscillograph

The BL-201 and BL-202 record instantaneous electrical phenomena from d. c. to 30 cps and with use of Brush equalized amplifier to 100 cps. The BL-221 and BL-222 models are identical except for circuit changes which permit use of either a standard inking or electric stylus.

Magnetic Recording and Reproducing Equipment

Single and Multichannel Recorders—L Recorders.

BL-932 D. C. Amplifier



Designed for use with Brush Magnetic Direct Inking Oscillograph, also used to make recordings of many types of phenomena heretofore measured only with the aid of complicated intermediate equipment.

Voltage gain is sufficient to give 1 chart mm. deflection per mv. input. Novel design features combined with both plate and heater voltage regulation reduce effects of power line fluctuation. Zero signal drift amounts to not more than 1 chart mm. per hour. Frequency response essentially uniform from d. c. to 100 cycles per second.

BL-2304 High Speed Level Recorder



Designed for acoustical and electro-acoustical measurements, incorporating a potentiometer controlled moving-coil stylus drive system and a variable speed paper drive.

BL-1502 and BL-1507

Deviation Test Bridges



For high-speed production checking of resistors, capacitors, inductors. Indicates percentage deviation from standard on large meter with zero point in center. Full scale deflection at 7% and 25%.

BL-1012

Beat Frequency Oscillator

An audio signal generator of particular use in conjunction with Level Recorder.



BL-2002

Heterodyne Voltmeter

A high frequency selective vacuum tube voltmeter for range 20 kc to 27 mc, measures both voltage and modulation. Full scale deflection from microvolts to 10 volts.

BL-2109 Audio Frequency Spectrometer

With the BL-2109 very rapid and accurate measurements may be made of amplitude, frequency of complex a. c. voltages from 18,000 cycles per second. Sound, vibration, other phenomena in the audio range of frequencies are readily analyzed by either manual or automatic scanning of the 27 fixed 1/3 octave pass filters in the Spectrometer. Hours of measuring time are saved in sound and vibration measurements.

BRUSH COMPONENTS



ACOUSTIC PRODUCTS

Phones

- Headphone
- A-1 High fidelity headphones
- Lognette phone
- Hushatone® speaker
- General purpose headphones
- Single phone

Crystal phones possess the following outstanding features:

1. Bimorph® crystal drive element of such high impedance that line or circuit characteristics are not affected when monitored by Brush phones.
2. Wider range response with more uniform output.
3. Compensation for ear coupling.
4. Light-weight, rugged, shock-proof construction.

Microphones

- Microphone
- Microphone
- Vibromike® contact-type microphone
- Lapel microphone

Other

Crystal Cutter

ELECTRIC ELEMENTS for electro-acoustical and electro-mechanical applications: Plates of Rochelle Ammonium Dihydrogen Phosphate (ADP); Lithium Sulphate; Barium Titanate (Brush Ceramics A & B); Potassium Tartrate (DKT); Cylinders, curved plates, bowls and other shapes of Barium Titanate (Brush Ceramics A & B); Bimorphs* of Rochelle Salt; Ammonium Dihydrogen Phosphate (ADP); Barium Titanate.



BA-109 Microphone

The Brush Model BA-109 microphone using the improved Acoustical® was created for public address, home recording and amateur applications. The Metalseal® crystal insures long life and reliability. Styled in rich maroon plastic and brushed chrome.

- Response from 40 to 10,000 cps.
- Output Level 54 db. below 1 volt/dyne cm².
- Non-directional.
- High Impedance equivalent to approximately .002 mfd. (1.8 meg. ohms at 1,000 cycles.)



Model "A" General Purpose

Designed for GENERAL PURPOSE applications including laboratory, studio and skilled amateur home use. The Bimorph® crystal drive element insures wide range response (100 to 8,000 cps.) and high sensitivity. High impedance; ideal for multiple installations.



BA-206 Headphone

Designed for use where high fidelity and smooth frequency response are of paramount importance. They are especially applicable to broadcast monitoring, to laboratory use in the study of sound measurements, audiometry and similar exacting headphone applications. Features exceptionally flat frequency response. Impedance of 100,000 ohms at 1000 cps; no transformer required. Ideal for multiple installation. Sensitivity is approx. 6.3 dynes/cm/volt at 1000 cps.



BA-106 Microphone

The Brush Model BA-106 is a high quality microphone incorporating the hermetically sealed Acoustical® with sintered bronze damping. Metal-seal® crystal is used for protection against conditions of high humidity. This microphone offers unexcelled response in microphones of this type and price range.

Vibration, shock or low frequency wind noise do not affect the performance of this microphone. Output level 50 db. below 1 volt/dyne/cm².

ELECTRO-OPTIC ELEMENTS—Unpolished blanks of Ammonium Dihydrogen Phosphate (ADP); Potassium Dihydrogen Phosphate (KDP) for electro-optic shutters, etc. *Trade Mark

MAGNETIC COMPONENTS

- Channel record-reproduce and erase heads
- Channel record-reproduce heads
- Multiple record-reproduce heads and erase heads



- BK-90 Record/Reproduce Head
- BK-10 Erase Head

Single-Channel Heads

The new magnetic head is designed for dual-channel recording/reproducing on 1/4-inch tape. It features: dimensional stability . . . Mu-metal shielding . . . single-hole mounting . . . high output . . . greatly extended frequency range . . . embedded construction.

* * *

FOR COMPLETE INFORMATION WRITE

Brush Electronics Company, Department K-7
Perkins Avenue, Cleveland 14, Ohio.



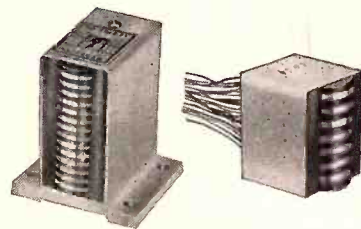
Cartridge Types

The BK-900 series heads were designed for single-channel recording on any magnetic medium. Available in track widths of 0.014 inch and wider. These heads have precision-lapped gap, synthetic resin dip, balanced magnetic construction, individually wound poles and accurate azimuth alignment.

Full Track Heads

- BK-1250 Record Head
- BK-1251 Reproduce Head
- BK-1252 Erase Head

These professional quality heads utilize the full width of quarter-inch tape for maximum dynamic range in the audio spectrum. Construction is similar to the BK-1090 "Redheads".



Multichannel Heads

Available in encased assembly or cartridge assembly.

Design Features

- Balanced magnetic structure with gaps at front and rear.
- All gaps in precise alignment.
- Individual channels are cast into one integral block of specially selected synthetic resin.
- Complete assembly is non-microphonic and impervious to moisture.
- Mu-metal shields between individual channels.
- Ground lead supplied for shields and pole pieces.
- Wide range temperature operation.
- Special design features may be supplied to meet your requirements.

BRUSH ELECTRONICS

INDUSTRIAL AND RESEARCH INSTRUMENTS
PIEZO-ELECTRIC MATERIALS • ACOUSTIC DEVICES
MAGNETIC RECORDING EQUIPMENT
ULTRASONIC EQUIPMENT



COMPANY

formerly
The Brush Development Co.
Brush Electronics Company
is an operating unit of
Clevite Corporation.



50 KW PEAK READING RF POWER METER PM-12

The P. M. 12 Peak Reading Power Meter is designed to accurately measure the peak power of pulsed RF signals in the range of 2 to 700 MC with PRF of 800 to 10,000 pps and pulse duration of .5 micro-seconds or more.

It is capable of dissipating 50 KW peak power with an RF duty cycle of .002.

This test set may also be used as a dummy antenna, rated for 100 watts maximum average power for any frequency within its range.

The 52 ohm coaxial input circuit is fitted with a type N or UG61A/U receptacle to mate with a UG59/U connector.

This test set is 110V, 60 cycles powered and is completely self contained in a cabinet 7 in. x 9 in. x 9 in.

PRICE \$175.00

SPECIFICATIONS

| | |
|------------------------|--|
| USE..... | Peak reading power meter. Dummy Antenna. |
| POWER DISSIPATION..... | 100 Watts average, 50 KW Peak. |
| FREQUENCY RANGE..... | 2 to 700 Megacycles. pulse rate..... 200 to 20,000 pulses per second. pulse width..... .5 microseconds to DC. |
| VSWR..... | Will not exceed 1.15 at any frequency in its range. |
| ACCURACY..... | Absolute 10% Relative 1% |
| INPUT..... | 51.5 ohm coaxial, type N or UG 61 A/U receptacle. |
| CALIBRATION..... | May be recalibrated using 60 cycle ac. |
| CONSTRUCTION..... | Meets Jan specifications for moisture, humidity, shock and vibration. Meter is sealed and ruggedized, Jan approved components used throughout. |
| SIZE..... | 7 in. high, 9 in. wide, 9 in. deep. |
| POWER..... | 105 to 120 volts, 60 cycle, 10 watts. |

RF WATTMETER and DUMMY LOAD, PM-10

GENERAL DESCRIPTION: The RF Wattmeter PM-10 is an absorption type wattmeter consisting of an oil filled, air cooled, coaxial load resistor and a voltmeter calibrated to read watts. The Wattmeter is suitable for use as a field or laboratory test instrument, is completely shielded and non-radiating, permitting transmitter testing and adjustment without interference. The meter box is easily detached, permitting location of the load resistor at a remote point. In cases where power measurements are not required the load resistor may be used as a dummy load.

POWER RANGES: 0-15 watts or 0-60 watts, selected by switch on front of meter box.

DUMMY LOAD: 50 ohms impedance capable of 90 watts dissipation, in still air, with duty cycle of not more than 30 minutes per hour. With forced air cooling 90 watts continuous.

VOLTMETER CIRCUIT: Uses 1N82 silicone diode crystal, and sensitive 200 micro ampere sealed meter. May be calibrated for any scale range from 0-7.5 w to 0-60 watts. Spare crystal included.

RECALIBRATION: May be recalibrated using 60 cycle A.C.

INPUT: Coaxial Type N, using modified UG58-A/U connector.

VOLTAGE STANDING WAVE RATIO: Less than 1.15 from D.C. to 700 MC.

ACCURACY: $\pm 5\%$ from 0-60 Watts.

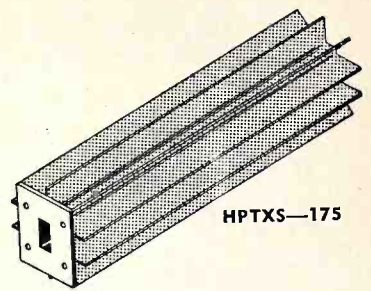
FREQUENCY RESPONSE: $\pm 5\%$ from 30 to 700 MC.

PRICE \$135.00

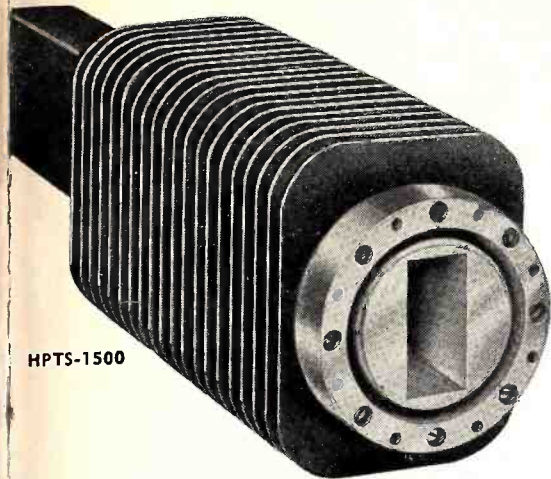


ELECTRO IMPULSE Laboratory 62 WHITE STREET • RED BANK, N.J.
RED BANK 6-0404

HIGH POWER Waveguide TERMINATIONS



HPTXS-175



HPTS-1500

"Eilex", a new ceramic lossy material, is now available in waveguide, high power terminations and attenuators from Electro Impulse Laboratory.

This new material is extremely durable, provides a strong adhesive bond to waveguide walls, withstands temperatures up to 2000° F, and handles the thermal shock efficiently.

Eilex is stable up to 2000° F (does not emit steam or water, characteristic of dummy loads using a Portland cement and graphite mixture for the lossy material.)

The waveguide loads use walls that are poor conductors, which means a more efficient removal of the heat generated in the load, and less tendency toward pulsepower breakdown (arcing) as may occur in designs which use filling material in the waveguide.

New construction shortens path between inner surface of lossy guide to heat conducting material. Hot spots have been eliminated.

Attenuators are accurately calibrated and may be used as a termination and power measuring device in conjunction with a thermistor bridge.

HPST-1500 is an S Band, waveguide termination capable of 1500 watts dissipation in still air, and has a V.S.W.R. of less than 1.1 over the range of 2700 to 3400 mc. **Price \$185.00**

HPTXS-175 is an X Band, waveguide termination, capable of 200 watts dissipation in still air. V.S.W.R. will not exceed 1.1 over the range of 8500 to 10,000 mc. **Price \$55.00**

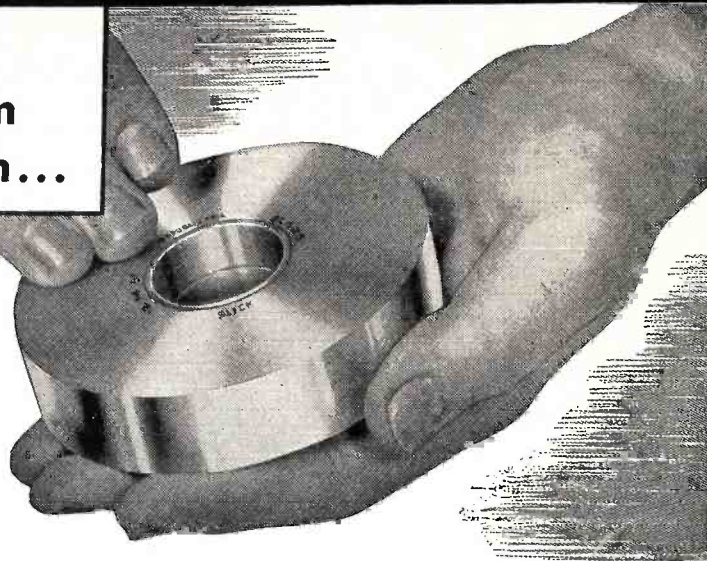
Many other standard terminations and attenuators available, non standard terminations made to specifications.

| Type | Freq. Range KMC | Waveguide in Inches | Nominal Average Power Dissipation | Maximum VSWR | Size in Inches | Weight | Flange |
|---|-----------------|---------------------|-----------------------------------|--------------|-----------------------------------|---------------|----------|
| TERMINATIONS FOR 1/2 in. x 1/4 in. WAVEGUIDE | | | | | | | |
| PK1 | 18-26.5 | 1/2 x 1/4 | 1 W. | 1.15 | 2 long | 1/4 lb. | UG425/U |
| PK50 | 18-26.5 | 1/2 x 1/4 | 50 W. | 1.15 | 8 long | 2 lbs. | UG425/U |
| TERMINATIONS FOR 1/2 IN. x 1 in. WAVEGUIDE | | | | | | | |
| TX1 | 8.5-9.6 | 1/2 x 1 | 1 W. | 1.1 | 8 long | | |
| TXS50 | 8.2-12.4 | 1/2 x 1 | 50 W. | 1.15 | 8 long | 2 lbs. | UG39/U |
| TXS75 | 8.2-12.4 | 1/2 x 1 | 75 W. | 1.15 | 11 long | 2 1/2 lbs. | UG39/U |
| TXS108 | 8.5-9.6 | 1/2 x 1 | 150 W. | 1.15 | 9 x 1 1/2 x 3 | 2 lbs. | UG40/U |
| TXS150 | 8.2-12.4 | 1/2 x 1 | 150 W. | 1.15 | 11 x 2.5 x 2.5 | 3 lbs. | UG39/U |
| TXS22/U | 8.2-12.4 | 1/2 x 1 | 175 W. | 1.15 | 11 x 3.5 x 3.5 | 3 lbs. | UG39/U |
| TXS250 | 8.2-12.4 | 1/2 x 1 | 250 W. | 1.15 | 11 x 3.5 x 3.5 | 3 1/4 lbs. | UG39/U |
| TERMINATIONS FOR 5/8 in. x 1 1/4 in. WAVEGUIDE | | | | | | | |
| TXS | 7-10 | 1 1/4 x 5/8 | 1 W. | 1.1 | 8 long | 2 lbs. | UG51/U |
| TXL100 | 7-10 | 1 1/4 x 5/8 | 100 W. | 1.15 | 10 long | 2 lbs. | UG51/U |
| TXL31 | 7-10 | 1 1/4 x 5/8 | 200 W. | 1.1 | 7.5 x 2 x 1 1/4 | 4 lbs. | UG51/U |
| TXL200 | 7-10 | 1 1/4 x 5/8 | 200 W. | 1.15 | 11.25x2.75 x 2.75 | 2 lbs. 4 ozs. | UG138/U |
| TXL250 | 7-10 | 1 1/4 x 5/8 | 250 W. | 1.15 | 12 x 3.5 x 3.5 | 3 1/4 lbs. | UG51/U |
| TXL21/U | 7-10 | 1 1/4 x 5/8 | 280 W. | 1.15 | 12 x 3.5 x 3.5 | 6 lbs. | UG51/U |
| TXL500 | 7-10 | 1 1/4 x 5/8 | 450 W. | 1.15 | 11.25 x 4.5 x 4.5 | 5 1/4 lbs. | UG51/U |
| TERMINATIONS FOR 1 1/2 in. x 3 in. WAVEGUIDE | | | | | | | |
| TXS1 | 2.4-3.7 | 1.5 x 3 | 1 W. | 1.1 | | 6 lbs. | UG53/U |
| TXS38 | 2.4-3.7 | 1.5 x 3 | 700 W. | 1.1 | 24 x 5.4 x 5.4 | 13 lbs. | UG438/U |
| TXS1500 | 2.60-3.95 | 3.00 x 1.50 | 1500 W. | 1.15 | 25 long | 13 lbs. | UG438/U |
| TERMINATIONS FOR 1 1/2 in. x 3/4 in. WAVEGUIDE | | | | | | | |
| TXS600 | 5.85-8.20 | 1 1/2 x 3/4 | 600 W. | 1.15 | 14 long | 8 lbs. | UG344/U |
| TERMINATIONS FOR 2 in. x 1 in. WAVEGUIDE | | | | | | | |
| TXS800 | 3.95-5.85 | 2.00 x 1.00 | 800 W. | 1.15 | 14 long | 12 lbs. | UG149A/U |
| TERMINATIONS FOR 4.46 in. x 3.31 in. WAVEGUIDE | | | | | | | |
| TL1500 | 1.70-2.60 | 4.46 x 3.31 | 1500 W. | 1.15 | 15 long | 20 lbs. | UG435/U |
| TERMINATIONS FOR 6.66 in. x 3.41 in. WAVEGUIDE | | | | | | | |
| TL2000 | 1.12-1.70 | 6.66 x 3.41 | 2000 W. | 1.15 | 32 long | 24 lbs. | UG417/U |
| COAXIAL DUMMY LOADS | | | | | | | |
| TS1 | S-Band | N | 1 W. | 1.15 | 4 long | | |
| TN100 | DC-9 | N | 100 W. | 1.15 | 5 1/2 x 6 x 4 1/2 | | |
| TU500 | DC-3 | 3/8 | 500 W. | 1.15 | 18 long | | |
| TN500 | DC-3 | N | 500 W. | 1.15 | 18 long | | |
| TL500 | L-Band | 1 1/4 | 500 W. | 1.15 | 18 long | | |
| TN1000 | DC-3 | N | 1000 W. | 1.15 | 24 long | | |
| TU1000 | DC-300 | 3/8 | 1000 W. | 1.15 | 24 long | | |
| ATTENUATORS | | | | | | | |
| PAXS | 8.2-12.4 | 1.2 x 1.00 | 250 W. | 1.15 | Attenuation 2-60 decibels (fixed) | | UG39/U |
| PAXL | 7.00-10 | 1 1/4 x 5/8 | 450 W. | 1.15 | Attenuation 2-60 decibels (fixed) | | UG51/U |

ELECTRO IMPULSE Laboratory 62 WHITE STREET • RED BANK, N. J. RED BANK 6-0404

MAXIMUM PRODUCTION

at
minimum
cost with...



REPUBLIC Capacitor FOIL

Custom-Made FOR YOUR MACHINES
FOR YOUR SPECIFIC
APPLICATIONS

- **CLEAN, STRAIGHT-CUT EDGES** — mean superior windings and minimum breakage, less down time and fewer rejects.
- **FREE UNWINDING** — no sticking, tearing, or wrinkling, permitting maximum winding speeds.
- **QUALITY CONTROL METHODS** — utilizing the most modern of electronic devices — assure uniform quality, accuracy and maximum yield.
- **NON-RETURNABLE STEEL CORES** — available without charge — eliminate time-consuming cleaning, sorting and guessing as to which supplier owns them.

ALUMINUM FOIL IN ROLLS SPECIFICATION INDEX

| Gage in Inches | Yield in Sq. In. Per Pound | Gage in Inches | Yield in Sq. In. Per Pound |
|----------------|----------------------------|----------------|----------------------------|
| .0002 | 51,000 | .00080 | 12,800 |
| .00023 | 44,600 | .00090 | 11,350 |
| .00025 | 41,000 | .0010 | 10,250 |
| .00030 | 34,000 | .0015 | 6,800 |
| .00035 | 29,200 | .0020 | 5,100 |
| .00040 | 25,600 | .0025 | 4,100 |
| .00045 | 22,700 | .0030 | 3,400 |
| .00050 | 20,500 | .0035 | 2,930 |
| .00065 | 15,700 | .0040 | 2,550 |
| .00070 | 14,600 | .0050 | 2,050 |

All commercial widths available from 1/4" mounted on standard 1-5/16" I.D. metal cores. Non-returnable steel cores are available without charge.

YOUR INQUIRY IS INVITED

REPUBLIC FOIL & METAL MILLS
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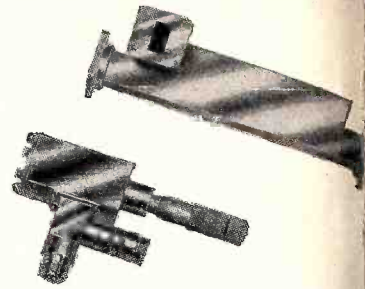


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R-F FITTINGS

for commercial and military applications



Standard and special co-ax connectors, cable assemblies, wave meters, crystal mounts, dummy loads, directional couplers, and other microwave components. Descriptive bulletin on request.



GENERAL **R-F FITTINGS** CO.

702 Beacon Street, Boston 15, Massachusetts

a plus feature

Immediately following the
Product Listings in the
DIRECTORY SECTION

of this Issue
is a list of more than

3400
TRADE NAMES
of electronic and
allied products.

They are intended for
your use in determining
the manufacturer's name
when only
a trade name is known.

precision electronic instruments by DeJUR



PANEL INSTRUMENTS

- 1. 2½" Ruggedized Meter. Meets MIL-M-10304. Model R210
- 2. 3½" A.S.A. Meter meets MIL-M-6A. Model S312
- 3. 1½" Meter. Conserves space. Built to SC-73-3. Model 112
- 4. 1½" Meter. Metal Case. Single Hole Mounting. Model 120
- 5. 1½" Ruggedized Meter. Meets MIL-10304. Model R112

PRECISION POTENTIOMETERS

- 6. Multiple ganging and external phasing 2" Diameter Model C200
- 7. Single hole mounting Model C200
- 8. Single Sine-Cosine Model C200
- 9. Dual Unit Model L402
- 10. 1-11/16" Diameter Center tapped Model L400
- 11. 3" Diameter 11 watt JAN-R-19 Const. Model 275
- 12. Dual Concentric Model 282
- 13. 3" Diameter 8 watt JAN-R-19 Const. Model 260
- 14. Non-Linear Card C200
- 15. Sine-Cosine Card C200

Actual performance records prove that these DeJUR components withstand adverse conditions of vibration, heat and moisture. Each is engineered and manufactured to meet rigid government requirements. In addition to its wide variety of stock instruments, DeJUR offers top-flight laboratory, engineering and manufacturing facilities for production of these precision units adapted to your specifications. Inquiries are invited.

Write for more detailed information on any of the products shown on this page to Dept. EBGMP



DeJUR · AMSCO CORPORATION

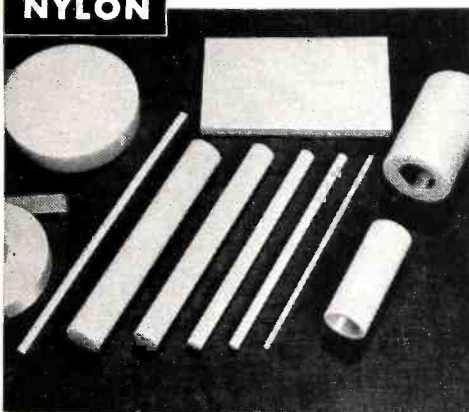
45-01 NORTHERN BOULEVARD, LONG ISLAND CITY 1, N. Y.
MANUFACTURERS OF SCIENTIFIC PRECISION EQUIPMENT FOR OVER 30 YEARS

POLYPENCO® NON-METALLIC SHAPES

Use stock shapes for low cost fabrication

With POLYPENCO shapes, you can economically obtain the advantages of nylon, Teflon*, and Q-200.5 for a wide variety of components by fabricating them on standard metalworking tools. You also receive uniform high quality in every piece of stock. Most standard sizes are stocked now for immediate delivery.

NYLON



ROD: Diameters from $\frac{1}{8}$ " to $6\frac{1}{2}$ " in lengths from 8' to 6".

STRIP: .010" to .125" thick, $\frac{1}{4}$ " to 4" wide.

TUBING: .035" to .500" O.D., .020" to .410" I.D.

TUBULAR BAR: O.D.'s from 2" to 10" with wall thicknesses of $\frac{3}{8}$ " to $1\frac{1}{2}$ ".

SLAB: $\frac{1}{4}$ " to 1" thick, standard 10" width, discs from $\frac{1}{4}$ " to 2" thick in 6" to 12" diameters.

ROD: Diameters from .030" to 4" in lengths ranging from continuous coils down to 6".

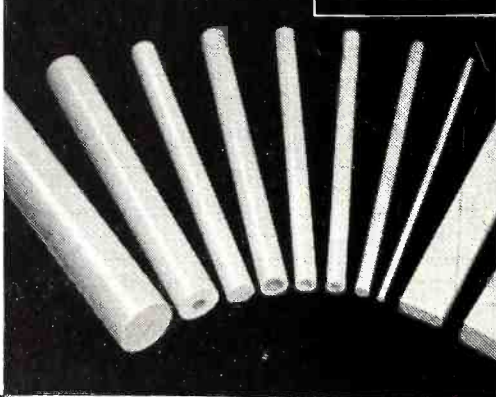
TUBING: $\frac{1}{4}$ " to $4\frac{7}{8}$ " I.D. with walls from $\frac{1}{8}$ " to 2" thick.

SPAGHETTI TUBING: I.D.'s corresponding to American Wire Gauges 22 through 8, in lengths up to 1,000'.

TAPE: .002" to .125" thick, $\frac{1}{4}$ " to 12" wide.

SLAB: 24" or 48" squares from .125" to 1.50" thick.

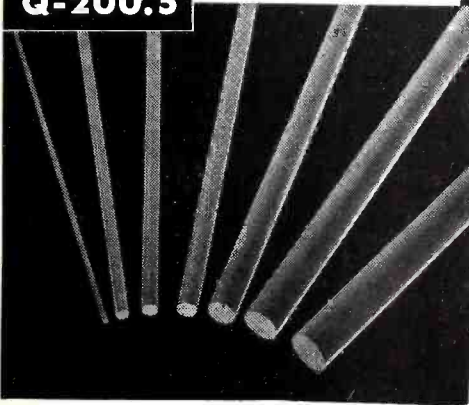
TEFLON*



ROD: Diameters from $\frac{1}{8}$ " to $3\frac{7}{8}$ " in lengths from 4' to 8'.

Other shapes and sizes can be supplied on special order.

Q-200.5



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POLYPENCO NON-METALLICS

nylon . . . Teflon* . . . Q-200.5

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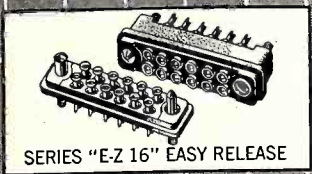
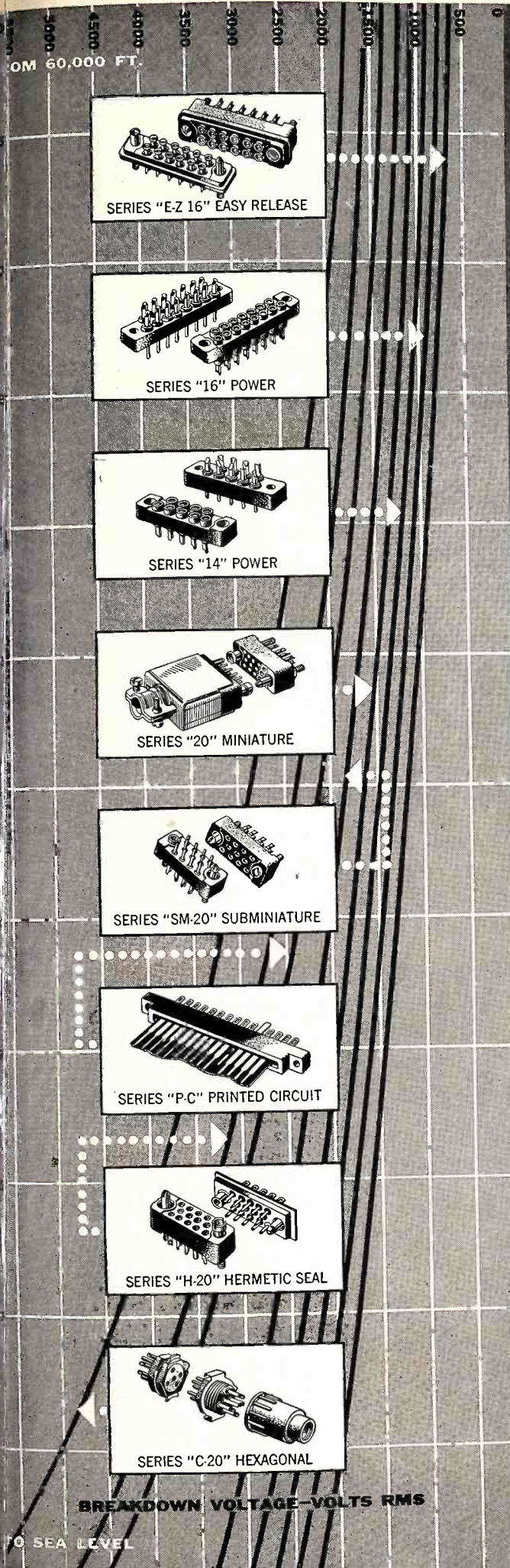
*Trademark for Du Pont tetrafluoroethylene resin

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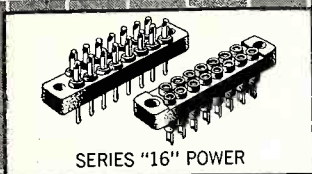
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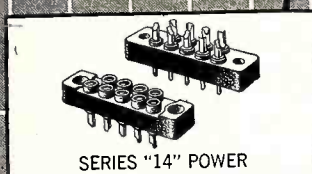
They refer
FIRST
to the
"GUIDE."



SERIES "E-Z 16" EASY RELEASE



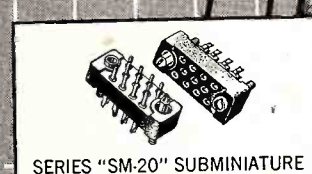
SERIES "16" POWER



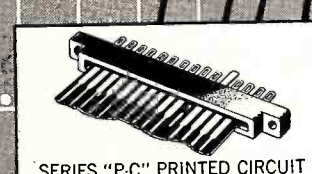
SERIES "14" POWER



SERIES "20" MINIATURE



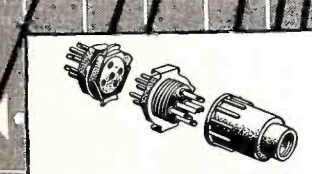
SERIES "SM-20" SUBMINIATURE



SERIES "P-C" PRINTED CIRCUIT



SERIES "H-20" HERMETIC SEAL



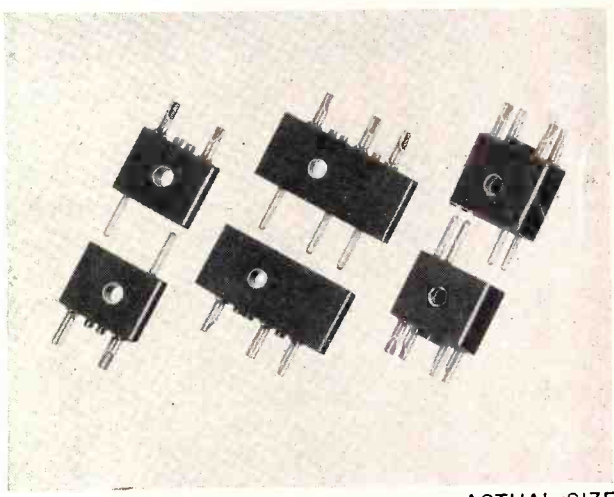
SERIES "C-20" HEXAGONAL

BREAKDOWN VOLTAGE—VOLTS RMS

TO SEA LEVEL

new... precision Continental Connectors*

simplify your connector problems



ACTUAL SIZE

Rectangular Series "G-20" Subminiature Connectors

These unique reverse pin and socket connectors are miniaturized for use in small area applications. The molding is provided with a hole for convenient, space-saving side mounting. Precision machined sockets and pin contacts are gold plated over silver for low contact resistance. The "G-20" series is available with two, three or four contacts in Melamine, Plaskon-Alkyd, or Dialyl Phthalate molding compounds.

For complete, illustrated engineering literature, write Dept. EBG2, DeJUR-Amsco Corp., 45-01 Northern Blvd., Long Island City 1, N. Y.

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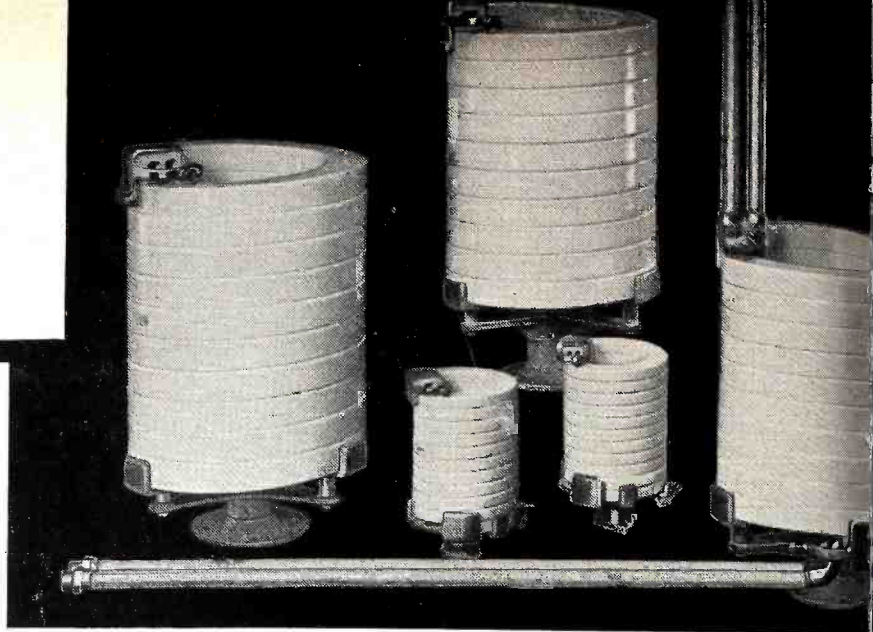
*WORLD'S LARGEST MANUFACTURERS OF MINIATURE PRECISION CONNECTORS

Lapp



TUBE SUPPORTS for air-cooled tubes

No longer is it necessary for equipment manufacturers to design supports for forced-air-cooled tubes. After producing many such special designs, Lapp has engineered and built a complete series of insulating supports for air-cooled tubes. Use of these supports facilitates design of transmitter and other high-power circuits. Simple, compact, efficient and attractive in appearance, in porcelain or steatite, they make for economical production, easy interchangeability, and availability of replacement units. Write for Bulletin 301, with complete description and specification data.



INSULATION FOR WATER-COOLED SYSTEMS

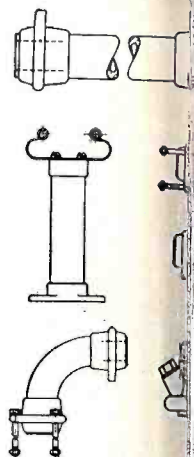
For carrying cooling water which must undergo a change in potential of Lapp porcelain eliminates troubles arising from water contamination and conductivity, sludging and electrolytic attack of fittings. Purity, cleanliness and high resistance of cooling water is assured—for positive cooling and long tube life.

LAPP PORCELAIN WATER COILS

Twin-hole and single-hole models in sizes to provide flow of cooling water from 2 to 90 gallons per minute. Cast aluminum mounting bases, lead pipe or flexible metal hose for attachment.

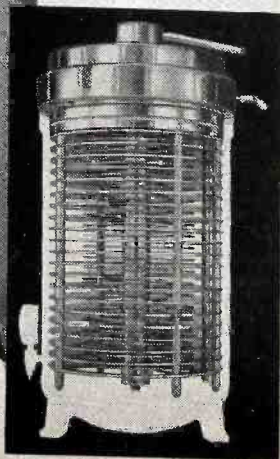
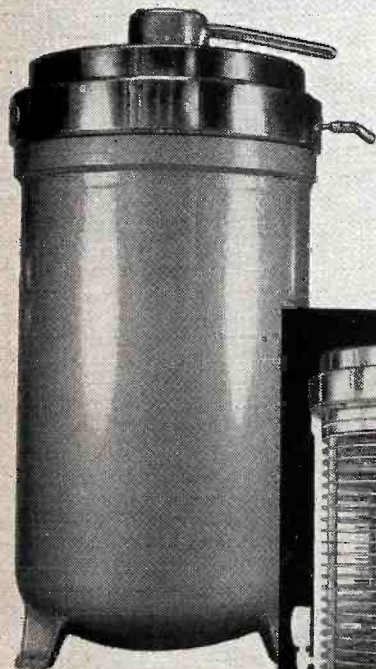
LAPP PORCELAIN PIPE

Inside diameters $\frac{3}{4}$ " to 3", in straight, 90° and 180° elbows, fittings. Swivel-type connections. Standoff insulators attach directly to fitting bolts. Write for Bulletin 301 with specifications for Lapp Porcelain Water Coils and Porcelain Pipe.



LAPP GAS-FILLED CONDENSERS

Capacitance for high-voltage, high-current d



The record of more than 15 years' service, in thousands of installations, proves the reliability of the Lapp Gas-Filled Condenser. For duty at high voltages and high currents, this unit offers the advantages of extreme compactness . . . low loss . . . high efficiency factor . . . constant capacitance under temperature variations . . . grounded tuning shaft . . . and rugged sturdiness. Units available in five tank diameters, 7" to 24" . . . in fixed or variable capacitance . . . capacitances to 60,000 mmf; current ratings to 525 amperes at 1 mc; voltages to 100 Kv peak. Write for Bulletin 302.

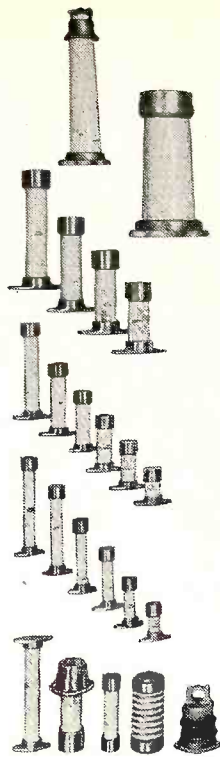
ENTRANCE INSULATORS

To eliminate losses which occur in ordinary types of bushings at radio frequency, Lapp units use air as major insulation, porcelain path being lengthened by its "bowl" shape. In wide variety of types for most electrical and mechanical requirements.

STAND-OFF INSULATORS

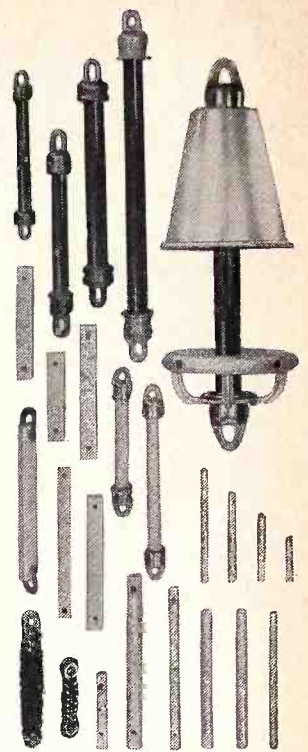
Dependable mechanical and electrical performance—and trim good looks. Hundreds of standard and special types available.

Write for Bulletin 301, listing entrance and stand-off insulators.

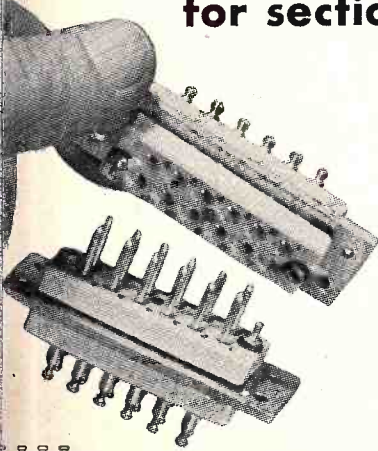


ANTENNA STRAIN INSULATORS

The largest of the porcelain rod insulators shown develops 12,000 lb. strength. Available, as specified, with rain shield and/or corona rings. Smaller units, in porcelain or steatite, for all strain or spreader use. Engineering and production facilities also available for special performance units. See catalog 301.

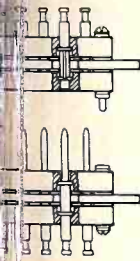


PLUG-AND-RECEPTACLE UNITS for sectionalizing circuits



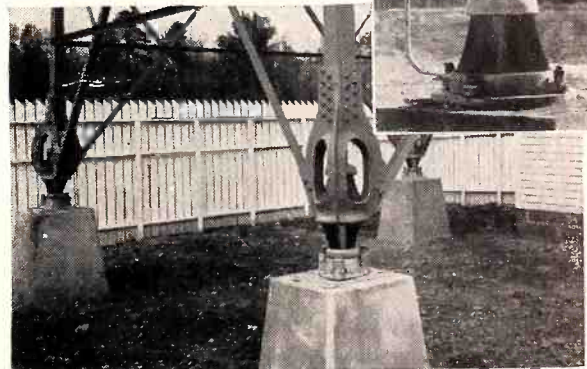
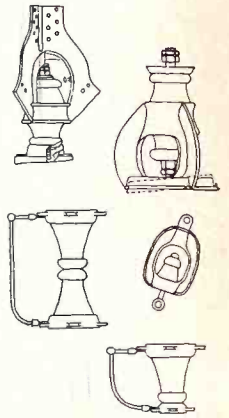
For panel-rack or other sectionalized circuits, Lapp offers a variety of plug-and-receptacle units. Any number of contacts can be provided (in multiples of twelve). Male and female contacts are full floating, for easy alignment and positive contact. Contacts

silver plated, terminals tinned for soldering. Insulation is steatite, the low-loss ceramic... non-carbonizing even under leakage flashover resulting from contamination, moisture or humidity. Write for complete electrical and mechanical specifications and recommendations.



ANTENNA TOWER INSULATORS

Most of the world's radio towers are supported by Lapp insulators, including the tallest guyed mast ever built. Through the Lapp "compression cone," immense loads can be carried by electrical porcelain. Write for data on Lapp footing insulators for self-supporting radiators, mast-base insulators, or guy insulators.



SPECIAL ASSEMBLIES

Business is electrical porcelain, its application, manufacture, and assembly. Our skill is in our knowledge of the capabilities, and limitations, of electrical insulation... in engineering ingenuity to meet special requirements... and in efficient production. Whenever you have need for insulating parts and associated specialties, we may be able to show you how they can be produced most economically, to perform most efficiently.

Lapp

LAPP INSULATOR CO., INC.
RADIO SPECIALTIES DIVISION
100 SUMNER ST., LEROY, N.Y.

AUDIO

TRANSFORMERS

All your requirements for transformers can be met "right up to specs" at TRANSFORMERS INC. Our highly trained staff of engineers, specializing in transformers, backed by ample production facilities, the most rigid testing and inspection procedures enables us to meet the most exacting requirements. Consult us first for the following types of transformers . . .

- PRECISION INSTRUMENT
- AUDIO INPUT
- INTERSTAGE OUTPUT
- PULSE HYBRID MATCHING POWER PLATE FILAMENT
- VIDEO MODULATION
- AUTO REFERENCE
- TOROIDAL

- CLASS A
- HIGH TEMPERATURE CLASS "H"
- MINIATURE
- SUB-MINIATURE
- MIL-T-27
- COMMERCIAL GRADE

Transformers Inc. has one of the most complete laboratories for the design of audio transformers. Our plant facilities permit us to manufacture large quantities at better than competitive prices. Although Transformers Inc. does not carry any stock items a special sample department is equipped to manufacture small quantities of audio transformers that are not commonly available. We also solicit inquiries on plate power and filament transformers for either large production quantities or samples.



MINIATURE AND SUB-MINIATURE TRANSFORMERS

Air-borne electronic equipment has created a need for small transformers with particular emphasis on light weight. Small sizes are obtained by the use of special core material and light weight requirements are met by special encapsulating methods. TRANSFORMERS, INC. is a recognized source for miniature transformers for military or industrial use. We carry a large stock of special alloy laminations in a great variety of sizes.

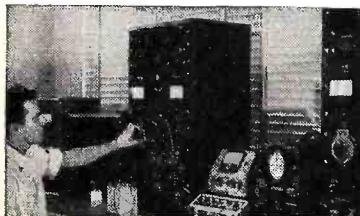
Even greater miniaturization can be effected in special cases by either reducing the efficiency of the transformer or by making the operating requirements more stringent.

All inquiries on miniature and sub-miniature transformers will receive prompt attention. In view of our large inventory on special alloy laminations samples of miniature and subminiature transformers can be made promptly.

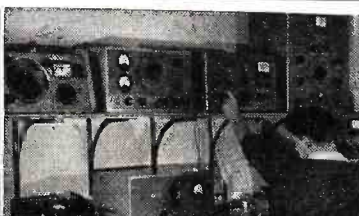
PULSE TRANSFORMERS



Transformers Inc. has the proper engineering, production and testing facilities for the manufacturing of all types of pulse transformers. We are currently manufacturing a great variety of pulse transformers of the miniature size used in blocking oscillators. These transformers are used in conjunction with hard vacuum tubes to produce pulses with a width as small as .1 microsecond, and with repetition rates up to 5000 p.p.s. We are also equipped to manufacture power pulse transformers as used in radar equipment.



INDUCTANCE MEASUREMENT—Any operating condition can be simulated in the range of 0-1000V A.C. and 0-5 Amps. D.C.



DEVELOPMENT OF AUDIO TRANSFORMERS—All characteristics of audio transformers in the range of .01 cycle to 10 M.C. can be measured and evaluated.



POWER LOSS MEASUREMENT—Losses as low as 15 micro watts in the range of 20 c to 200 K.C. can be measured and analyzed and possible improvements effected.



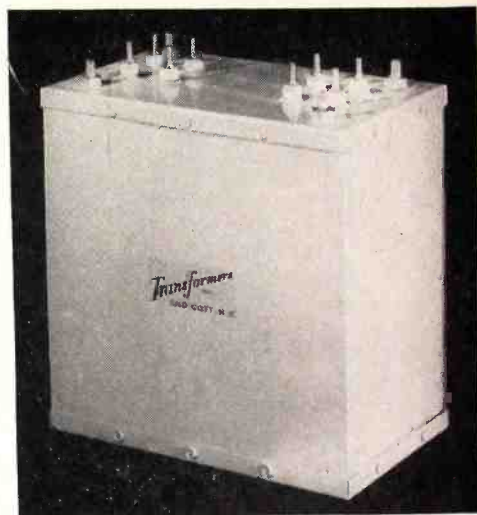
PULSE TRANSFORMER DESIGN—Circuit methods commonly used in the design of pulse transformers have been supplanted by use of special equipment.

COMPUTER PRECISION TRANSFORMERS

Voltage reference transformers and computer excitation transformers

Voltage ratio accuracy of $\pm .05\%$ can readily be obtained while accuracies as low as $\pm .01\%$ have been achieved for special applications. The phase angle can be made as small as .1 milliradian (approximately 20 seconds).

Transformers Inc. has special facilities for the accurate measurements of voltage ratio and extremely small phase angles. Special techniques have been developed by our laboratory staff to manufacture precision transformers with predictable accuracy and permanency. Any assistance required in the application of precision transformers to specific problems will be furnished free of charge by our engineering staff.



Samples of voltage reference transformers have been submitted to the National Bureau of Standards for calibration and have been found to have a voltage ratio accuracy of better than $\pm .05\%$.

MAGNETIC AMPLIFIERS

Transformers Inc. manufactures a large variety of Saturable Reactors, Transducers, Magnetic Amplifiers and Magnetic Modulators. We carry stock items in the range of 5-200 Watts output for servo amplifiers operating at 400 c.p.s.

Send for **BULLETIN 201**

HIGH TEMPERATURE TRANSFORMERS - CLASS "H"

Class "H" transformers can be divided into two distinct groups.

GROUP 1

The first group are those that operate in extremely high ambient temperatures. They are of normal weight and size.

GROUP 2

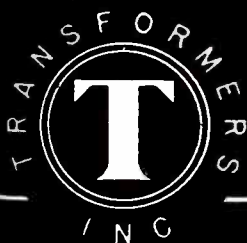
The second group are those transformers that of necessity have been made so small in size by reducing their efficiency so that the attendant losses cause high temperature rise during operation.

In addition to these two groups there is a third in which the ambient is high and miniaturization has been effected. Transformers Inc. is in a position to make samples as well as large quantities of these types of transformers.



Transformers Inc. meets all requirements for

**CLASS A • HIGH TEMPERATURE-CLASS "H" • MINIATURE
SUB-MINIATURE • MIL-T-27 • COMMERCIAL GRADES**



TRANSFORMERS INC.

532 NORTH STREET

ENDICOTT, NEW YORK

Telephone ENDICOTT 8-1801

STATIC ELECTROMAGNETIC DEVICES



SERIES 6000

Micro-RELAY by Terado

TRADE MARK

- OPERATING POWER
65 Milliwatts
Less on special adjustment
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Double Throw
- SWITCH RATING
1.0 ampere/1,000,000
operations 24 volt
non-inductive load.
Greater load capacity
at fewer operations.
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Excellent characteristics
due to short armature
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-55°C — +85°C
- BASE TO FIT 7-PIN
Miniature tube socket
- PHYSICAL SIZE
3/4" x 1-11/16"

Write direct to

TERADO Company
Precision Equipment Dept.
1059 RAYMOND AVE.
ST. PAUL 14, MINNESOTA
UNITED STATES OF AMERICA

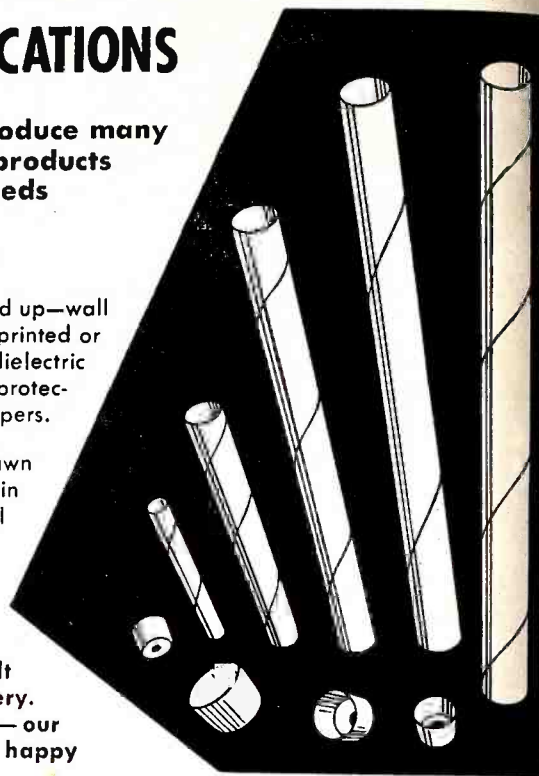
PAPER TUBE PRODUCTS TO YOUR EXACT SPECIFICATIONS

NIEMAND BROS. produce many types of paper tube products to meet the varied needs of the electrical and mechanical industries.

Diameters from .093" to 2" and up—wall thicknesses of .003" to .060"—printed or plain—materials such as high dielectric kraft, fish paper, foils, special protective coated and laminated papers.

We also make precision drawn paper caps from .141" to 2" in diameter, as well as special die-cut washers and parts to required specifications.

Our modern, high-speed equipment and improved methods of production result in economy and rapid delivery. Send us your specifications—our highly trained staff will be happy to serve you.



NIEMAND BROS. INC. *Manufacturers of*

PAPER TUBE PRODUCTS

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Price \$42 each
F.O.B. Quincy, Mass.

AINSLIE 'Scope Dolly

Practical • substantially built • attractive appearance

Completely assembled. Just slip four ball-bearing casters in place and it's ready for use. Finished in grey wrinkle-tone baked enamel, black enamel handles. Dolly accommodates 'scopes up to 14 3/4 x 23 1/2. Ample space for accessories on handy lower shelf. Hght. (front) 36 1/4", hght. (rear 28 1/4" width 17". With two 3" free-wheeling rubber-tired casters and two side-brake rubber-tired casters. Adjustable bracket. Shipping weight, 48 lbs; dolly 38 lbs.

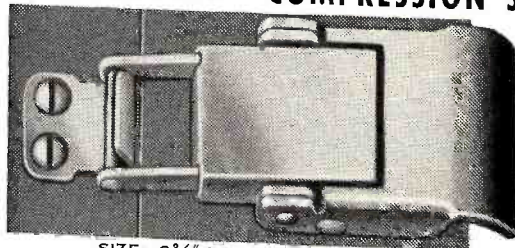
Ainslie Electronic Products, Inc.

312 Quincy Ave.

Quincy, Mass.

Designers and Manufacturers of
Radar Reflectors and Equipment; Precision Fabricators

"Nielsen" COMPRESSION SPRING DRAW PULL CATCHES WITH SPRINGS CONCEALED



SIZE: 2 3/4" LONG X 1 1/4" WIDE

SIGNAL CORPS NO. SC-B-83314

70-Pound Tension at 1/8" Deflection,
the established application dimension.

Withstands 600-Pound Pull Test.

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FOR QUALITY HARDWARE — GOOD SERVICE TO YOUR SPECIFICATION

ASTRON

quality capacitors filters...

DEPEND ON...INSIST ON...ASTRON

SAFETY MARGIN* Electrolytic Capacitors



ASTRON "SM" SAFETY MARGIN design affords the ultimate in performance over a wide range of operating conditions. Particularly suited for operation in tropical, hot and humid climates, they offer maximum protection under severe operating conditions for long service life.

Leading electronic equipment manufacturers favor Safety Margin Electrolytic capacitors for their reliability and quality.

Safety Margin types fill your requirements whether they are metal cased, cardboard cased or twist prong capacitors.

*Trademark



Molded Plastic Tubulars



BLUE POINT'S tough new bonded plastic shell and unique bonded seal answer all heat and moisture problems. Exclusive new material treatments and design with solid thermosetting vacuum impregnant insure absolutely dependable operation at 85°C without derating. Extremely high heat resistant qualities of the shell and BLUE POINT seal prevent leads from pulling or melting out.

METEOR* Subminiature Paper Capacitors



Operate up to 125°C without derating. METEORS* use ASTRON'S exclusive new high temperature impregnant X-250*. Over the entire operating range -65°C to +125°C, these miniaturized capacitors have high insulation resistance, low power factor plus a built-in voltage safety factor. METEORS* surpass the most exacting military specifications and are available in a variety of designs for all types of installation.

*Trademark

METALITE® Metallized Paper Capacitors



METALITE capacitors are remarkably small units designed to meet current needs for subminiature capacitors to fit into ultra compact electronic equipment. Extremely small and lightweight METALITE'S self-healing characteristics prevent failures from momentary over-voltages and surges. For operating temperatures up to +125°C HY-MET METALITE capacitors with solid thermosetting impregnant offer the desired operating qualities... stability, vastly improved insulation resistance, low RF impedance and self-healing properties.

METALITE and HY-MET in a wide variety of case styles and operating characteristics meet the requirements for all types of equipment.

OIL FILLED Capacitors



ASTRON-developed, oil filled, hermetically sealed paper capacitors are designed to meet the severe operating requirements and test conditions of specification MIL-C-25A. Designed for military as well as commercial use, they are made to the most exacting quality standards for reliable performance and maximum dependability.

Designed for military as well as commercial use, they are made to the most exacting quality standards for reliable performance and maximum dependability.

RF NOISE SUPPRESSION FILTERS



Pioneers in the development and mass production of high efficiency subminiaturized filters, ASTRON engineers have solved the most difficult and diversified noise suppression problems. Latest concepts of filter design plus the newest quality components and production techniques assure unequalled guaranteed performance plus reduced size and weight. Let ASTRON'S filter engineers solve your noise suppression problems.

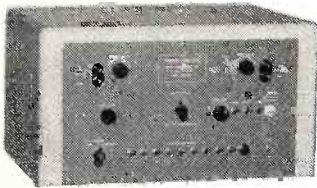
ASTRON'S extensive experience and modern large scale production can solve all your capacitor and filter problems. ASTRON products are now in use in millions of leading TV sets and other electronic equipment. Start using ASTRON brand today to increase your brand acceptance. Write today outlining your requirements.



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255 GRANT AVENUE
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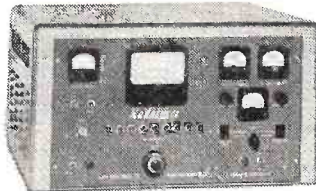
LF... HF... UHF... Microwave Test Equipment



RADA-SWEEP: An all Electronic sweeping oscillator for use in aligning radar IF strips. Swept by symmetrical sawtooth also used for sweeping the oscilloscope. Marks individually switched on or off. Separate attenuators used on pip marker and high frequency outputs. True zero level reference baseline provided on scope display.

CENTER FREQ. . . . Switchable to 30 or 60 mc—Others to order
 SWEEP WIDTH . . . Switchable to 3 or 20 mc
 MARKERS . . . Narrow pulse type crystal positioned at 25, 35, 55, 65 mc
 PRICE . . . \$395 with marks as above. Marker frequencies changed or added on special order.

RADALYZER: A gain set with a 30 MC IF for low level microwave measurements. Insertion losses of over 60 db or of only 0.2 db can be measured. ATTENUATORS: 0-101 db (steps—1, 2, 3, 5, 10, 20, 20, 20, 20). 0-10 db precision ten-turn potentiometer, calibrated. POWER SUPPLIES: Electronically regulated voltages are furnished for two external klystrons.

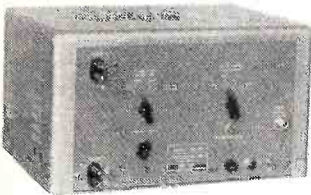


PRICE: \$995.00



MEGA-MATCH: Displays reflection coefficient over wide frequency range. Measures reflected energy. Used for designing broad band antennas and matching transformers, checking impedance matching of TV RF transformers and tuners, and measuring transmission line terminating impedance.

FREQ. RANGE . . . 10 to 1000 mc. FREQ. SWEEP . . . To 30 mc in width
 SENSITIVITY . . . Reflection coefficients down to approx. 0.01 up to 500 mc and 0.1 from 500 to 1000 mc can be seen. PRICE . . . \$895



MEGA-PULSER: Provides a source of very narrow pulses for use in testing the transient response of wide-band circuits and the correctness of termination of transmission lines. 3 different pulse repetition rates 100, 1000, 2000 pps., and 4 different pulse widths, 0.025, 0.05, 0.1, 0.25 micro-sec., rise and decay time

approx. 0.01 micro-sec., for wide band video amplifier transient response studies. Operates with internal or external triggers. PRICE . . . \$225.00

MICRO-PULSER: Provides rectangular pulses over a wide range of repetition rates. For testing radar systems and components, transient response of video amplifiers and other electrical networks. Has variable delay between synchronizing pulse and output pulse. Pulse output may be used to pulse modulate an RF carrier to obtain a suitable signal for testing transient response of hf broad-band amplifiers. PRICE . . . \$225



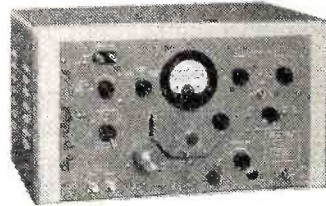
RADA-PULSER SR.: A versatile pulsed-carrier generator with continuously variable calibrated frequency range from 12 MC to 80 MC. Calibrated variable pulse widths from 0.2 to 20 microseconds. Pulse Rise and Rate of Fall: 0.03 microseconds.

OUTPUT ATTENUATOR: 50 ohms constant Z. 101 db max. in steps of 0.5 db. PRICE . . . \$745.00

SONA-SWEEP: Very similar to Kilo-Sweep. Frequency range and sweep width adapt it to measurement and alignment of ultrasonic frequency amplifiers in Sonar and carrier-current communication systems. Adapted to work on high Q systems, since sweep repetition rate is variable to below 5 cps. Covers range from 5 to 200 kc. with maximum sweep width of 20 kc. Supplied with crystal marks at 50, 100, and 200 kc. PRICE: \$525

CALIBRATED MEGA-SWEEP: The widest range sweeping available. Covers approximately 50 kc to 900 mc range, with control tuning. Maximum sweep width at least 30 mc, variable TOOTH SWEEP . . . no phasing. PRICE . . . \$495

MEGA-SWEEP: An alternate model of the above with many of features except that it lacks single dial tuning and direct indication of approximate output center frequency. PRICE . . . \$465



111-A Calibrated MEGA-SWEEP: Provides much higher output width to 40 mc, and same features as Calibrated Mega-Sweep. Includes blanking for zero level line. Frequency range and output follows:

| Frequency Range | Output Impedance | Output Voltage (Into Load) |
|------------------|-------------------|----------------------------|
| 1. 10 mc—950 mc | 70 ohm unbalanced | 0.15 V |
| 2. 450 mc—900 mc | 300 ohm balanced | 0.3 V |

PRICE . . . \$575

Model Video MARKA-SWEEP:

All electronic video sweep oscillator. Crystal positioned marks of pulse type provided at 1, 2, 5, 10, 15, and 20 Mc are fed directly to the oscilloscope. By use of external signal generator a variable frequency pulse type marker is available. Output max. is 0.3 v. from a 72 ohm internal impedance. SWEEP RANGES . . . 50 kc to 5 mc, 50 kc to 10 mc, 50 kc to 20 mc. SAWTOOTH SWEEP . . . Sweeps video output and deflects scope horizontally. Zero level baseline provided on oscilloscope. PRICE . . . \$495



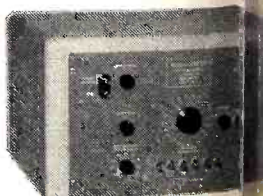
Model Video TTV MARKA-SWEEP:

Combines 8 mc wide video sweeping oscillator with any one of 5 crystal positioned markers and a continuously variable marker. Metered output of 1.5 volts into 72 ohms. Specifications: SWEEP RANGE: 50 kc to 8 mc. SWEEP: All electronic linear sawtooth. MARKERS: CW—A continuously variable CW signal covering the frequency range from 8 mc is provided. Crystal Positioned—Crystal positioned marks provided singly at 0.20, 0.75, 1.25, 4.0 and 6.0 mc. Others may be substituted. AMPLITUDE MODULATION WHILE SWEEPING: Less than 1 db/mc. OUTPUT VOLTAGE: Sweep, CW and Crystal Frequency: 4.2 volts, peak-to-peak, into 72 ohms. (1.5 volts, r.m.s.) Peak and r.m.s. reading voltmeter provided at output, accurate within approximately 5%. OUTPUT ATTENUATORS: Switched—20 db, 2 db, 3 db. Continuous—Approx. 26 db. PRICE: \$695.00 for rack mounting. Cabinet \$35.00 extra.



KILO-SWEEP:

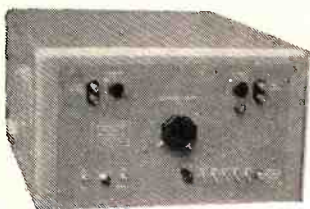
Applies sweep generator techniques of visual alignment to the 50 kc to 2 mc frequency range. Sweep width control allows continuous adjustment of width up to a maximum of 100 kcs. SWEEP . . . All electronic, linear symmetrical sawtooth. Sweep repetition rate adjustable. MARKERS . . . Up to 6 crystal positioned pulse type marks fed directly to scope vertical amplifier. at 0.5, 1.0, 2.0 mc. Others specified by purchaser. ZERO LEVEL LINE . . . Produced on oscilloscope pattern. ATTENUATORS: Switched . . . 20, 20, 10 db. Continuous . . . Approximately 26 db. PRICE . . . \$525



Industrial Instruments . . . Production Test Equipment

TELEVISION TEST EQUIPMENT

Model RF-MARKA-SWEEP: An electronic switchable TV RF sweep generator with narrow pulse markers actuated by receiver alignment. Wide sweep and narrow crystal positioned markers at picture and carrier frequencies on each of



12 VHF channels. IF band included. Output 70 ohms unbalanced and 300 ohms balanced (with matching device supplied). PRICE . . . \$795

Model IF MARKA-SWEEP: An all electronic switchable IF TV sweep generator covering all present ranges. Includes crystal positioned pulse type markers not affected by receiver. For dual IF or intercarrier receivers. Generally similar to Model Video. PRICE . . . \$325. Crystal marks (up to 9) \$15.00 each extra.

FOR COLOR

Color Bars: Various models of these color and Color Bar generators are now available for engineering, production and service. All models produce Standard NTSC colors plus black and white. Some include built-in dot generators. Prices from \$200 to \$795.00.

Model MEGA-PIX SR.: A crystal controlled 12 channel TV picture and audio modulated sound RF signal source for color, black and white. Standard Video input signal required.

SPECIFICATIONS: ACCURACY OF PICTURE AND SOUND CARRIERS: $\pm 0.01\%$ (24 separate crystals). **MAXIMUM PICTURE AND SOUND CARRIER OUTPUT:** At least 30,000 μv into 72 ohms. Attenuator built in. **INPUT IMPEDANCE:** 72 ohms. **VIDEO INPUT Z:** 72 ohms. **INPUT SIGNAL REQUIRED:** Approx. 1.4 volts, peak-to-peak, black negative. **VIDEO BANDWIDTH:** 5 mc, flat. **SOUND CARRIER DEVIATION:** Variable from 0 to 25 kc. **SOUND MODULATION FREQUENCY:** 400 cps, or by external audio. Standard emphasis provided. PRICE . . . \$990



ULTRA-PIX: UHF TV crystal controlled picture and sound RF signal source. Covers UHF channels and one VHF channel. **SPECIFICATIONS:** Same as those for Mega-Pix Sr., except: Standard unit operates on channels 3, 15, 48 and 82. Any one to three other UHF channels may be substituted on special order. PRICE . . . \$795

MEGA-PIX UHF CONVERTER: A UHF converter for the Mega-Pix Sr. (and many other VHF signal sources) which enables that instrument to operate on the following additional channels: 14, 15, 16, 47, 48, 49, 81, 82, 83, also 34, 35, 36, 37, 38, 39 and 40. PRICE . . . \$450

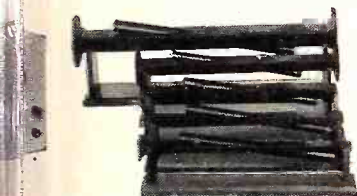
ULTRA-SWEEP: A precision UHF Sweeping Oscillator providing unusually high output. Designed for the production line testing of UHF TV receivers and tuners, as well as general laboratory applications. **FREQUENCY RANGE . . .** 450 mc to 900 mc. **SWEEP WIDTH . . .** Continuously variable from 0 to 50 mc. **OUTPUT . . .** 3 volts into 75 ohms terminated. **ZERO LEVEL BASELINE** produced on oscilloscope pattern. **ATTENUATORS . . .** Switched: 60 db, 20 db, 20 db, 10 db, 6 db, 3 db Continuous: Approx. 3 db. **DETECTOR . . .** built in. PRICE: \$895

ULTRA-MARKER: Provides very narrow "pip" type crystal positioned marks at UHF TV picture and sound carrier frequencies on all channels or every fourth channel. For Ultra-Sweep and other UHF sweeping oscillators. PRICE . . . \$395



Model UHF MARKA-SWEEP: Combines Ultra-Sweep and Ultra-Marker in single cabinet. Channels marked on dial, permitting rapid selection of any UHF TV channel with crystal positioned markers. PRICE . . . \$1190

OTHER EQUIPMENT



MICROWAVE MEGA-NODES: Sources of random noise provided in eight waveguide sizes. May be used for measurement of noise figure, receiver gain and calibration of standard signal sources. Noise figure obtained by comparing noise output of a system with the amount of noise introduced by the instrument. Particularly useful for checking over-all performance in radar systems. Available in following waveguide sizes covering following frequency ranges: RG 69/U—1200 to 1400 mc. RG 48/U—2600 to 3950 mc. RG 49/U—3950 to 5850 mc. RG 50/U—5850 to 8200 mc. RG 51/U—7050 to 10,000 mc. RG 52/U—8200 to 12,400 mc. RG 91/U—12,400 to 18,000 mc. RG 53/U—18,000 to 26,500 mc. **NOISE OUTPUT (ALL GUIDES):** 15.8 db \pm 0.25 db.



MEGA-NODE SR.: A calibrated random noise source providing output over a wide frequency and power range. Used in measuring noise figure, receiver gain, and for voltage calibration of standard signal sources. Reads noise figure directly without band width computation. **FREQ. RANGE . . .** 10 mc to 3000 mc. **OUTPUT IMPEDANCE . . .** 50 ohms unbalanced. **NOISE FIGURE RANGE . . .** 0 to 20 db. **METER CALIBRATION:** Linear in DB noise figure. PRICE . . . \$995



MEGA-NODE: A calibrated random noise source providing selection of several output impedances with balanced or unbalanced output. Used in measuring noise figure, receiver gain, and for voltage calibration of standard signal sources. Noise figure obtained directly from meter of the MEGA-NODE.

FREQ. RANGE . . . 5 to 220 mc. **OUTPUT IMPEDANCES:** Unbalanced . . . 50, 75, 150, 300, Infinity. Balanced . . . 100, 150, 300, 600, Infinity. **NOISE FIGURE RANGE:** 0 to 16 db at 50 ohms; 0 to 23.8 db at 300 ohms. **METER CALIBRATION:** Linear in DB noise figure. PRICE . . . \$295

ANALYZER: Analyzes signals in the 5-4400 cps region in 3 frequency ranges with broad and narrow analysis filters on each range. For studies of transient and steady state vibration signals on aircraft, ships, rotating machinery. Directly writes analysis results on non-photographic recording paper. PRICE . . . \$2500

SONA-GRAPH: Three dimensional or Fourier Analysis of transient or steady state signals 80-8000 cps on non-photographic recording paper.

NOTE: All prices are F.O.B. factory and may change without notice.

FOR COMPLETE DATA:

Send for Kay Electric Company's "Electronic Instruments" brochure or write for full specifications and prices on any of the above instruments.



KAY ELECTRIC COMPANY

MAPLE AVENUE

Phone: Caldwell 6-4000

PINE BROOK, NEW JERSEY

HIGH VOLTAGE



MODEL LAB-40

CONTINUOUSLY VARIABLE REGULATED 25 TO 40 KV DC POWER SUPPLY

Unit has a 4 to 6 KV focus tap for use with flying spot kinescope recording tubes, etc. Regulations of 0.5% at 1 milliamper. Available either with locking controls or standard knob.

With meter
\$620 Net

Less Meter
\$545 Net

MODEL LAB-30PN

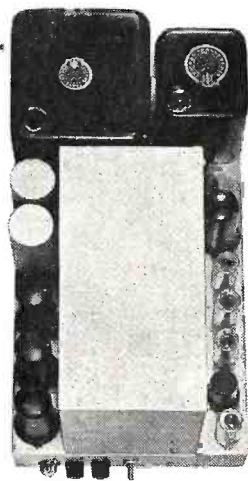
• REVERSIBLE POLARITY—Continuously Variable 1 to 30 KV

Regulated DC Power Supply with regulations of 0.5% at 1 milliamper. Although rated at 1 ma. this unit is capable of 2 ma. operation within regulation specifications. This 16 tube unit is of the RF type consisting of a separate oscillator and buffer feeding the power oscillator into a doubler rectifier. Regulations accomplished through feed-back into a DC amplifier plus simultaneous output control of the buffer. Polarity reversible from front panel. Standard Rack Model—19" wide x 12" high x 13" deep. Standard Bench Model—21" wide x 14" high x 15" deep.

With Meter **\$670 Net**—Less Meter **\$595 Net**

MODEL LAB-30 is a positive polarity output regulated High Voltage DC Power Supply with same electrical characteristics and dimensions as the LAB-30PN. Available in either positive or negative polarity.

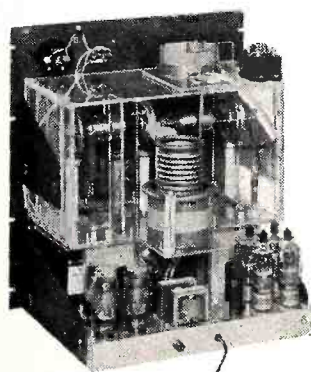
With Meter **\$570 Net**—Less Meter **\$495 Net**



MODEL MIL-30

POSITIVE POLARITY POWER SUPPLY

The **Model MIL-30** is a positive polarity, high voltage DC power supply, with an output voltage range of 15 to 30 KV D.C. at 1 ma. with regulations of .5%. The MIL-30 also has a negative 1000 Volt tap at 1 ma. regulated. Also available in positive 300 Volt tap at 1 ma. This unit is shown less housing, is built in accordance with military specifications. Dimensions: Length 15", Width 8½", Depth 9". Weight—36 lbs.



MODEL PN-60

REVERSIBLE POLARITY RF TYPE DC POWER SUPPLY

Polarity changes made on front panel. Continuously variable from 0 KV to 60 KV. Current output 1 milliamper at 60 KV. Overall Dimensions 22½" x 21" x 15". Ideal for electrostatic paint spraying, capacitor charging and testing as well as many other uses.

PN-60 Complete with Meter
\$675.00 Net

MODEL LAB-60

REGULATED DC POWER SUPPLY

0-60 KV at 1 ma. regulated. 2 ma. may be drawn from 45 KV to 0.

LAB-60 Complete with meter . . . **695.00 Net**



SPELLMAN

TELEVISION CO., INC.

3029 WEBSTER AVENUE
BRONX, N. Y. Kingsbridge 7-030

HIGH VOLTAGE

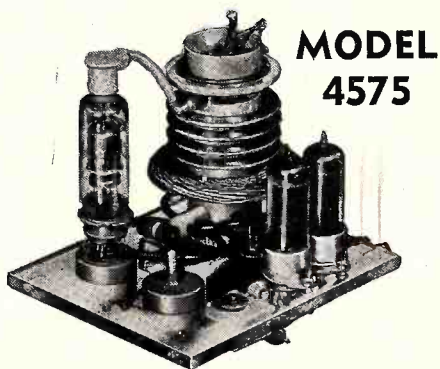
MODEL 2040 • 40 KV DC POWER SUPPLY

A ruggedly built power supply which is in constant use in laboratories and industrial plants throughout the world for condenser charging, electrostatic spraying and stress testing, etc. Nothing finer available at five times the price. Designed for constant use and will stand severe abuse. Available with either positive or negative 40 KV output. Voltage range of approx. 15 to 40 KV. The 15 to 40 KV variance in voltage is controlled through a knob on the front panel. If required for TV use, a voltage output of approx. 4 to 6 KV is available through a tap. Voltages supplied through a 4 ft. HV Safety Cable. Specify desired polarity when ordering.

With HV meter installed in front panel. **\$136.90 Net**
\$50 additional

0-100 KV DC 2 ma. OIL-FILLED 60 CYCLE POWER SUPPLIES

Suitable for use in paint spraying, flocking, electrostatic precipitation.

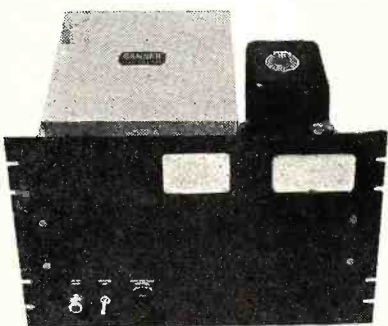


4 1/2 KV POWER SUPPLY

This compact, well designed, ruggedly built DC supply utilizes two 6AQ5 tubes as a parallel oscillator feeding a 1X2 rectifier tube. For an output voltage of 4 1/2 KV DC at 1 milliamper, the low voltage input requirement is 250 V at 50 milliamperes. By varying the DC input the output voltage can be varied from approx. 1 KV to 7 1/2 KV. Dimensions: 5 3/8" high x 5" deep x 4 1/4" wide. In completely enclosed metal housing (not shown). Less low voltage DC supply. **\$32.50 Net**

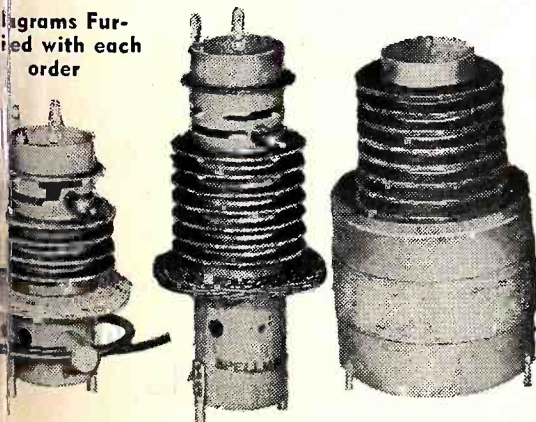
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High grade supply which incorporates voltage tap in the range of 4 to 6 KV. Use with 5WP15, 5TP4 and flying tubes. Regulations better than .5% milliamper. In wide use for color development work, transcription recording systems. Power supply also available with focus and convergence voltage for RCA Tri-Color tubes at slight additional cost. **\$295 Net**
 HV meter installed on front panel. **\$50 additional**



HIGH VOLTAGE RF STEP-UP COILS

Diagrams furnished with each order



5 KV
 Secondary Height . . . 3 1/2"
 Secondary Windings . 1 3/4"
 consisting of 4 Pie
 Windings
 Primary Diameter . . . 2 1/4"
10-15 KV
 Secondary Height . . . 5 1/4"
 Secondary Windings . 1 3/4"
 consisting of 7 Pie
 Windings
 Diameter 2 1/2"
35 KV
 Secondary Height 7"
 Secondary Windings 3" dia.
 consisting of 10 Pie
 Windings
 Primary (separate from secondary)
 Height 4"
 Diameter 4 1/4"

Secondary Voltage Output 5 KV
 Secondary Current 2 Milliamperes
 Approx. Frequency. 300 KC
\$4.80 Net
 Secondary Voltage Output 10-15 KV
 Secondary Current 2 Milliamperes
 Approx. Frequency. 175 KC
\$12.00 Net
 Secondary Voltage Output 35 Kilovolts
 Secondary Current 5 Milliamperes
 Approx. Frequency. .70 KC
\$42.00 Net
 25 KV—Same as 35 KV except Secondary Height. 6"
\$36.00 Net

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A self-resonant auto transformer for use with type 1B3 Rectifier tube. Will operate with Spellman HV coils. **\$1.50**
TUNING PADDER for Filament Transformer. **0.58**

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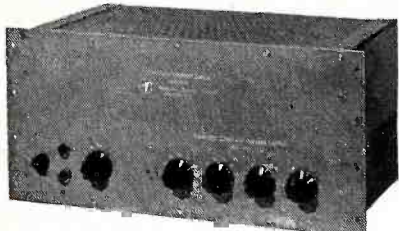
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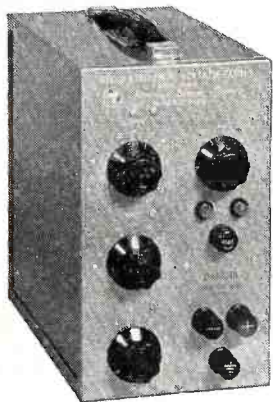


PRECISION SUPPLIES



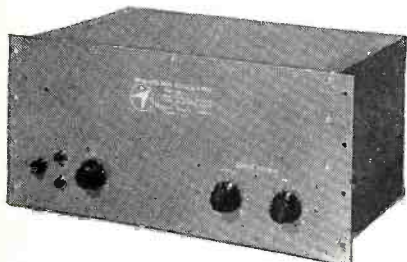
Constant Current Supply
Model RI-221

1-225 Ma. 0-300 V.
10 uA. ripple 100 Megohm Imped.



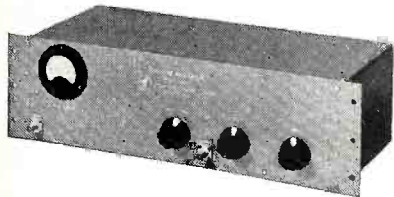
Regulated High Voltage Supply
Model RE-1601

300-1600 V. 0.5 Mv. ripple
0-7 Ma. 0.5 Ohm Imped.



Regulated High Voltage Supply
Model RE-2002

700-2020 V. 1 Mv. ripple
0-25 Ma. 0.5 Ohm Imped.



Klystron Modulator
Model ME-331

Square-wave frequency: 50-10,000 cps.
Used with RE-2002 Supply

Either positive or negative of any supply can be grounded.

Any of these supplies can be modified to meet specialized requirements.

Regulated HV supplies to 10 Kv. and Constant Current supplies to 1 Amp. can be designed and built. Inquires invited.

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D.C. POWER SUPPLIES MODEL CV-30-24

INPUT: 117V, 60 cycle, single phase.
OUTPUT: 0-30 volts at 0-24 amperes D.C.
CONTROLS: Powerstat, Heinemann magnetic circuit breaker, Klixon thermal circuit breaker, rectangular voltmeter and ammeter accurate to 2%, neon pilot light, 5 way binding posts for output.

CV-30-24 full wave rectified D.C. \$260.00
CF-30-24 2.5% ripple \$300.00
CA-30-24 0.35% ripple \$345.00

D. C. LABPACK

INPUT: 117 volts, 60 cycle, single phase
OUTPUT: 0-28 volts at listed current, continuously variable
CONTROLS: Powerstat, circuit breaker, neon pilot lamp, on-off switch, voltmeter and ammeter accurate to 3%, 5 way binding posts for output.

Model L 28-5, 5 Amperes full wave rectified D.C. \$87.50
Model LF28-4, 4 Amperes D.C. 2% ripple 107.50
Model L 28-10, 10 Amperes full wave rectified D.C. 155.00
Model LF28-8, 8 Amperes D.C. 2% ripple 170.00



The illustrated standard units represent the power supplies we manufacture. Many power supplies are designed to the exact requirements of the user, giving maximum utility together with economy. Prompt quotation and delivery. Request catalog describing these and other power supplies.

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Production and laboratory testing of D.C. apparatus from A.C. power lines, allowing continual variation of D.C. voltage and current to simulate changing battery or line voltage conditions. Commercial operation of vibrator power packs, dynamotors, D.C. motors, relays and other devices which require D.C.

- Replacing storage or primary batteries.
- Life testing of battery operated equipment.
- Battery charging.
- High current selenium rectifier plate power supply.

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NEW... EPOXIDE RESIN bobbins

With extraordinary properties, for hermetically-sealed resistor forms.

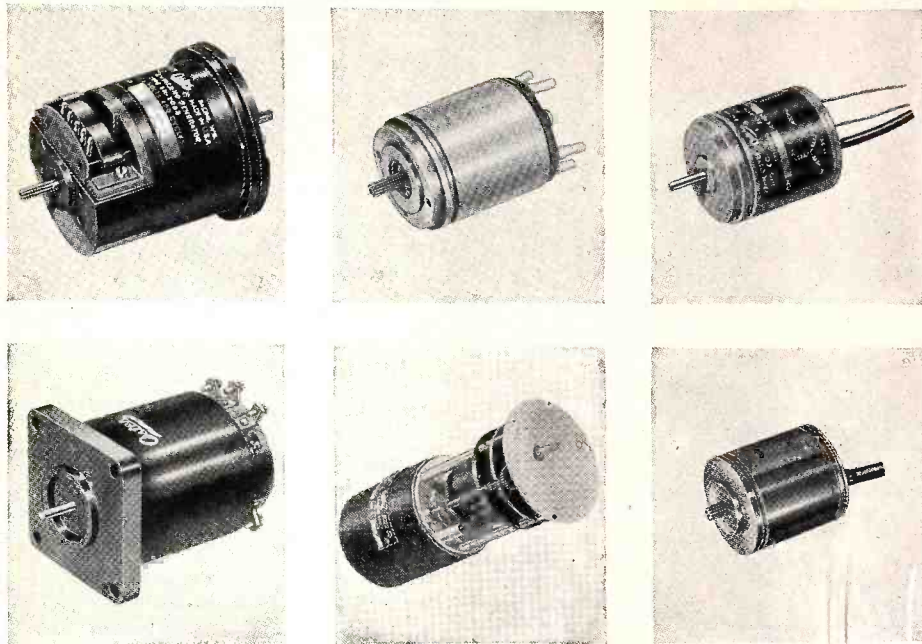
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Rotating components for automatic control

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SERVOS to meet all specific requirements. These include servo motors providing instant response to input signal through high torque-to-inertia ratio.

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Oster
GENERATORS

TACHOMETER generators—for applications in servo systems requiring accurate generation of a sinusoidal voltage, the magnitude of which is proportional to the speed of the shaft and the frequency is equal to the excitation frequency.

REFERENCE generators to induce two voltages which are displaced by 90° and the magnitude and frequency of these voltages are proportional to the speed of the rotor shaft.

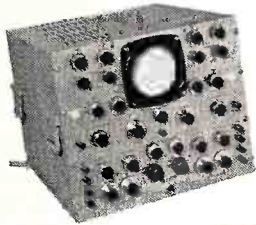
These are but a few of the OSTER precision quality products for avionics.

Insure dependability . . . specify

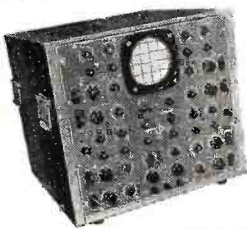


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MULTI-CHANNEL SCOPES & MULTI-GUN TUBES THAT Tackle the TOUGH Jobs!



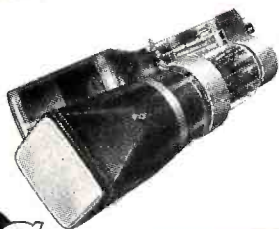
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✦ **Four Channel Scopes**—Same separate controls. #H-43, DC-200kc range, for use with continuous film strip camera. #H-45, DC to 300kc range, sensitivity over .028 Vdc/in.



✦ **Multi-Tube, 8 Channel Scopes**—For film strip seismography recording, etc. #H-81, AC amp. #H-82, DC amp., greater sensitivity.



✦ **Multi-Gun C.R. Tubes**—Complete line from 1-gun to 10-gun types, special purpose tubes—virtually every type capable of commercial manufacture.

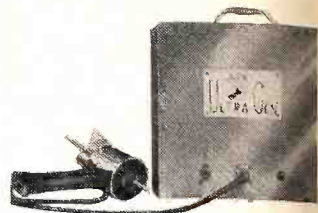
✦ Representative types only—write for catalog covering the complete line.

ETC

electronic tube corporation

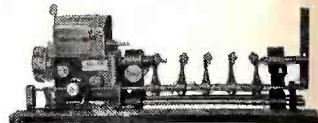
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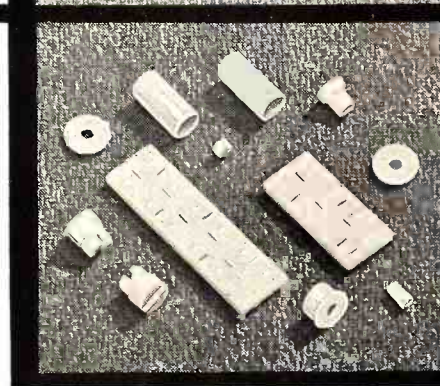
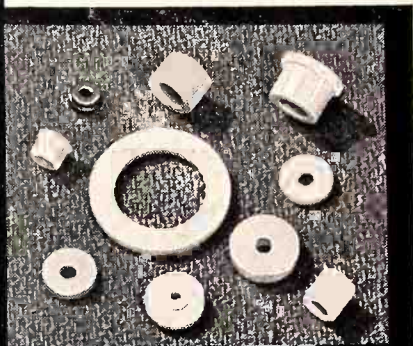
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MACHLETT ELECTRON TUBES

for Broadcasting and Industry

TRANSMITTING TUBES

| TYPE | CATHODE | | | MAXIMUM ANODE RATING | | | | FULL INPUT FREQ. MCS. | COOLING |
|--------|---------|------|------|----------------------|-------|-------------|-------------|-----------------------|------------|
| | VOLTS | AMPS | MU | VOLTS | AMPS | INPUT WATTS | DISS. WATTS | | |
| 1-29A | 6.3 | 1.0 | 100 | 1000 | 0.125 | 125 | 100 | 2500 | Forced-Air |
| 1-29 | 22.0 | 51.0 | 20 | 15000 | 2.0 | 30000 | 10000 | 1.6 | Water |
| 1-29C | 14.0 | 6.0 | 16 | 3000 | .350 | — | 275 | 1.5 | Convection |
| 1-29 | 21.5 | 41.0 | 40 | 15000 | 1.5 | — | 10000 | 4 | Water |
| 1-29CA | 21.5 | 41.0 | 40 | 15000 | 1.5 | — | 5000 | 4 | Forced-Air |
| 1-29A | 21.5 | 41.0 | 16 | 6000 | 1.5 | — | 5000 | 3 | Water |
| 1-29B | 20.0 | 60.0 | 40 | 20000 | 3.0 | — | 25000 | 3 | Water |
| 1-29 | 21.5 | 41.0 | 40 | 12000 | 1.7 | — | 10000 | 20 | Water |
| 1-29 | 14.0 | 6.0 | 16 | 3000 | .350 | — | 275 | 7.5 | Convection |
| 1-29C | 10.0 | 3.25 | 12.5 | 1250 | .150 | 188 | 100 | 6 | Convection |
| 1-29A | 10.0 | 21.0 | 10 | 3000 | .800 | — | 1200 | 20 | Convection |
| 1-29A | 27 | 225 | 32 | 20000 | 11.0 | — | 100000 | 4 | Water |
| 1-29 | 27 | 225 | 57.5 | 20000 | 11.0 | — | 100000 | 4 | Water |
| 1-29 | 20.0 | 67 | 40 | 20000 | 2.5 | — | 25000 | 4 | Water |
| 1-29A | 21.5 | 57.5 | 40 | 18000 | 2.0 | — | 10000 | 4 | Water |
| 1-29A | 21.5 | 57.5 | 40 | 18000 | 1.5 | — | 5000 | 4 | Forced-Air |
| 1-29 | 7.5 | 170 | 20 | 12500 | 6.0 | 60000 | 22500 | 25 | Water |
| 1-29 | 10.0 | 10 | 30 | 4000 | 0.5 | 1800 | 400 | 110 | Convection |
| 1-29 | 10.0 | 21.0 | 10 | 3000 | .800 | — | 1200 | 20 | Convection |
| 1-29 | 6.3 | 1.0 | 100 | 3500 | 0.01* | 35* | 35* | 3000 | Forced-Air |
| 1-29 | 7.5 | 12.0 | 38 | 6000 | 0.6 | — | 450 | 40 | Convection |
| 1-29 | 10.0 | 10.0 | 35 | 4000 | 0.50 | 1800 | 400 | 20 | Forced-Air |
| 1-29 | 12.6 | 315 | 20 | 10500 | 6.0 | 60000 | 20000 | 25 | Water |
| 1-29 | 11.0 | 120 | 21 | 8500 | 2.0 | 16000 | 5000 | 50 | Water |
| 1-29A | 11.0 | 120 | 21 | 8500 | 2.0 | 16000 | 5000 | 40 | Forced-Air |
| 1-29 | 22.0 | 60 | 8.5 | 12000 | 2.0 | 18000 | 6000 | 1.6 | Water |
| 1-29 | 22.0 | 60 | 8.5 | 10000 | 2.0 | 15000 | 4000 | 1.6 | Forced-Air |
| 1-29 | 22.0 | 60 | 50 | 15000 | 2.0 | 30000 | 10000 | 1.6 | Water |
| 1-29 | 22.0 | 60 | 50 | 12500 | 2.0 | 18000 | 4000 | 1.6 | Forced-Air |
| 1-29A | 20.0 | 183 | 34.5 | 20000 | 4.0 | 70000 | 20000 | 5 | Water |
| 1-29AR | 20.0 | 183 | 34.5 | 20000 | 4.0 | 70000 | 20000 | 5 | Forced-Air |
| 1-29 | 5.0 | 55 | 26 | 5000 | 1.75 | 8750 | 3000 | 110 | Forced-Air |
| 1-29 | 6.3 | 92 | 22 | 10500 | 3.75 | 30000 | 10000 | 30 | Forced-Air |
| 1-29 | 7.5 | 57 | 26 | 8500 | 2.75 | 23000 | 10000 | 110 | Forced-Air |
| 1-29 | 11.0 | 176 | 19.5 | 12500 | 3.0 | 32500 | 10000 | 22.5 | Forced-Air |
| 1-29 | 22.0 | 60 | 50 | 14000 | 2.0 | 25000 | 10000 | 1.6 | Water |
| 1-29 | 11.0 | 176 | 19.5 | 12500 | 3.0 | 32500 | 20000 | 22.5 | Water |
| 1-29 | 12.0 | 290 | 20 | 12500 | 5.0 | 60000 | 20000 | 20 | Water |
| 1-29 | 11.0 | 120 | 21 | 10000 | 2.0 | 20000 | 12500 | 22.5 | Water |
| 1-29 | 11.0 | 120 | 21 | 10000 | 2.0 | 20000 | 7500 | 22.5 | Forced-Air |
| 1-29 | 22.0 | 60 | 50 | 14000 | 2.0 | 28000 | 20000 | 5 | Water |
| 1-29 | 22.0 | 60 | 50 | 14000 | 2.0 | 28000 | 10000 | 5 | Forced-Air |
| 1-29 | 12.0 | 220 | 25 | 15000 | 12.0 | 150000 | 75000 | 30 | Water |
| 1-29 | 16.5 | 325 | 32 | 16000 | 20.0 | 300000 | 100000 | 30 | Water |
| 1-29 | 12.6 | 27 | 21 | 5500 | 1.5 | 7000 | 5000 | 110 | Water |
| 1-29 | 12.6 | 27 | 21 | 5500 | 1.5 | 7000 | 5000 | 110 | Water |
| 1-29 | 12.6 | 27 | 21 | 5500 | 1.5 | 7000 | 3000 | 110 | Forced-Air |

*Duty cycle: 0.0033

HIGH-VOLTAGE RECTIFIERS

| TYPE | CATHODE | | ANODE RATINGS | | INSULATION | COOLING |
|-------------|---------|------|---------------|---------|------------|------------|
| | VOLTS | AMPS | INV. PKV | PEAK MA | | |
| ML-102A | 20 | 19.0 | 75 | 750 | Air | Convection |
| ML-103 | 10 | 11.5 | 125 | 78 | Oil | Convection |
| ML-108 | 13 | 12.5 | 140 | 200 | Oil | Convection |
| ML-110 | 10 | 11.5 | 140 | 78 | Air | Convection |
| ML-115 | 10 | 11.5 | 125 | 100 | Air | Convection |
| ML-120 | 13 | 12.5 | 140 | 200 | Air | Convection |
| ML-121 | 10 | 11.5 | 140 | 100 | Oil | Convection |
| ML-126 | 13 | 12.5 | 150 | 200 | Air | Convection |
| ML-170 | 13 | 12.5 | 200 | 200 | Air | Convection |
| ML-180 | 13 | 12.5 | 200 | 200 | Oil | Convection |
| ML-199 | 12 | 23 | 110 | 10000 | Air | Convection |
| ML-222A | 21.5 | 41 | 25 | 5000 | Air | Water |
| ML-5575/100 | 20 | 24 | 150 | 1000 | Air | Convection |
| ML-5576/200 | 20 | 32 | 150 | 2500 | Air | Convection |

MERCURY VAPOR RECTIFIERS

| TYPE | CATHODE | | TUBE VOLT. DROP | FIL. EXCIT. | COOLING | ANODE RATINGS | | |
|---------|---------|------|-----------------|-------------|------------|---------------|-----------|----------|
| | VOLTS | AMPS | | | | INV. PKV | PEAK AMPS | AV. AMPS |
| ML-575A | 5.0 | 10 | 10 | In-Ph. | Convection | 15 | 6.0 | 1.5 |
| ML-673A | 5.0 | 10 | 10 | In-Ph. | Convection | 15 | 6.0 | 1.5 |
| ML-857B | 5.0 | 30 | 15 | Quad. | Forced-Air | 22 | 40.0 | 10.0 |
| ML-866A | 2.5 | 5.0 | 15 | In-Ph. | Convection | 10 | 1.0 | 0.25 |
| ML-869B | 5.0 | 19 | 15 | Quad. | Forced-Air | 15 | 20.0 | 5.0 |
| ML-872A | 5.0 | 7.5 | 10 | In-Ph. | Convection | 10 | 5.0 | 1.25 |
| ML-8008 | 5.0 | 7.5 | 10 | In-Ph. | Convection | 10 | 5.0 | 1.25 |

HYDROGEN THYRATRON TUBES

| TYPE | CATHODE | | RESERVOIR | | ANODE RATINGS | | |
|--------------|---------|------|-----------|------|---------------|------|------|
| | VOLTS | AMPS | VOLTS | AMPS | PEAK | AMPS | |
| | | | | | VOLTS | AV. | PEAK |
| ML-5948/1754 | 6.3 | 30 | 4.5 | 4.5 | 25000 | 1.0 | 1000 |
| ML-5949/1907 | 6.3 | 20 | 4.0 | 3.0 | 25000 | 0.5 | 500 |

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 Canada Dominion Sound Equipments, Ltd.
 Europe, South America, Africa, Asia Westrex Corp.
Note: For complete technical data or prices, write to Machlett Laboratories, Inc., Springdale, Conn., or nearest Graybar, Westrex, or Dominion Sound Equipment office.

MACHLETT LABORATORIES, INC., SPRINGDALE, CONN.






OVER 50 YEARS OF ELECTRON TUBE EXPERIENCE



from any angle



the Turner 80's a Dependable Buy

-  **DESIGN** modern, neat, graceful. A compliment to musicians, singly or in numbers.
-  **SIZE** diminutive, inconspicuous, convenient. No obstruction for singing star or soloist.
-  **VERSATILE**. nondirectional performance with a response range of 80 to 7000 cps makes the 80 at home in recording studio or in front of one-nighters.
-  **SPECS**. Sensitivity—About -58 db.
Weight—5 oz. less cable
Cable—7 foot attached single conductor shielded
Finish—satin chrome plate
Mounting—standard 5/8"-27
-  **PRICE** A low \$15.95 for the mike.
\$5.75 for matching C-4 stand.

THE TURNER COMPANY
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THE **14** TH YEAR

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electronics
BUYERS
GUIDE

- For Product Information
- For Trade Name Listings
- For Distributor Listings

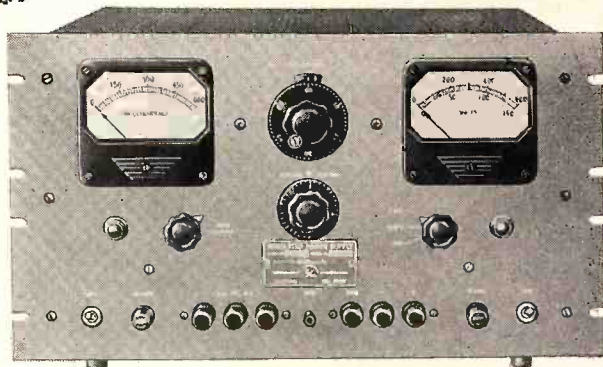
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Precisely Controlled Power
for Research, Production
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Whether your requirement is simple bench power, precision voltages for meter calibration or stable high power for computers, ELECTRONIC MEASUREMENTS is a dependable source for stable D.C. power. Long experience in this field, including the solution of many airborne problems, means ELECTRONIC MEASUREMENTS can meet your routine or special power needs competently and economically.



0-600 V
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1 AMP UNIT
Illustrated



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● REGATRON SERIES

VARIABLE D.C. VOLTAGE STANDARD
SUPER REGULATED POWER SOURCE
SMALL SIGNAL MODULATION
MECHANICAL AND ELECTRICAL VERNIERS
ESPECIALLY SUITED FOR TRANSISTOR
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HIGH STABILITY OVER EXTENDED PERIODS
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MODULAR SYSTEM PERMITS CURRENTS
UP TO 20 AMPS., VOLTAGE TO 350 V.
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ABSOLUTE CALIBRATION AVAILABLE

● GENERAL PURPOSE POWER SUPPLIES

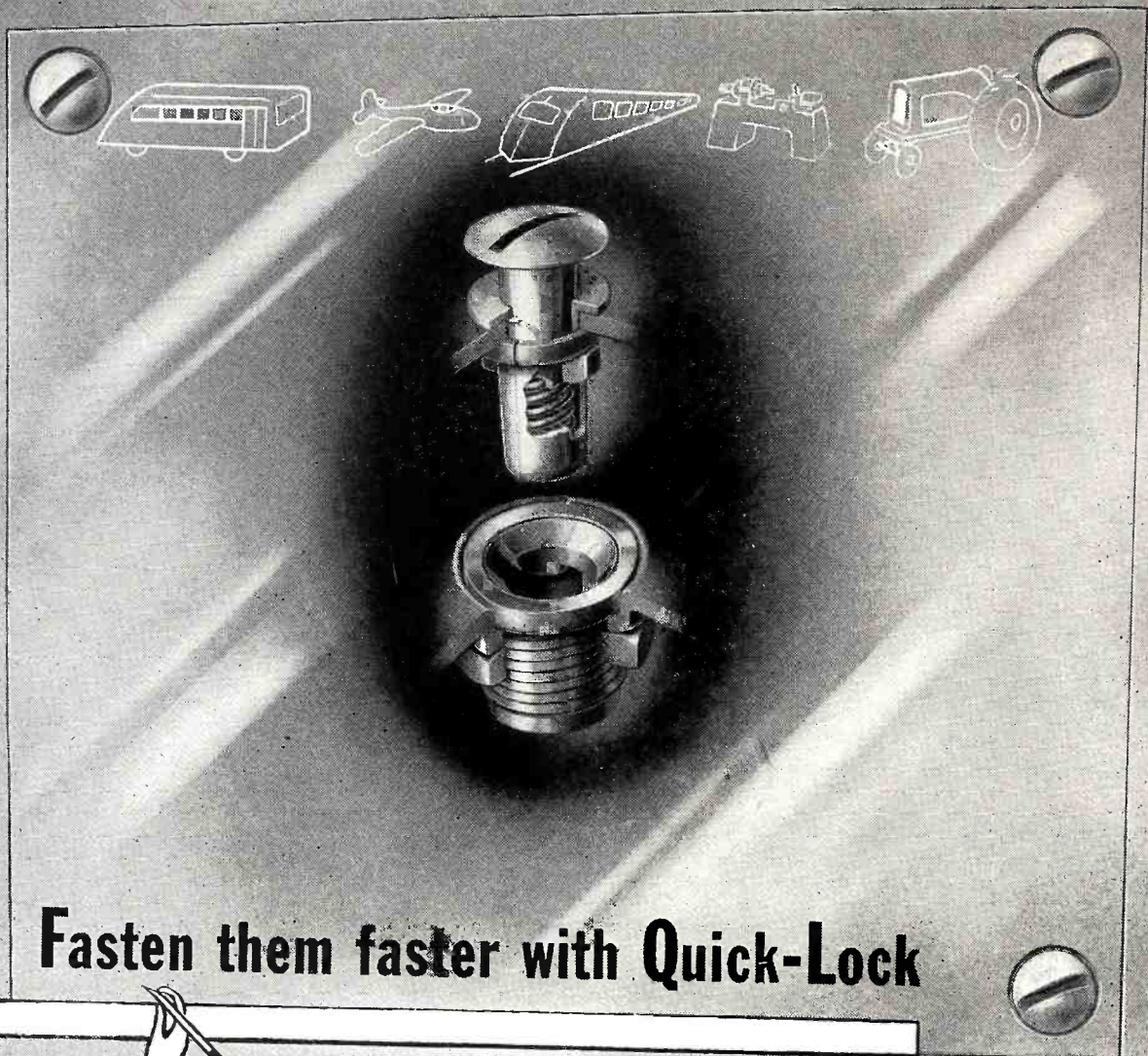
Electronic Measurements Company Regulated Power Supplies have been in production for almost a decade and have established a standard of performance recognized throughout the industry. A complete line is offered, capable of meeting most requirements.

Electronic MEASUREMENTS COMPANY • INC

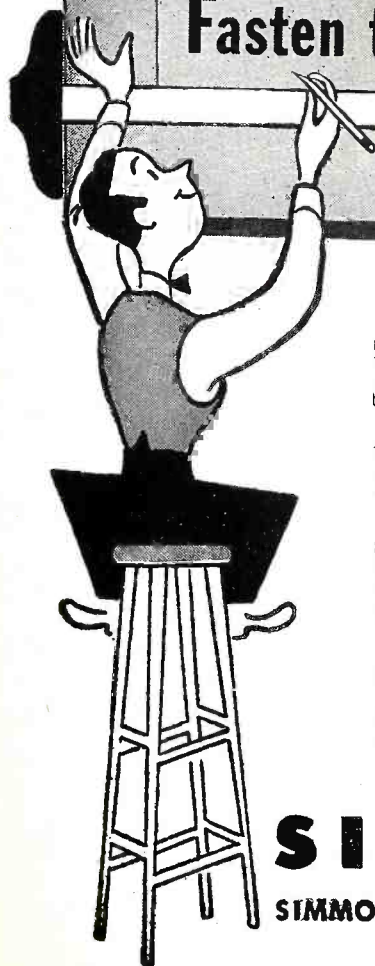
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Fastening removable access doors and panels need not be a laborious and costly production or assembly operation—not if they're fastened with QUICK-LOCK.

Designed for simple installation, QUICK-LOCK requires no special tools. It speeds up mounting and demounting detachable panels with only a 90° turn required to lock and unlock it *in a jiffy*.

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Industrial and agricultural equipment manufacturers would do well to analyze the cost-saving features of QUICK-LOCK's simple design. A good way would be to consult a Simmons Engineer and discuss the economy of a QUICK-LOCK installation as compared to your present fastening method. Why not send for him today?

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SIMMONS FASTENER CORPORATION • 1750 NORTH BROADWAY, ALBANY, N. Y.

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We've honestly earned our reputation as experts in electronic development, design and production . . . and our complete facilities are always at your service.

Our two plants have a production area of more than 122,000 square feet. They are laid out for peak efficiency in development, design, fabrication and assembly of every component in electronic projects from simple test equipment to complex radar systems.

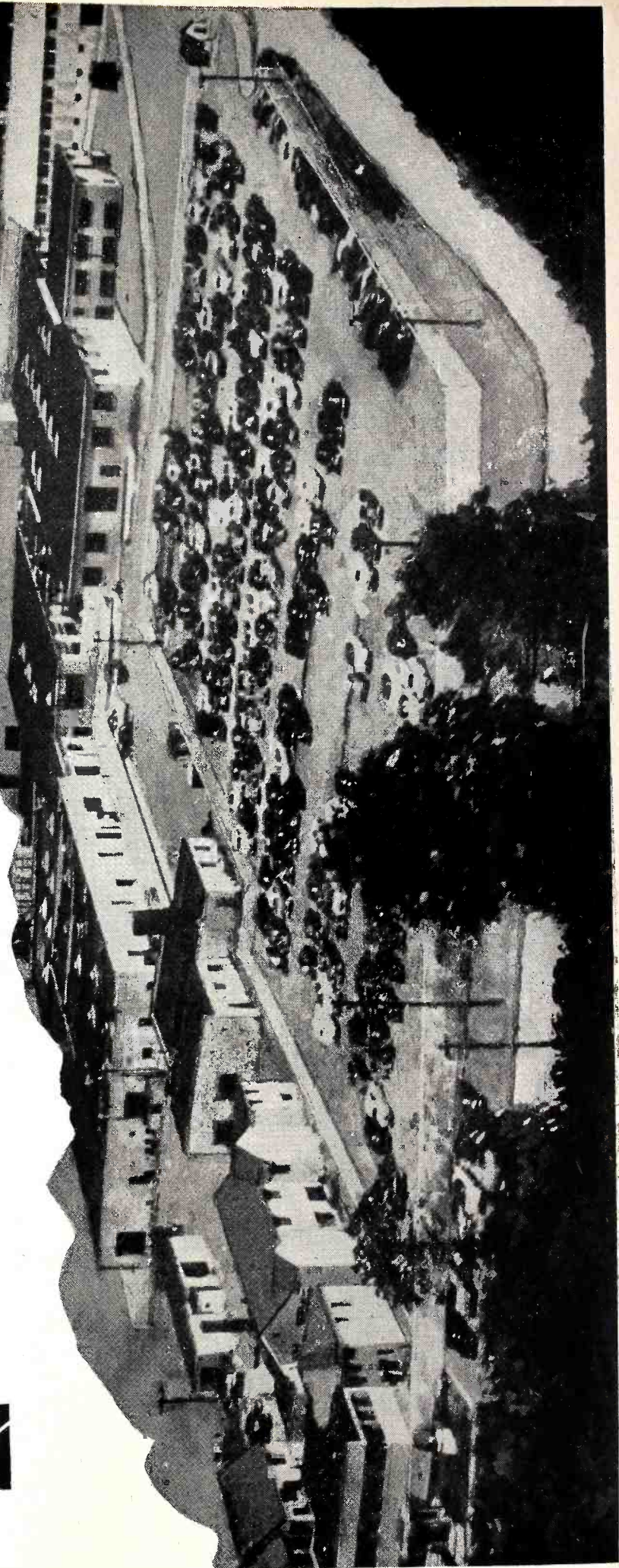
Here are complete departments for metal working . . . welding . . . riveting . . . heat treating . . . plating . . . engraving . . . assembling . . . finishing . . . packaging and shipping. Approximately 500 trained employees and experienced electronic engineers assure accurate and efficient results.

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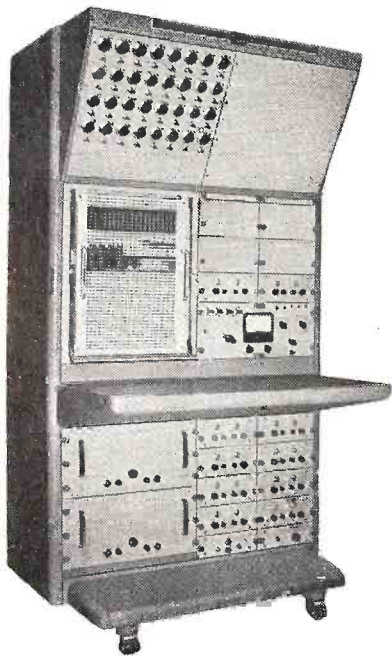
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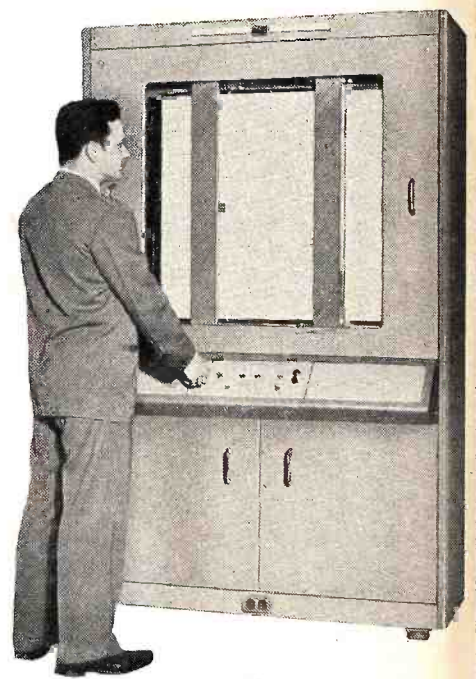
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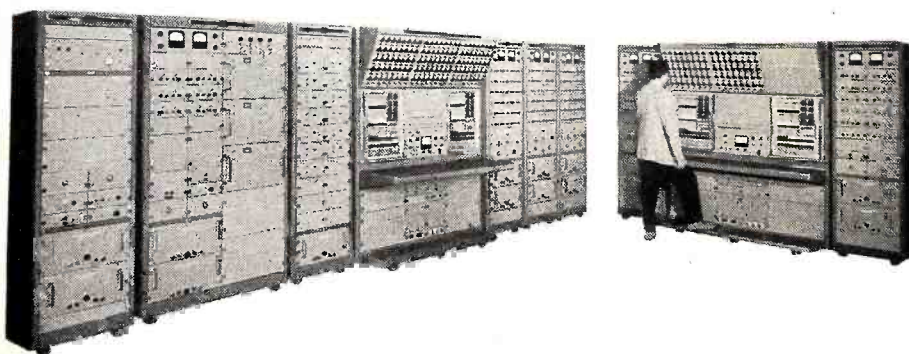
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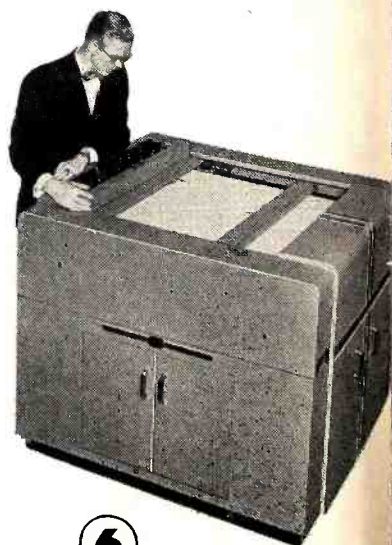
3



4



5



6

HIGH ACCURACY ELECTRONIC APPARATUS

Specialists in

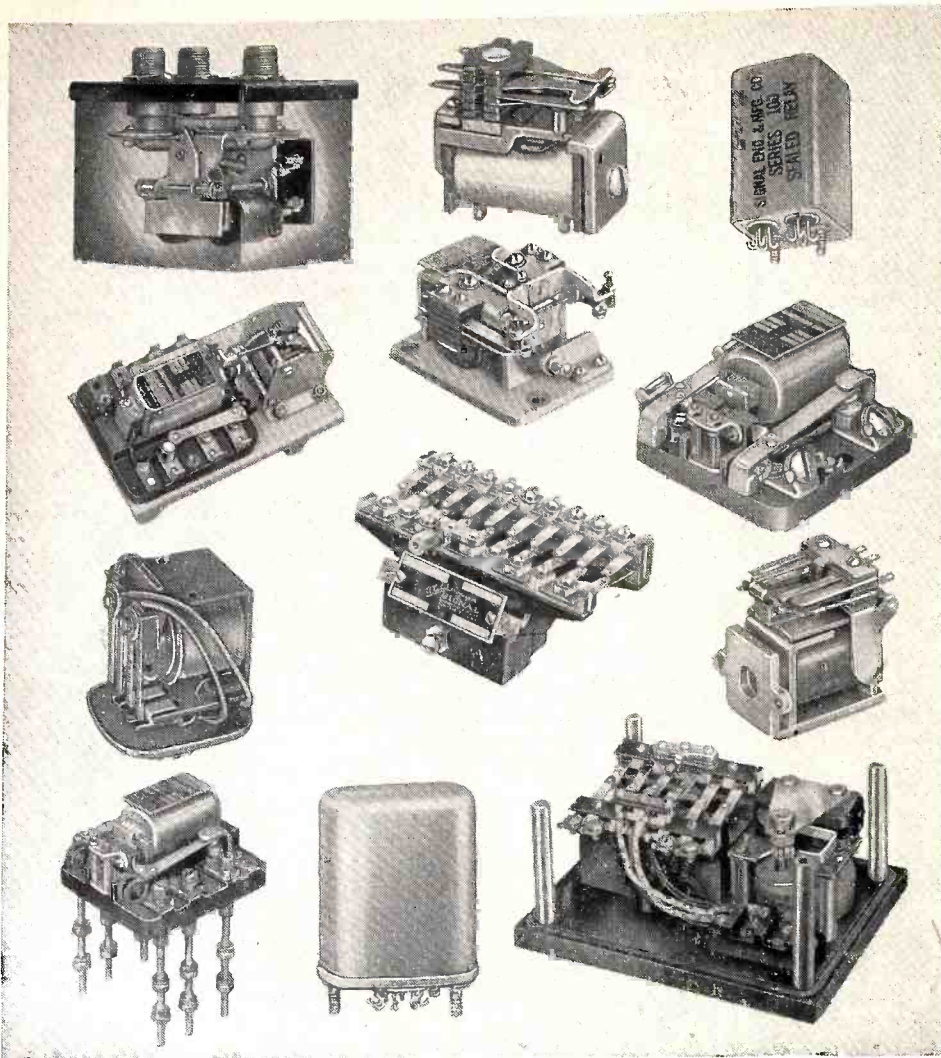
PRECISION ANALOG COMPUTING EQUIPMENT

for Solving Problems in Dynamics

- 1 COMPUTATION CENTER, PRINCETON, N. J.** Located on U. S. Route 1. Owned and operated by Electronic Associates, Inc. Established to meet the demand for a headquarters where members of industry can solve their dynamic computation and simulation problems. A staff of scientists experienced in the use and application of analog computers will be available to evaluate, set up, and solve problems.
This facility will provide computer time on a rental basis, to industry, for problem solution. Complete basic and accessory Electronic Associates equipment will be available at the Center, summer 1954.
 - 2 PRECISION ANALOG COMPUTER, TYPE 16-31R.** The most accurate, versatile and dependable equipment possible at a fair and reasonable price. It features ruggedized construction, a new high gain, low drift, contact stabilized d-c amplifier with outstanding accuracy, gain, frequency response and output power characteristics. Provisions are made for expansion to larger more complete systems by the addition of standard component groups including operational amplifiers, resolvers, servo multipliers, diode function generators, electronic multipliers, and other associated input and output equipment.
 - 3 DIGI-VERTER GROUP 17-31A.** The Digi-Verter can be used to convert digital information, such as that obtained from card reading machines or tabular lists, into analog form suitable for presentation as a point plot on a Variplotter plotting board. It is designed to accept two four-decimal digit numbers and their signs from an IBM machine such as Type 513, 517, 519, 523, etc. Complete operating controls include power switch, feed switch, input switch, storage clear, and scale factor and parallax controls for both X and Y. Scale factor will provide plot expansion up to 10 times and parallax controls allow the zero-zero origin to be located anywhere on the plotting surface. The complete digital plotting system consists of the Digi-Verter, Data Input Keyboard, Model 205G Variplotter plotting board and Multi-Symbol printing head. Other models of the Digi-Verter are available for accepting input data from paper and/or magnetic tape.
 - 4 VARIPLOTTER, MODEL 205J.** A self-balancing potentiometer type recorder designed to record simultaneously two independent X vs. Y plots, both using the full plotting surface. The plotted result, in the form of an inked line, is presented on a 30 inch square of paper which is held firmly to the vertical plotting surface by a vacuum system. Static error is 0.05 per cent of full scale. Dynamic error averages 0.05 per cent of full scale plus the static error. Standard writing speed is 8½ inches per second. Sensitivity is 50 millivolts to 10 volts per inch. Where floor space is limited, the Model 205J VARIPLOTTER is recommended for your recording needs such as analog computer output, guided missile data, engine performance, etc.
 - 5 COMPLETE RANGE OF PRECISION ANALOG COMPUTERS.** Electronic Associates, Inc. is equipped to build analog computers ranging from the smallest and simplest to the largest and most complete. The computer pictured here, a typical large installation, was designed and built for the Radar Research and Development Division of Hughes Aircraft Company. It consists of 132 operational amplifiers, 13 servo multipliers, 3 resolver-multiplier channels together with control consols so arranged that the computer may be operated as a large single computer or as two smaller individual computers.
 - 6 VARIPLOTTER, MODELS 205G AND H.** A self-balancing potentiometer type recorder designed to record one variable d-c voltage as a function of a second variable d-c voltage. Model 205G is a single pen board that will present a single X vs. Y plot. Model 205H has an additional arm and pen allowing it to record two independent sets of X vs. Y data simultaneously. Static error is 0.05 per cent of full scale at 70 degrees Fahrenheit. Dynamic error averages 0.05 per cent of full scale plus the static error. Sensitivity is 50 millivolts per inch to 10 volts per inch. Maximum writing speed is 8½ inches per second. Continuously variable uncalibrated scale factor and parallax controls are provided for each axis. Accessories are available for the Variplotter, such as: High Speed Gear Box to increase the writing speed, a Function Generator Kit to enable it to be used as an input device, paper drive mechanism, so that roll paper may be used, etc.
- **FUNCTIONAL POTENTIOMETERS.** There are two types of sine-cosine potentiometers available—Type 462 which is a single unit and Type 315 which provides two sets of sine-cosine functions. Accuracy, is within 0.15% of the theoretical voltage for all points throughout 360° of shaft rotation. Angular resolution is 0.005% of 360°. Electrical resolution, expressed as a percentage of the total voltage applied across one 90 degree quadrant is within 0.05%. Card resistance is approximately 60,000 ohms per 90° quadrant and maximum voltage rating is 200 volts for both types. These potentiometers find wide use as highly accurate d-c resolvers in the analog computer field.
 - **State your problem and we will send you applicable data. Write to Dept. EBG**

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LONG BRANCH • NEW JERSEY



A RELAY for every application . . .

From extremely sensitive to heavy duty relays . . . whatever the need . . . you'll find Signal Engineering Relays built to meet the severest operating conditions.

Backed by more than a quarter-century of specialized engineering experience, each relay embodies design features which insure accurate, efficient and dependable operations to meet exacting standards of performance. That is why . . . whenever performance counts . . . Signal Engineering Relays are used as components by many of the largest manufacturers of electronic equipment and devices, and for other control operations by leading industrial firms everywhere.

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MULTIMETERS and REGULAR METERS
 AC and DC types, multiple ranges, accuracy 1/2 of 1%. 2 microamperes to 1 ampere AC. 2 milliamperes to 3 amperes AC.

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 Ranges 100 V to 35,000 V, AC or DC. Resistance exceeds million megohms. Can measure static electricity.

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 Laboratory and production measurements of magnets and magnetic circuits. Single push button return-to-zero.

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 Our most recent development for measuring magnetic field strengths. Measures from a few gauss to 120 kilogausses.

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 Now available, popular type RL11C, for radio and computer circuits — write for new bulletin.

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* Over 35,000 subscribers including engineers, designers, specifiers, purchasing agents, maintenance and production personnel.

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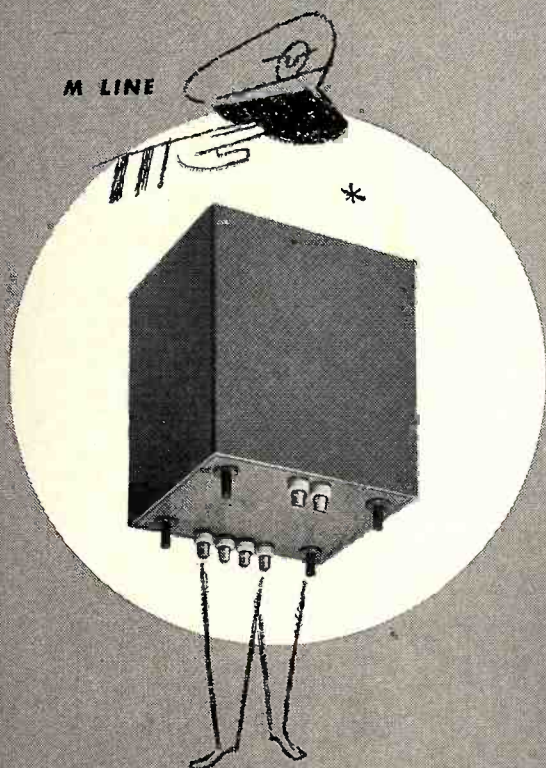
ELECTRICALLY AND MECHANICALLY INTERCHANGEABLE

THE

Kenyon

TWINS

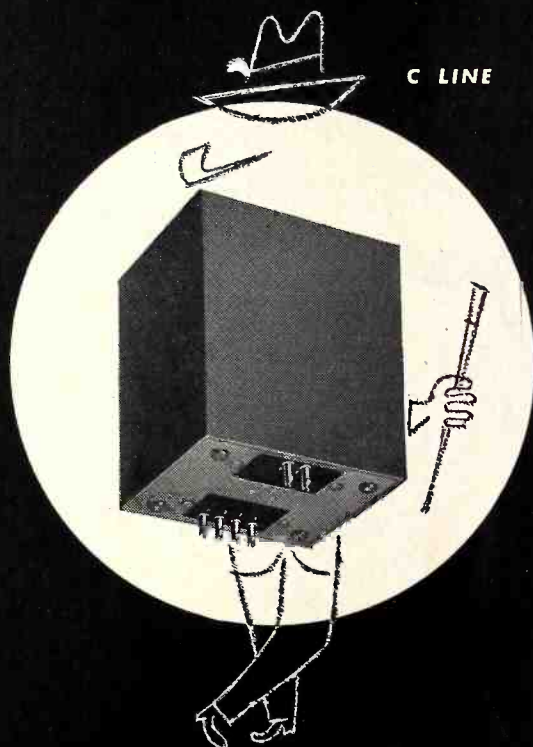
M LINE



MEETS ALL MIL-T-27 REQUIREMENTS

Completely hermetically sealed to meet MIL-T-27 specifications. Military Standard types are included. Catalog Listing M L

C LINE



MEETS ALL CIVILIAN REQUIREMENTS

A complete line to MIL electrical specifications, housed in conventional cases. Satisfactory performance at substantial savings. Catalog Listing C L

HOUSED IN CASES WITH STANDARD MIL-T-27 DIMENSIONS, BOTH LINES CARRY THE USUAL KENYON GUARANTEE

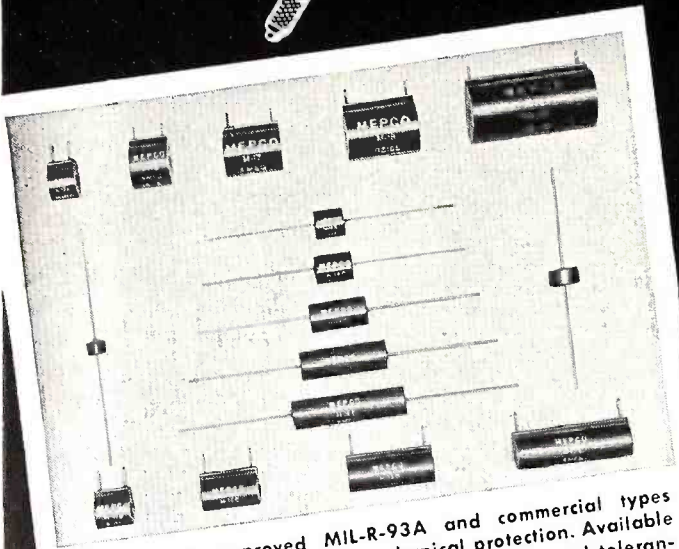


The new Kenyon Military and Commercial Lines feature the very latest practice, using the best class "A" wire and insulation now available, and the latest types of core material, to obtain minimum size at reasonable cost. . . . Cases are identical to the requirements in the MIL-T-27 specification and standard units are finished in a smooth, durable medium gray. Other colors are available on special order. Full rating information and schematic is furnished in the form of a stencil on each case. . . . Special units with other ratings and the same or similar cases are available on short delivery, in any quantity. Class B, class C, and class H units can also be delivered no special order. Where casing is not required yet sealing is important, we recommend our "Ken-Seal" molded transformers, available on special order. Write for catalog. Your inquiry will receive prompt attention.

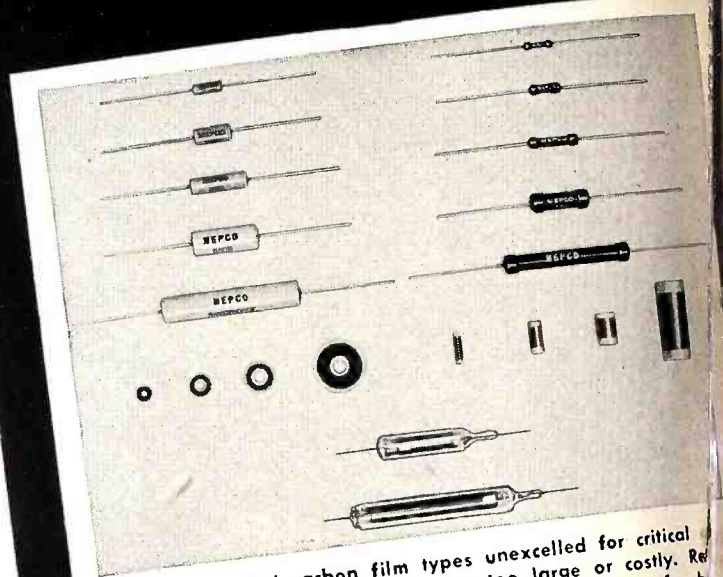
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59

MEPCO

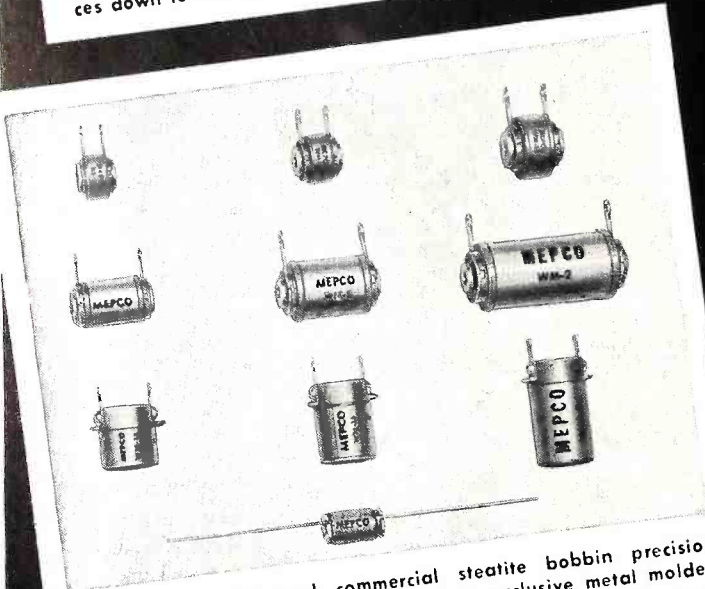
Time Proven PRECISION RESISTORS



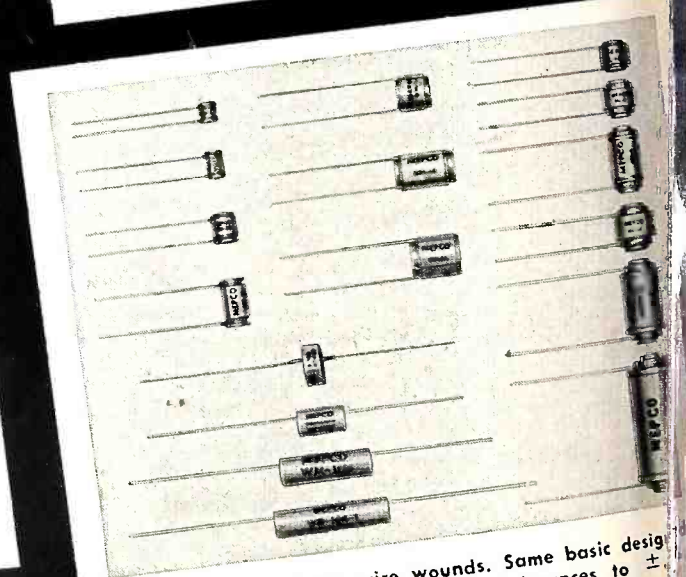
Encapsulated, approved MIL-R-93A and commercial types provide positive moisture and mechanical protection. Available in all resistance values, temperature coefficients and tolerances down to $\pm .01\%$. Also, matched sets.



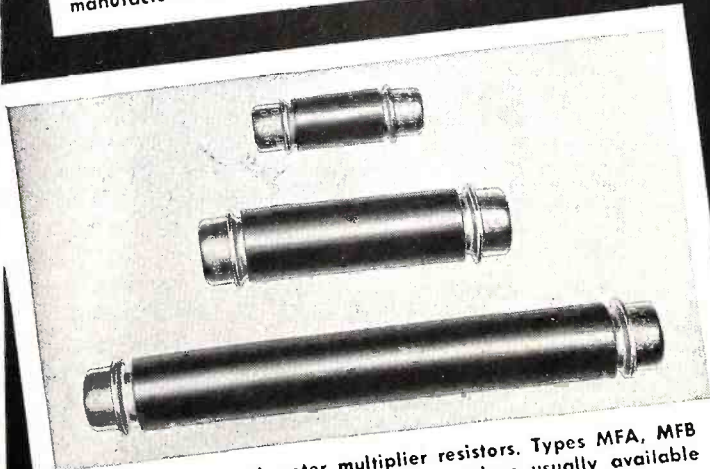
Hermetic sealed carbon film types unexcelled for critical applications where wire wounds are too large or costly. Resistor coated units to MIL-R-10509A. Disc and rod types for high frequency requirements. Glass sealed types for high stability and tolerances to $\pm .1\%$.



Standard JAN-R-93 and commercial steatite bobbin precision resistors. Basic lug terminal types include exclusive metal molded termination and patented internal insulation features. All types manufactured to your exact requirements.



Lead terminal precision wire wounds. Same basic design reliability as standard JAN types. Tolerances to $\pm .1\%$ matched sets, etc.



JAN-R-29 external meter multiplier resistors. Types MFA, MFB and MFC in all standard resistance values usually available from stock.

Shown on this page are but a few of the many types available either as standard items or custom manufactured to your exact specifications. Complete technical data will be furnished on request.

MEPCO, INC. MORRISTOWN, N.J.

sealing glass
or sealing
glass-to-metal?

then **KAHLE** machinery
is best for you . . .

largest manufacturer
of sealing machines
for the electronics
and allied industries

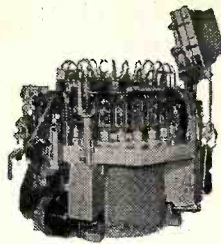
Experience with the widest
range of products to be sealed —
whether all glass seals or
glass-to-metal seals — makes Kahle
your logical source for
sealing machines — stationary,
automatic or combination.
Kahle automatic combination machines
seal and exhaust in one operation —
produce up to 2000 units
each hour! Regardless of your product
or production requirement,
write **KAHLE**.

**SPECIAL EXPERIMENTAL
AND RESEARCH SERVICES
OFFERED BY KAHLE INCLUDE:**

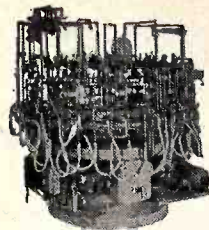
- Special glass parts and accessories
- Special tools for research
- Special models
- Small-lot manufacture of special items for research or development
- Regular industrial engineering at regular fee or contract rates
- Special tubes, lamps, etc. for research purposes including elements and parts
- Any special equipment for manufacture or research for tubes or lamps

Kahle
ENGINEERING
COMPANY

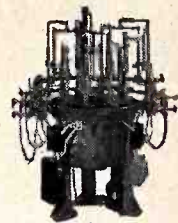
1310 SEVENTH STREET
NORTH BERGEN, N. J.



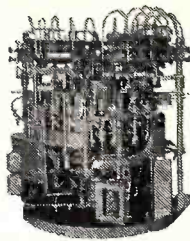
SUB-MINIATURE TUBES 24 HEAD



MERCURY LAMPS



HERMETIC SEAL 8 HEAD



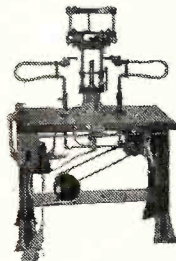
RADIO RECEIVING TUBES
SEAL EXHAUST MACHINE



FLUORESCENT LAMPS 8 HEAD



CR TUBES 16 HEAD



CR TUBES SINGLE HEAD



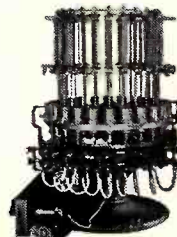
LIGHTHOUSE TUBES
HIGH FREQUENCY SEALING



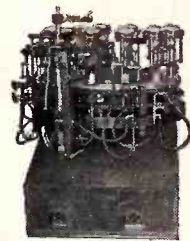
SUB-MINIATURE 12 HEAD



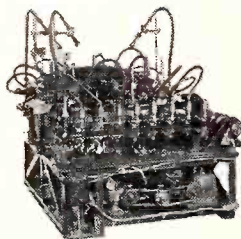
BI-POST LAMPS SINGLE HEAD



FLUORESCENT LAMPS 24 HEAD



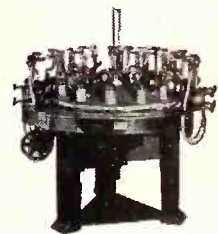
MOULDED NECK LAMPS



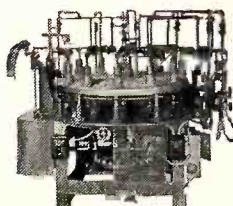
CR TUBE FACE PLATE SEALING
SINGLE HEAD FOR COLOR TV TUBES



POWER TUBES 8 HEAD



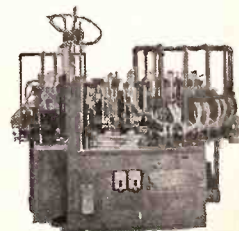
MINIATURE TUBES 12 HEAD



HERMETIC SEAL 12 HEAD



POWER TUBES SINGLE HEAD



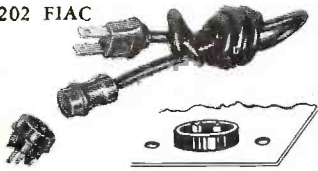
VACUUM BOTTLES

Simplify planning and production of Electronic Gear with ALDEN STANDARD COMPONENTS

① You have to provide for IN-OUT CIRCUITS

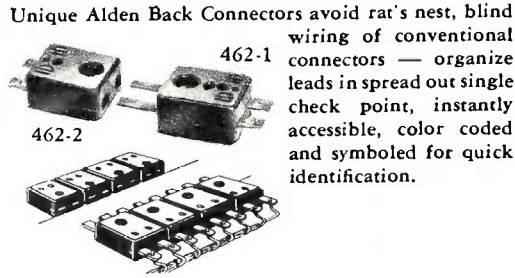
Alden Detachable Line Cord to bring the power in.

202 FIAC



Reduce all problems to just a simple plug mounted in your equipment. Give customer choice of desired length.

Alden Slide-in Back Connectors centrally organize all in-out leads.



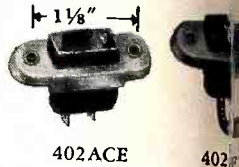
Unique Alden Back Connectors avoid rat's nest, blind wiring of conventional connectors — organize leads in spread out single check point, instantly accessible, color coded and symbolized for quick identification.

Tiny Alden Sensing Elements act as "tell tales" to protect equipment, monitor operation, permit front-panel checks



Check Voltages with Alden Mini-Test Jacks
Monitor Operations with Alden Pan-i-Lite
Spot Blown Fuse — Alden Fuselite

Alden Miniature AC outlets provide power take wherever needed.



World's smallest, most AC outlets, with tabs tailored to your specs.

② You have to provide INTERNAL CONNECTORS

Alden Connectors, from 1 to 20 contacts, employ standard mass-produced components to fit every need with minimum assembly costs and space requirements: "Top connected contacts" and other unique Alden features provide extra quality and dependability.

201M/F



SINGLE LEAD DISCONNECTS
Miniature hi-voltage disconnects. Phenolic or polyethylene insulation. UL safety collar.

8101M/F



TWO AND THREE LEAD
Excellent miniature antenna lead-ins or signal connectors.

HA Series

500 Series



Metal Seal Series

Shielded Series



ONE TO FIVE LEAD
Plugs, Connectors and Sockets that answer most needs for 1 to 5 shielded leads.



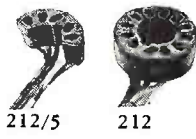
Speaker Connector Series

TWO TO SEVEN LEAD
Beautiful detachable terminal connectors that do away with terminal strips, save soldering and cabling.

Non-interchangeable Series



TWO TO ELEVEN LEAD
For cables having several connectors, prevent misconnects by specifying Alden Non-Interchangeable Connectors.



212/5

212

MINI DUO-DECALS
Have only 3 parts: "Top Connected" contacts, leads, molding. Voltage breakdown exceeds that of tube base.



211

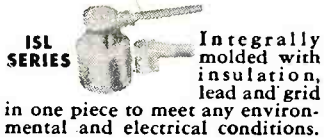
214

C-R TUBE CONNECTORS
Quality equipment for instruments, TV, radar. Magnal, duodecal, diheptal. 100% insulation each clip and lead.

TUBE CAPS for every purpose
Completely prewired — Phenolic, Injection



90 SERIES
Quality phenolics, completely insulated for radio receiver, transmitter or TV tubes.



ISL SERIES

Integrally molded with insulation, lead and grid in one piece to meet any environmental and electrical conditions.

DIAL LIGHT SOCKET

Designed for low-cost volume production, with pre-wired leads ready to drop into your equipment. 4 basic designs you can standardize on for most all needs.



81L Single Lead Clip Mounting

82ML Double Lead Clip Mounting

83UL Single Lead Snap-in

85UL Double Lead

COMPLETELY MOLDED CABLES

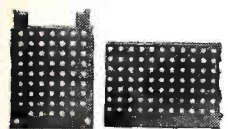
New Alden Technique Solves hi-voltage and corona problems



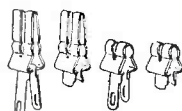
This 20,000 volt Anode Cable for Color TV comprises nylon Cap, High-voltage Disconnect and Anode Clip, molded by Alden technique to form integral unit with joints sealed against leakage and corona discharge. We mold cables to your requirements including any number of components.

③ You probably want PLUG-IN CONSTRUCTION

It's as simple as this — Alden Terminal Card Mounting System lets you organize circuitry in compact vertical planes.



PREPUNCHED TERMINAL MTG. CARD



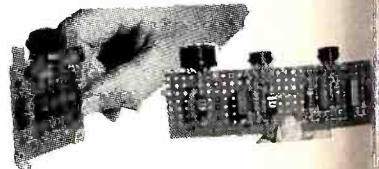
MINIATURE TERMINALS



JUMPER STRIP
Eliminates wiring for common circuits



CARD-MTG. SOCKETS

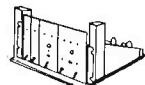
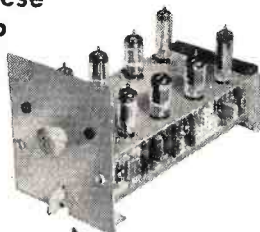


YOUR COMPLETED CIRCUIT FOR PLUG-IN PACKAGE OR CHASSIS

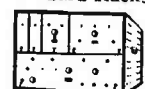
— and see how easily these Terminal Cards drop into

ALDEN PLUG-IN PACKAGES. 4 SIZES: 7, 9, 11 & 20-PIN

ALDEN BASIC CHASSIS 4 SIZES: 2", 4", 8" & 17" widths



In Standard Racks

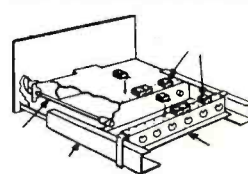


In Alden Uni-Racks



In Portable Cases

GET QUICK CHASSIS PILOTING, LOCKING AND EJECTING WITH ALDEN SERVE-A-UNITS



Alden Serve-A-Units install easily in your plug-in chassis so that 1/2 twist of front handles operate powerful nose cam to pilot, lock or eject your Side Rail guided into simple "L" Lock Frame.

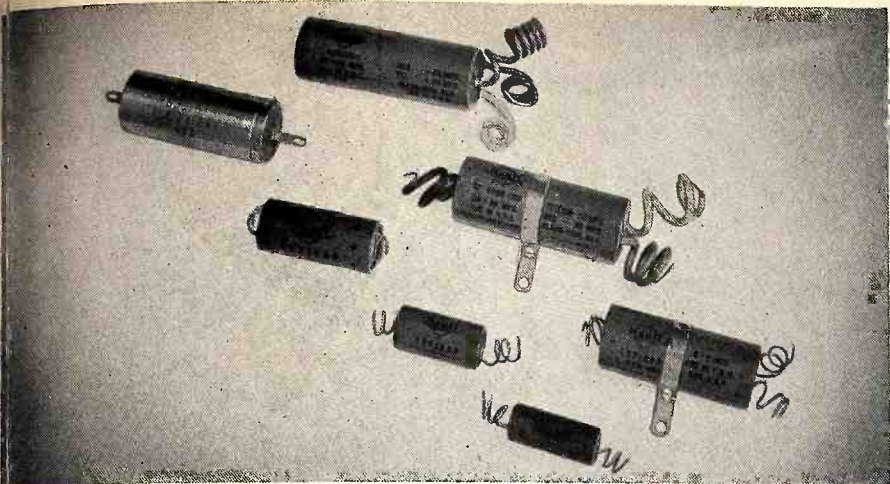
Alden Slide-in Back Connectors make and break all leads as Serve-A-Units draw in or eject.

REQUEST CATALOG describing Alden's complete line of standard components to mount, house, fasten, connect, monitor your electronic circuitry. State your area of interest and we will send samples.



ALDEN PRODUCTS

CO. 112 N. Main St., Brockton 64, Ma



Planet Capacitors "Engineered for Quality"

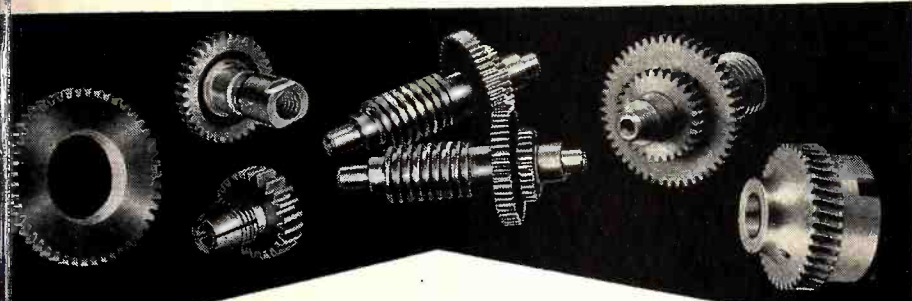
1 year service guarantee

Custom engineered to your specifications or supplied from stock, Planet capacitors meet the highest standards of the industry. Every capacitor is tested mechanically and electrically throughout its manufacture.

This rigid system of quality control makes our unconditional one-year guarantee possible. But making Planet capacitors correctly from the start means reasonable prices too!

WRITE for Catalog 206-A, listing specifications on stock items.

PLANET MANUFACTURING CORPORATION
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BLOOMFIELD, N. J.



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Find how this new universal paper can serve you to PRODUCE Memories—to RECORD Computer Totals, Radar Signals, Sonar Signals, Infra Red Signals, Telemetered Data—to DISPATCH Business Records and Information—to MONITOR Any Operation, Any Process—to PROVIDE Information for Analysis Studies.

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—describe your problem.

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WESTBORO 4, MASS.

ALDEN MONITORING RECORDERS

Providing an extremely simple method of getting permanent records of number and time of almost any actions or occurrences—with simple rugged Recorders that can be used under almost any conditions—installed by anybody.

ALDEN MAGAZINE RECORDER



Records 2 actions plus timing marks. Just plug into AC outlet and run wires to source of on-off actions.

ALDEN MULTI-CHANNEL RECORDER

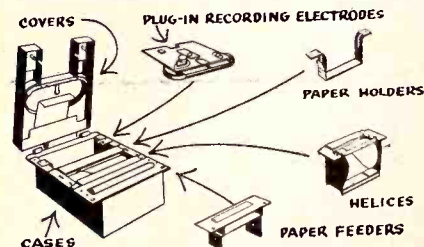


Records up to 30 separate tests, actions and processes, all on 5" paper.

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It's extremely simple to explore the unique direct recording techniques made possible by Alfax Paper with these unitized facsimile recorder components.



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For over 25 years, the Industrial Transformer Corporation has specialized its abilities on the production and improvement in the design and manufacture of Transformers. The engineering know-how and specialized skills that have resulted from this experience will become apparent to you, when you use our products.

You will find Industrial ready to cooperate with you in meeting special requirements, regardless of how difficult or unusual they may seem.

We invite your inquiries.

ITC provides the most up-to-date plant facilities for supplying you with transformers and test equipment of the highest quality.

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- Filters
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- Saturable Reactors
- Servo
- Pulse
- Toroids
- Miniature

SPECIAL TEST EQUIPMENT

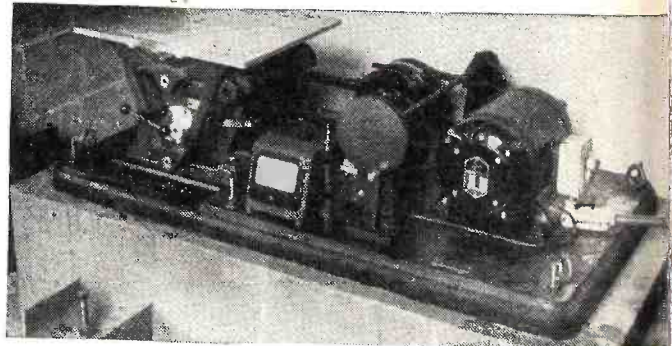
- Incremental Inductance Bridges
- Insulation Breakdown Testers
- Open: lugs, leads.
- Enclosed: Molded, Encapsulated, Hermetically Sealed.

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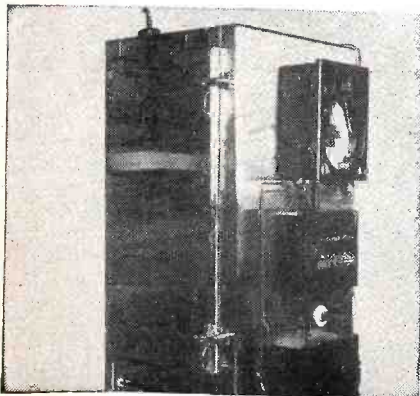
We are completely equipped with facilities for in-plant testing to meet MIL-T-27 specifications. Some of the equipment is illustrated.

All raw materials are given numerous inspection tests to insure uniform high standing quality and ability to withstand the stresses to which they will be subjected in actual service.

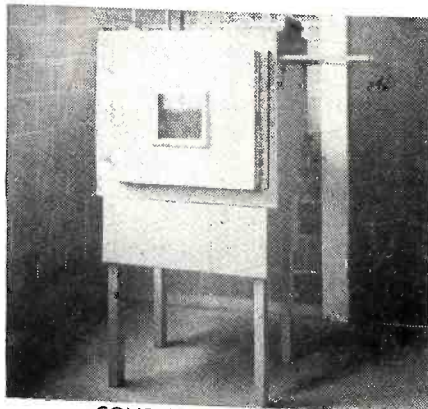
We are constantly working to improve design and production, and our engineering staff is always ready to assist you in your Transformer problems.



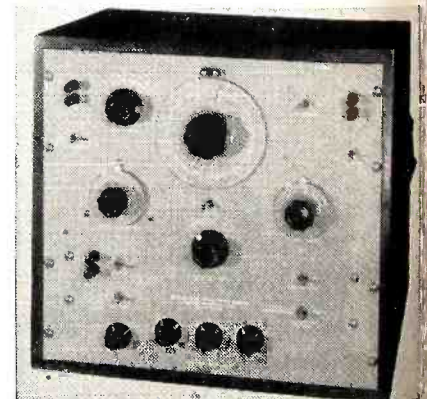
VIBRATION TABLE



HUMIDITY CYCLING
CHAMBER



CONSTANT TEMPERATURE
OVEN



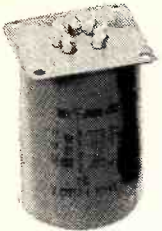
ITC INCREMENTAL INDUCTANCE
BRIDGE MODEL 220



Precision
DECADE TRANSFORMER
FOR COMPUTERS



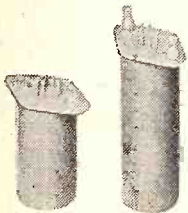
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HERMETICALLY SEALED
OUTPUT TRANSFORMER



MULTI-TAP TRANSFORMER
FOR TUBE TESTER



MOLDED AUDIO &
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INCREMENTAL INDUCTANCE BRIDGE MODEL 226

Range: 1 Millihenry—2000 Henry
DC Saturation: 0—1000 M.A.
AC Test Voltage: .01 to 300 VRMS
OWEN HAY MAXWELL in one
instrument

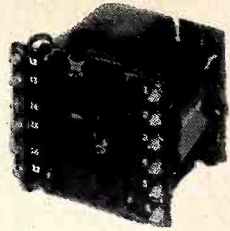


Model IT 630

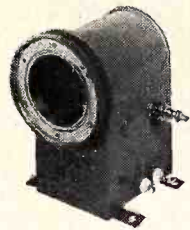
Shock Proof INSULATION BREAKDOWN TESTERS

Output: 0—3000 and 0—6000 volts
Input: 115 volts, 60 cycles
Rating: 1. KVA

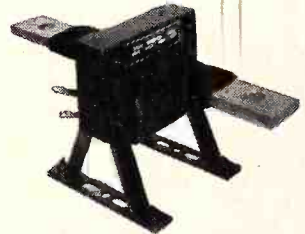
A few representation type of
special units are shown, which
can be altered to suit your exact-
ing requirements.



ENCAPSULATED TRANSFORMER
USING WOUND CORES



MAGNETRON
PULSE TRANSFORMER



CURRENT TRANSFORMER

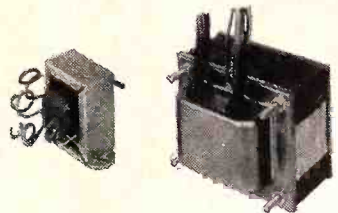


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DUAL SATURABLE REACTOR

INDUSTRIAL

G O U L D S B O R O



TRANSFORMER

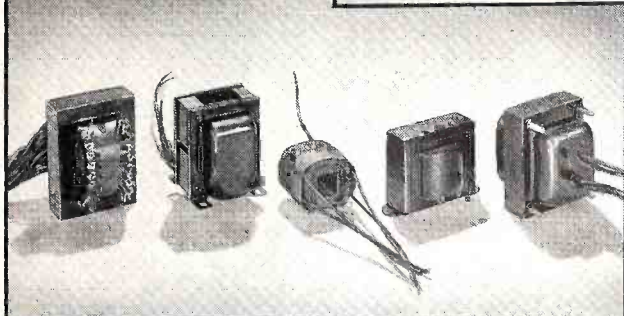
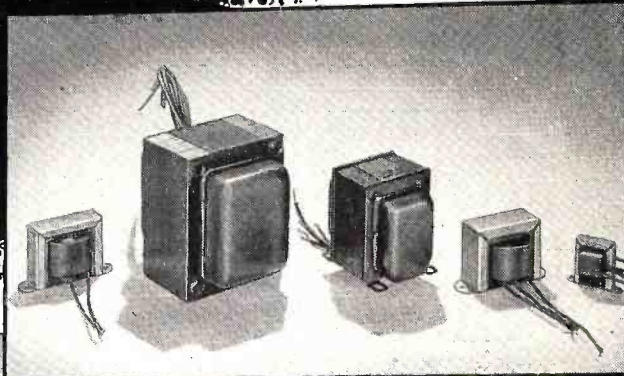
P E N N S Y L V A N I A



TRANSFORMERS . . .

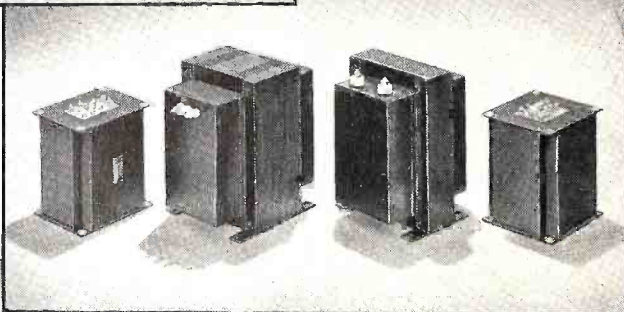
. . . specified for the usual
. . . demanded for the unusual

"GTC" Transformers for television receiver applications . . . custom-designed for high quality at minimum cost.



"GTC" Transformers for industrial and commercial applications . . . accurately engineered and fully recognized for finest quality.

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They refer FIRST to the "GUIDE."

GRAYHILL Switches • Test Clips • Molded Plastic Parts

Grayhill Rotary Tap Switch

SERIES 3000

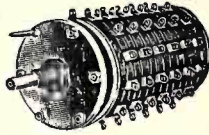
For Special Circuit Combination Applications

Available 1 to 12 decks, 2 to 11 contacts per deck.

A rugged index action assures rotor contact coming to rest at next position once thrown past center.

Diameter of switch 3-1/2"

Rated—20 amps., 115 v., A.C., non-inductive



Grayhill Miniature Tap Switches

SERIES 5000

For Commercial Applications

Available 1 to 6 decks—2 to 10 contacts per deck.

Shorting (make before break) or Non-shorting (break before make).

Switch rotates 360° with 10 positions—stops provided with 9 or less positions.

Bushings, 1/4" long—3/8"

Diameter of switch 1-1/32"

Rated to break—1 amp., 115 v., A.C., non-inductive.

To carry—5 amps., 115 v., A.C.



SERIES 12

For Military Applications

Available 1 to 6 decks—2 to 10 contacts per deck.

Shorting (make before break) or Non-shorting (break before make). 360° rotation with 10 positions—stops provided with 9 or less positions.

Bushings, 1/4" long—3/8"—32 thread

Diameter of switch 1-1/32".

Rated to break—1 amp., 115 v., A.C., non-inductive

To carry—5 amps., 115 v., A.C.



SERIES 24

Positive Detent Action and better feel for precision requirements.

Available 1 to 6 decks—2 to 10 contacts per deck.

Shorting (make before break) or Non-shorting (break before make).

360° rotation with 10 positions—stops provided for less than 10 positions.

Bushings, 1/4" long—3/8"—32 thread

Diameter of switch 1-1/32"

Rated to break—1 amp., 115 v., A.C., non-inductive

To carry—5 amps., 115 v., A.C.



Grayhill Push Button Switch

SERIES 2000—Snap Action

For Manual Operation

Audible click when actuated Momentary contact, single pole, single throw type.

O.D.—7/8" dia. x 1-59/64" high Bushings, 7/16" long—15/32"—32 thread

Rated—10 amps., 115 v., A.C., non-inductive

1 amp., 115 v., D.C.

Rated Life—Approx. 50,000 operations

No. 2201—Normally open

No. 2202—Normally closed



SERIES 4000—Momentary Contact

Momentary contact, single pole, single throw type.

O.D.—51/64" dia. x 1-17/32" high Bushings, 3/8" long—15/32"—32 thread

Rated—1/2 amp., 115 v., A.C.—non-inductive

Rated Life—Approx. 800,000 operations

No. 4001—Normally open

No. 4002—Normally closed



SERIES 23—Miniature, Momentary Contact

Momentary contact, single pole, single throw

O.D. 1/2" dia. x 1-3/64" high Bushings, 1/4" long—5/16"—32 thread

Rated—1/4 amp., 115 v., A.C., non-inductive

Rated Life—Approx. 500,000 operations

No. 23-1—Normally open



Grayhill Test Clips

SERIES 16—Completely insulated, alligator type

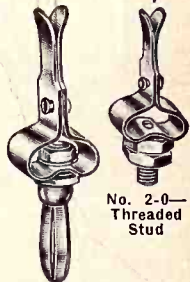
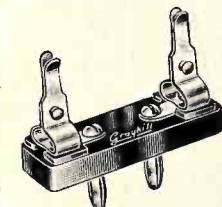
Even hinge pin is insulated.

Low contact resistance (approx. .0015 ohm)—.008" silver overlay on contact surfaces

Terminals—silver plated Finger grips—molded phenolic



SERIES 2

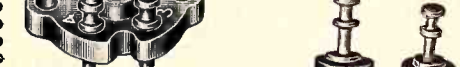
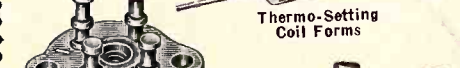


No. 2-2—Plug-in Adapter for equipment employing 3/4" jack centers.

No. 2-1—Banana Plug

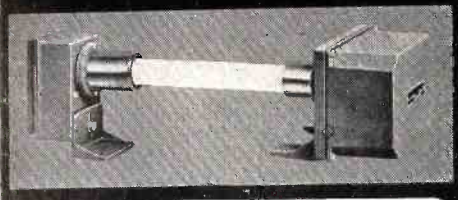
Clips—Cadmium plated Plugs—Nickel plated Base—General purpose phenolic electrical grade, per Mil-P-14 type CFG.

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537 Hillgrove Avenue, La Grange, Illinois
Phone: Fleetwood 4-1040

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for Every Purpose

Such as Counting, Sorting; Bin Level, Tension, Jam-up, Die Protection, Gaging, Alarms, Flame Failure, Registration, Illumination, Weighing, Positioning, Inspection, Door Operation, Smoke Detection, Timing, etc.

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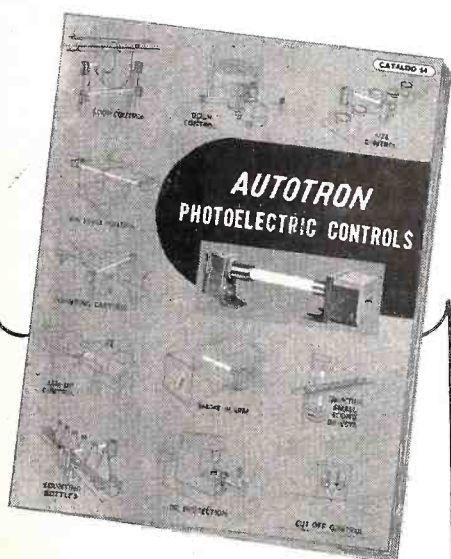
General Purpose to extreme sensitivity, and .000010 second dark time; time delay, safety relays, warm-up protection, "fail safe" circuits, dual filament light sources and many other selective features.

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Sensitive from .010 watts. Hi temperature and temperature compensated. Fast operate or time delay. Frequency tuned (vibrating reed type).

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7/8" x 23/32"

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Easy to tie



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*Patent Applied For

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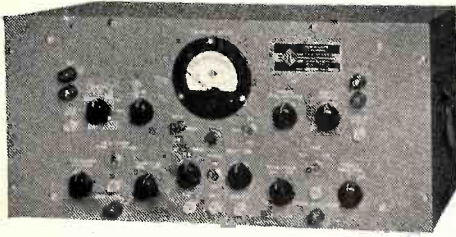
ELECTRONICS DIVISION
225 W. 34th Street, New York 1, N.Y.

EXECUTIVE OFFICES
12 S. 12th Street, Philadelphia 7, Pa.

PRECISION TEST EQUIPMENT

Model PC-100 DOUBLE PULSE GENERATOR

- SINGLE OR DOUBLE PULSES, POS. OR NEG.
- OUTPUT 0-75 V, INTERNAL IMPEDANCE 220 Ω
- INTERVAL BETWEEN PULSES, 5 TO 5000 μ s
- PULSE WIDTH 1 μ s, RISE & DECAY TIME .1 μ s
- SYNC INT. OR EXT.; SYNC TRIGGER OUTPUT
- TIME MARKERS 1, 10 OR 100 μ s, ACCURACY 1%
- AMPLITUDE CALIBRATOR .1 TO 100 V, ACCURACY 2%



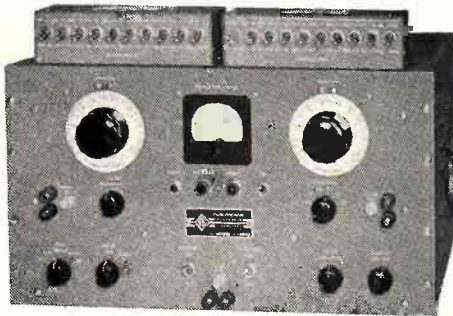
Model TO-100 PUSH-BUTTON TEST OSCILLATOR

- ANY 20 FREQUENCIES IN RANGE 20 ~ TO 100 KC
- STANDARD MODEL FOR FM/FM SUB-CARRIER TESTS
- STANDARD MODEL FOR AUDIO FREQUENCY TESTS
- CALIBRATED FREQ. CONTROL, $\pm 10\%$ ADJUSTMENT
- LOW DISTORTION AND EXCELLENT STABILITY
- CONSTANT VOLTAGE LOW IMPEDANCE OUTPUT
- CONTINUOUSLY VARIABLE CALIBRATED LEVEL



Model PG-200A FAST PULSE GENERATOR

- DURATION AND POSITION .05 TO 1000 μ s
- RISE AND DECAY TIMES CONSTANT .03 μ s
- SINGLE PULSES TO 20,000 PER SECOND
- 100 VOLTS, 50 OHMS DRIVING IMPEDANCE
- CALIBRATED WIDTH, POSITION AND RATE
- TRIGGER OR SINE WAVE SYNCHRONIZATION
- NEGLIGIBLE INTERACTION OF CONTROLS



Model DT-100 DIODE TESTER

- PRE-SET REGULATED REVERSE VOLTAGES
- -10, -50, -100, 0-150 VOLTS AT 5 ma
- FORWARD CURRENT TO 500 ma AT 1.0 VOLT
- CONTROLS INTERLOCKED FOR ROUTINE TESTS
- REVERSED OR SHORTED DIODE INDICATION
- TEST FIXTURE ALLOWS QUICK CONNECTIONS
- PROVISION FOR ACCESSORY DIODE HEATER



Model PS-110 CONSTANT CURRENT POWER SUPPLY

- CONSTANT CURRENT OR CONSTANT VOLTAGE
- ALL RANGES CONTINUOUSLY VARIABLE PLUS TO MINUS
- FROM LESS THAN 1 μ a TO 50 ma LOAD CURRENT
- VOLTAGE VARIABLE FROM 0 TO PLUS OR MINUS 200 V
- REGULATION AND STABILITY 0.5% OR LESS
- USEFUL IN DIODE AND TRANSISTOR TESTS



Model ES-180 ELECTRONIC SWITCH

- FOR D.C. AND WIDE BAND OSCILLOSCOPES
- FOR FAST, TRIGGERED OR RECURRENT, SWEEPS
- INTERNAL DUAL ATTENUATORS
- INTERNAL AMPLITUDE CALIBRATOR

Model PT 145 PULSE TIMER

- PRECISE MEASUREMENT OF FAST PULSES: RISE TIME, DECAY TIME, PULSE WIDTH, ETC.

ULTRA PRECISION CRYSTAL OSCILLATOR ASSEMBLIES

- COMPLETE CRYSTAL OSCILLATOR, OVEN AND OVEN TEMPERATURE CONTROL CIRCUITS

Model FS-185 FREQUENCY STANDARD

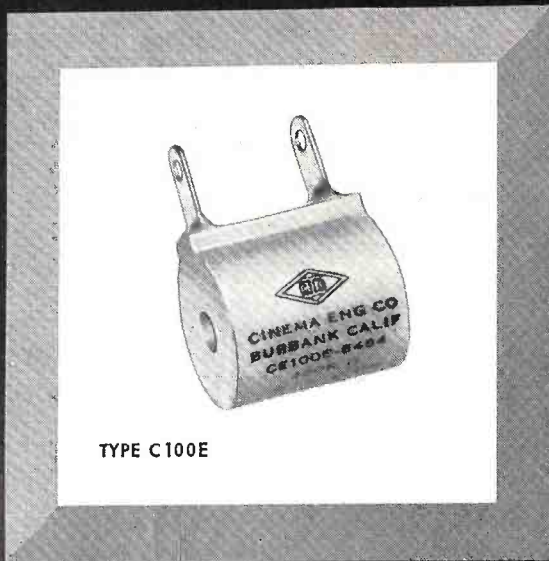
- 100 KC GT CUT CRYSTAL
- LONG TERM STABILITY, ONE PART IN 10^7 OR BETTER
- SHORT TERM STABILITY, ONE PART IN 10^8 OR BETTER

TELETRONICS LABORATORY INC.

54 Kinkle Street, Westbury, Long Island, New York

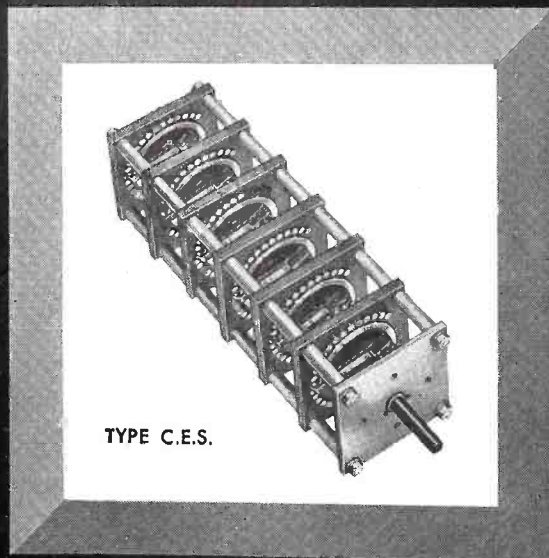


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laboratory
types,
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encapsulated
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hundreds
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NEW PRECISION COUNTING SYSTEM FOR HIGH FREQUENCY



DECAVIDER* 10-100

Newly modified DECAVIDER* 10-100 extends to 100 megacycles the counting range of 10MC standard counting equipment. Single knob Decade selector switch and output meter permit instant location of unknown frequency, no auxiliary tuning required. No loss of accuracy, merely add number indicated by DECAVIDER* to number on counter.

Specifications:

Range: 10-100 megacycles.
Used with: Any standard 10MC counter or EPUT meter.
Input: 0.05 to 4.0 volts rms.
Output: 1.0 to 20 volts rms.
Average Gain: 25 db.
Price: \$495.00 FOB Caldwell, N. J.
Other DECAVIDERS* for other ranges with 100KC and 1MC counters.

Also available:—

DECALATORS* (Decade-switched crystal-controlled signal generators)
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a plus feature

Immediately following the
Product Listings in the
DIRECTORY SECTION

of this Issue
is a list of more than

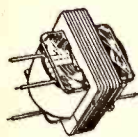
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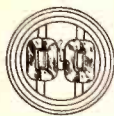
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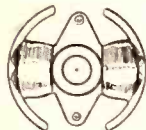
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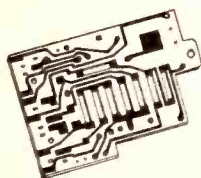
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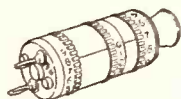
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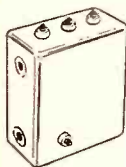
PRECISION DECADE RESISTOR

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VACUUM ENCAPSULATED ASSEMBLIES

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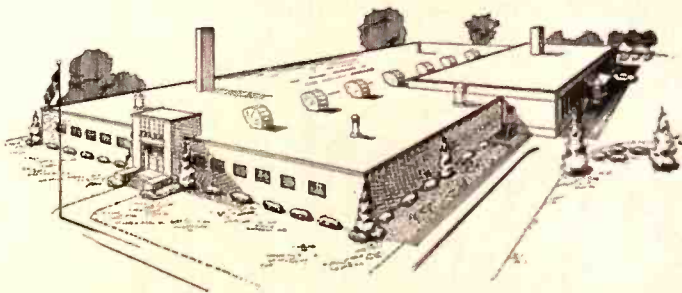
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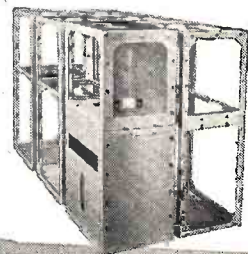
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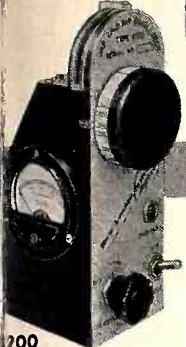
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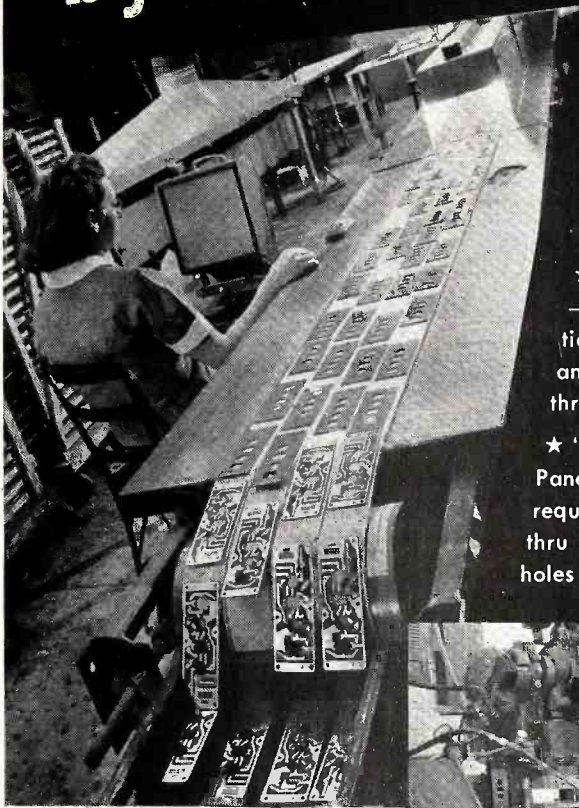
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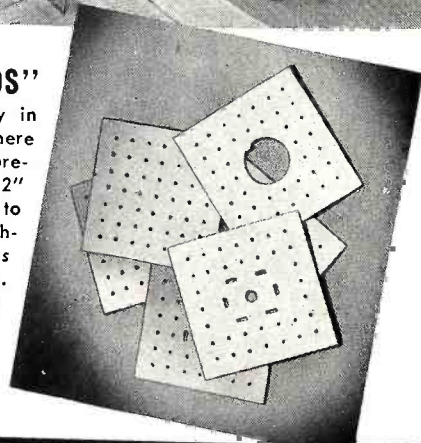
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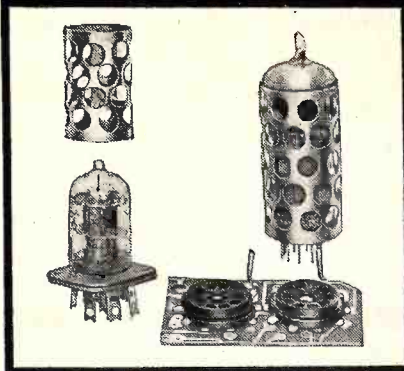
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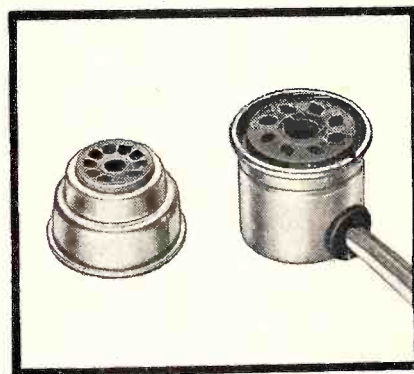
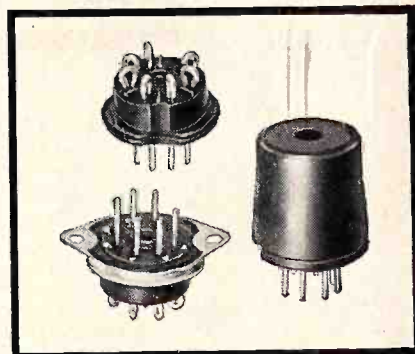
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TUBE ACCESSORIES and ELECTRONIC HARDWARE



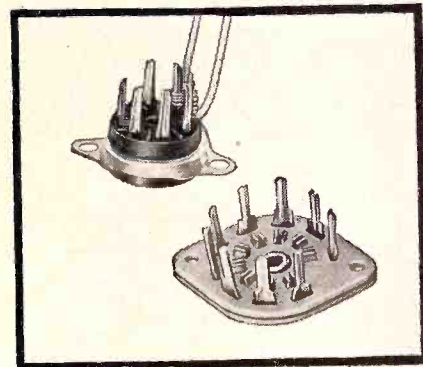
"Ventilator" shields not only improve "hot" tube performance by dissipating heat but are the most economical shields in Methode's extensive line. Easily handled and compression fitted to ground terminals on Methode laminated or printed circuit sockets, shields are available in lengths of 1-11/16" or 2-1/16" with one standard diameter which fits either seven or nine pin tubes. Available with tin or black oxide finish.

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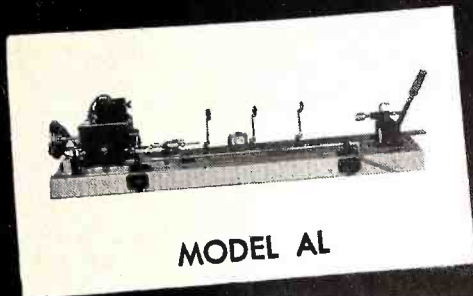
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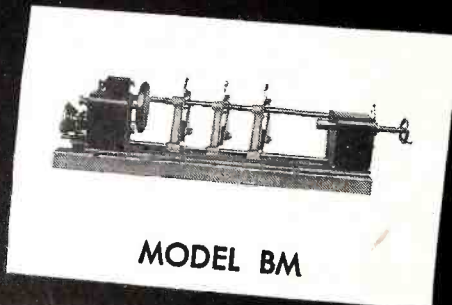
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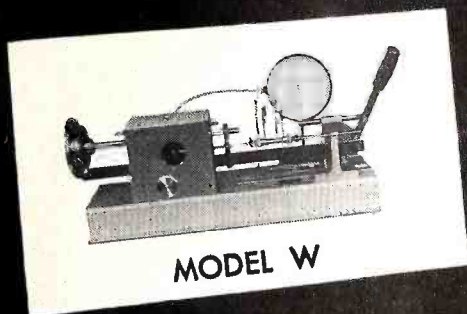


MODEL AL

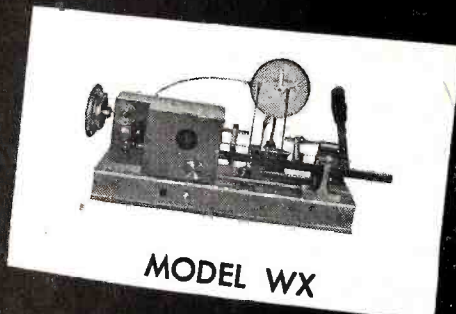


MODEL BM

LATTICE & PI WINDERS

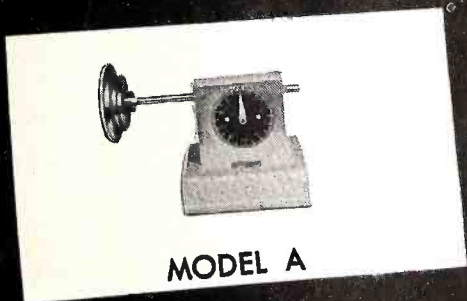


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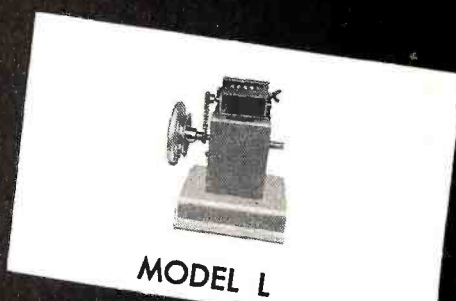


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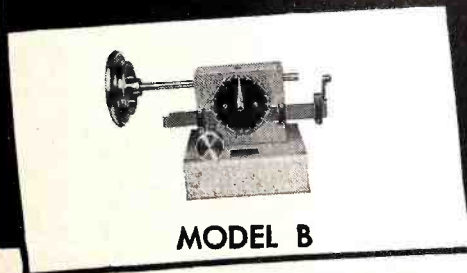


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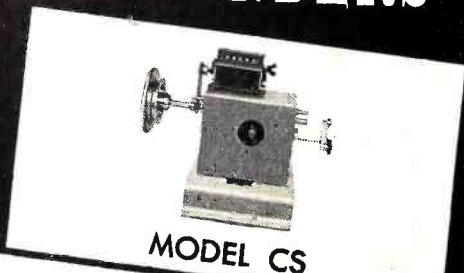


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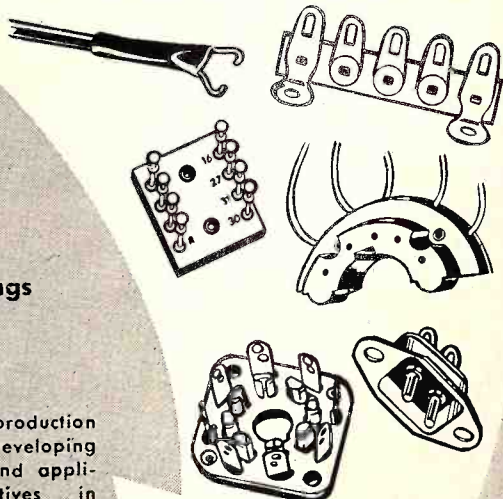
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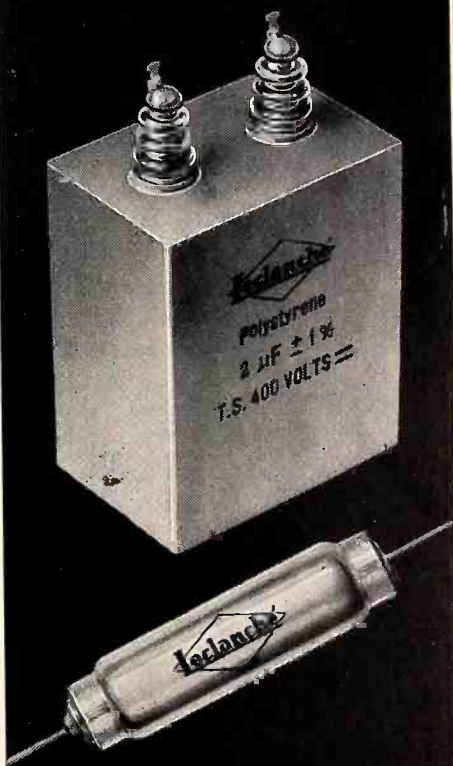
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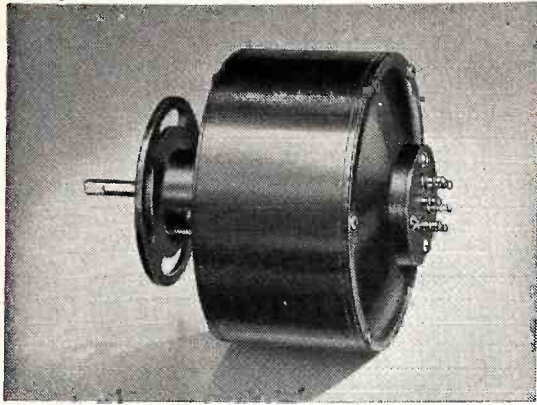
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Sinusoidal Type

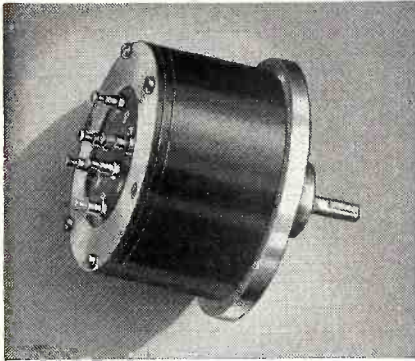
CONDENSED SPECIFICATIONS



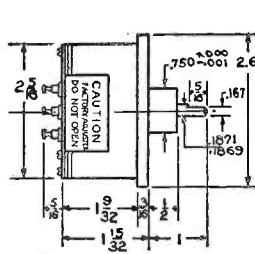
RL-14 MS

| | | | | |
|--|----------------|---------|-------------|-------|
| Total resistance | 16,000 ±10% | RL 11-C | 35,400 ±10% | RL-14 |
| Percent resistance within brush circle | Approx. 85% | | 99 ±1/2% | |
| Angle of rotation | 360° | | 360° | |
| Weight | 4.75 oz. | | 1.8 lb | |
| Torque (Approximate) | 3/4 oz. in. | | 2 oz. | |
| Wire | 80 Ni 20 Cr | | 80 Ni 20 Cr | |
| Resolution | .4° | | .2° | |
| Angular accuracy | ±.6° | | ±.5° | |
| Amplitude accuracy | ±.8% | | ±.6% | |
| Maximum volts across winding | 150 | | 350 | |
| Maximum speed | 60 rpm | | 60 rpm | |
| Expected Life | 350,000 cycles | | 200,000 | |

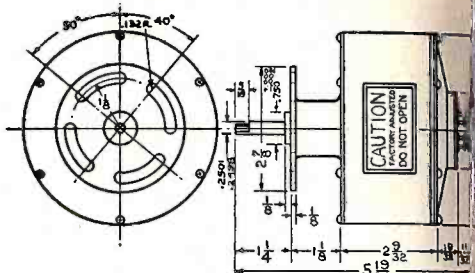
Minor variations of these standard designs, available on special order, permit operation at high rotational speeds with some loss of accuracy.



RL-11C



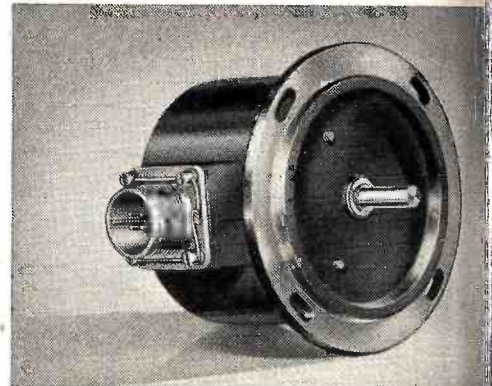
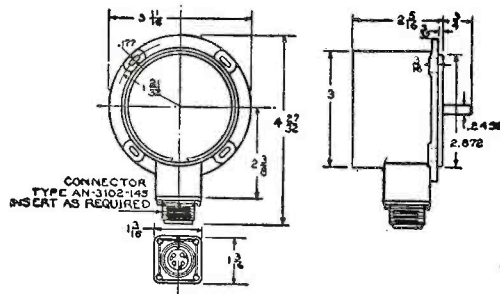
RL-11C



RL-14 MS

Toroidal Type

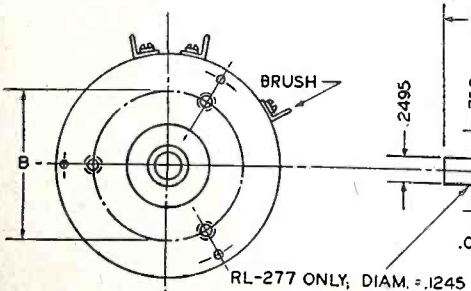
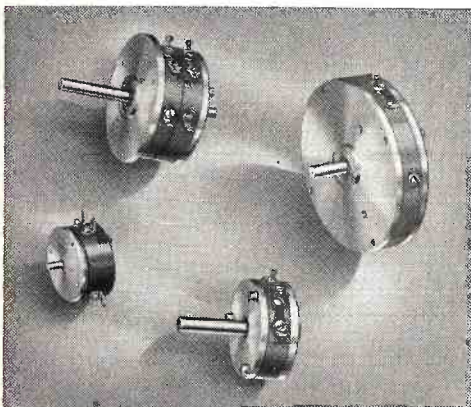
- Rating15 watts
- Torque, max.2 oz. inches
- Weight14 oz.
- Resistance500 to 25,000 ohms
- Useful angle360° or less
- Resolution0.06 to 0.2%
- Linearity . . . ±1% with multiple taps; ±1/2% end taps only
- Brushes2 (180° ± 1/2)
- External connections. 6 (4 winding taps —2 brushes or 5 winding taps—1 brush)



RL-270 Type

CONDENSED SPECIFICATIONS

| | RL-272 | RL-270 | RL-271 | RL-275 | RL-277 |
|---------------------------------|-----------|-----------|-----------|-----------|--------|
| Diameter "A" (in.) | 5 | 3 | 2 | 1 5/8 | 1 1/2 |
| Rating (watts) | 12 | 6 | 3 | 2 | 1 |
| Torque, max. (oz. in.) | 1 | 1 | 1 | 1/2 | 1/2 |
| Weight (oz.) | 15 | 6 | 3 | 2 | 2 |
| Mounting: 3 holes 1/8" deep | #8-32 | #8-32 | #8-32 | #6-39 | #6-39 |
| Mounting circle diam. "B" (in.) | 3.250 | 1.750 | 1.250 | 1.000 | 1.000 |
| Max. resistance (ohms) ±10% | 500,000 | 275,000 | 160,000 | 105,000 | 64,000 |
| Min. resistance (ohms) ±10% | 460 | 250 | 150 | 105 | 105 |
| Max. useful angle (deg.) | 358 ± 1/2 | 356 ± 1/2 | 354 ± 1/2 | 352 ± 1/2 | 350 |
| Max. resolution (%) | 0.05 | 0.08 | 0.15 | 0.2 | 0.2 |
| Min. resolution (%) | 0.01 | 0.015 | 0.025 | 0.04 | 0.04 |
| Linearity (%) | ±0.10 | ±0.10 | ±0.15 | ±0.25 | ±0.25 |



RL-277 ONLY, DIAM. = .1245

Standard Shaft: single end, 3/4" extension; specify if otherwise.
 Double-ended shaft special; specify diameter and length.
 Multiple sections can be ganged; add 3/8" to the overall length for additional section.
 Terminals will be positioned on the circumference as required for winding angle.
 Expected life of all types over 1,000,000 cycles.

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 Newton Upper Falls 64, Massachusetts



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MODEL 700
Complete and accurate tube Tester available. 7 other HICKOK tube Testers available to fill all your requirements.

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Model 209A: Contains large 9" meter with zero-center scale. Highly accurate for servicing industrial electronic equipment. DC Volts: 0-1200 in 6 ranges. AC RMS Voltage: 0-1200 V. in 6 ranges. AC Peak-to-Peak Voltage: 0-1200 V. in 6 ranges. Capacitance 0.1 to 10,000 MMF in 2 ranges, 0-1000 MF in 5 ranges. Inductance 0.1 henries. 0.1 ohm to 10,000 megohms in 7 ranges.

MODEL 209A

SINE-SQUARE WAVE GENERATOR
For Laboratory & Industrial Use

Model 755: Provides an accurately calibrated source of sine wave and square wave functions over a wide frequency range. Sine wave total harmonic distortion below 1%. Hum level better than 90 db down. Square wave rise time less than .1 Micro second. Frequency range 10 to 250 MC. Noise level better than 90 db down. Square wave rise time less than .1 Micro second.

MODEL 755

NOISE GENERATOR
Industrial & Technician Model

Model 710: The first noise generator to be completely self-contained. Has two indicating meters. This instrument is divided into two parts — VTVM side and Generator Noise side. Permits noise level adjustments to meet requirements for testing audio and video in TV receivers. Ranges: 0-0.1, 0.5, 1.0 and 5.0 dbm. Frequency range flat from 10 to 250 MC. Noise level better than 90 db down.

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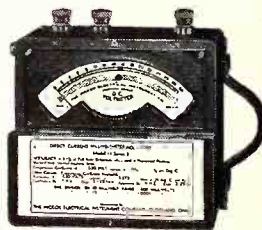
MODEL 46

The high HICKOK standard of quality is available in Ruggedized DC or Rectifier Type AC meters. This latest design provides the practical answer to requirements for shock-proof meters with dependable accuracy. These instruments are thoroughly engineered and tested and meet MIL-M-6A, MIL-M 10304 (Sig. C) and New Military Specification for Round Panel Instruments. Available in 2½", 3½" and 4½" Ruggedized.



MODEL 46-250

Space on an instrument panel is valuable. The need for obtaining as long a panel as possible is neatly filled with a 250 Degree Arc-Angle long scale instrument pioneered and perfected in the smaller size by HICKOK. These meters have a scale 2½ times as long as the conventional panel instruments. 250° Meters, in sealed as well as standard molded cases, are available in many sizes and ranges.



MODEL 14

HICKOK DC and AC Portable Instruments — Ammeters, Milliammeters, Microammeters, Voltmeters, Millivoltmeters, Volt-Ammeters Thermo-Meters are contained in a phenolic case lined with heavy steel shell which shields from the effects of stray magnetic fields. Scale divisions are spaced equal distances apart. Accuracy within ½ of 1%. On special order, Model 14 can be supplied with a calibration chart to provide accuracy to 0.2%. Also available is a complete line of pocket portables with accuracies to 0.5%.

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flexible waveguide made.

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ble waveguide manufactured. RF leak-
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bendable to very small radii, can be pre-
formed easily; just a few of its unique
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ing circular mechanical symmetry. Pro-
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true shear in a single assembly. In addi-
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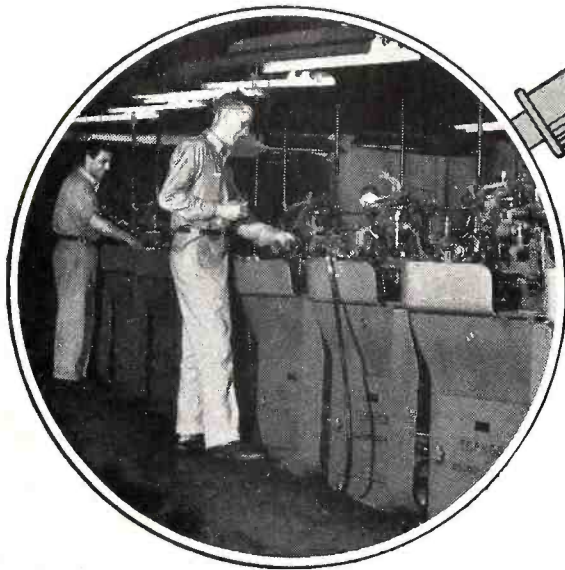
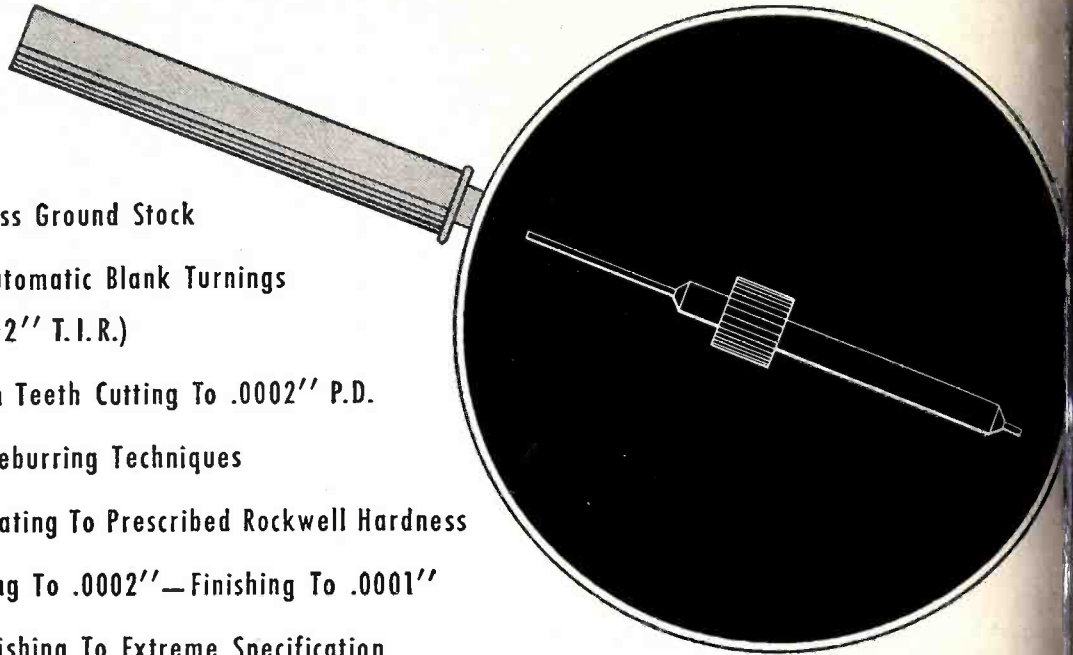
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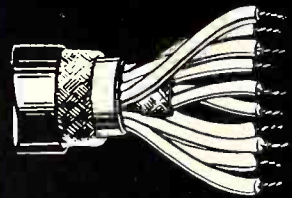
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Conductors: copper or copperweld



3 Conductor polyethylene
4 Conductor polyethylene
4 Conductor vinyl
5 Conductor vinyl



Four stranded tinned copper conductors, color-coded vinyl plastic insulation; one conductor has tinned copper shield and over-all vinyl plastic jacket; all four conductors cabled with jacketed conductor as core; cabled conductors covered with tinned copper shield; over-all vinyl plastic jacket.



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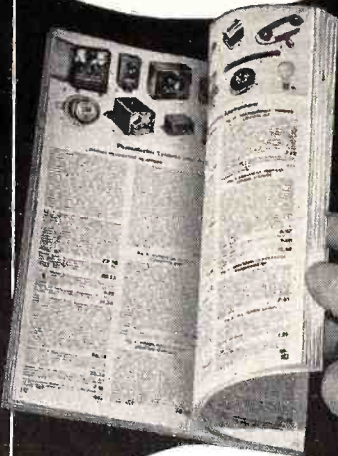
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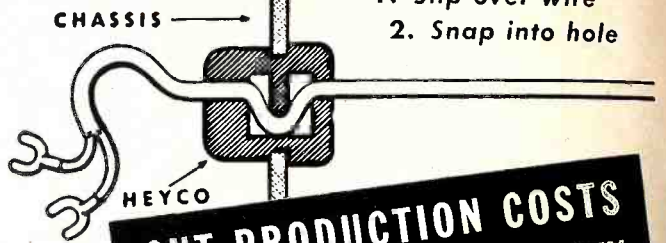


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cords to the housing
& eliminate strain
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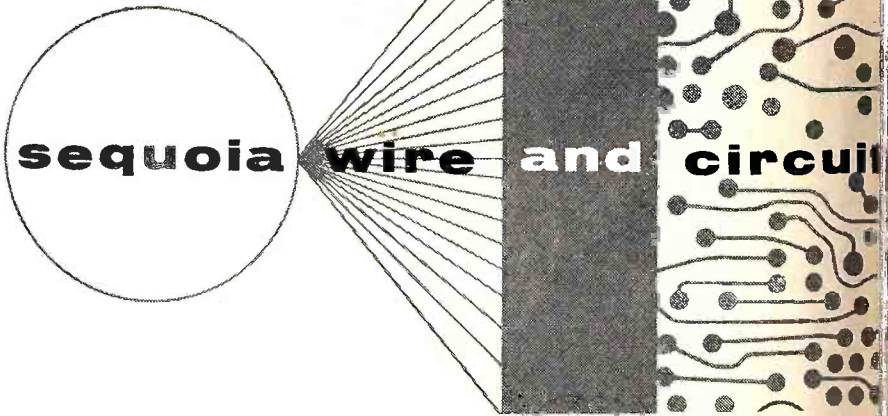


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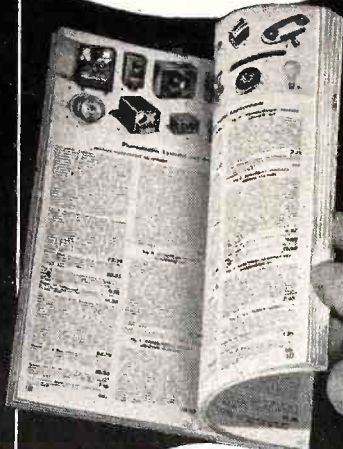
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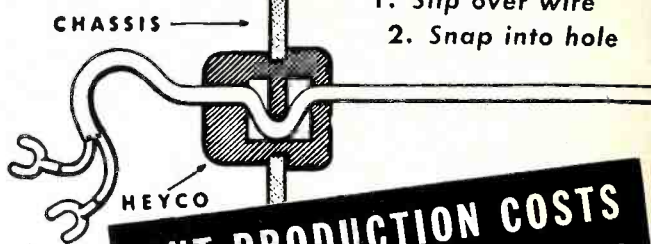


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anchor power
cords to the housing
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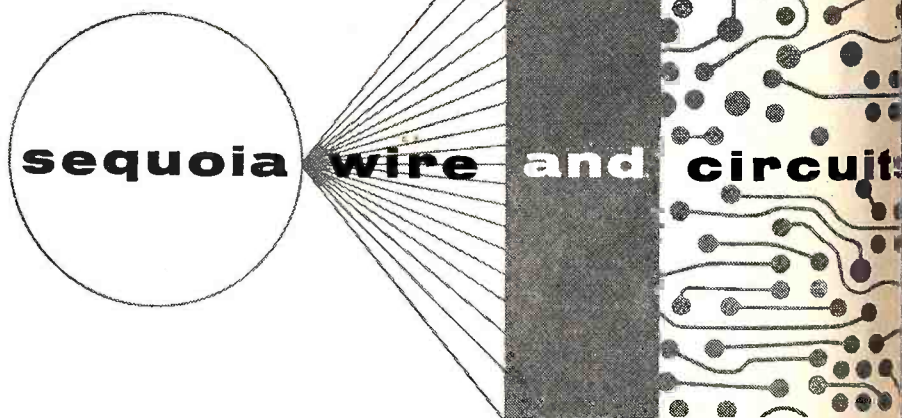
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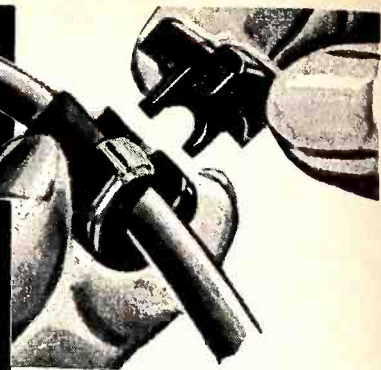
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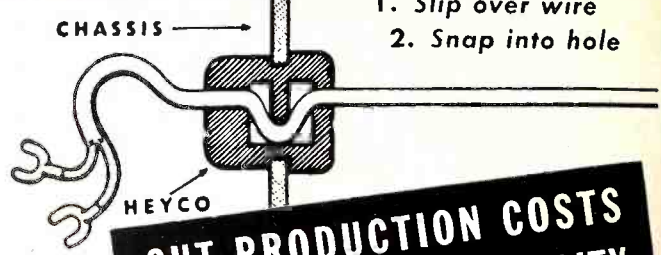


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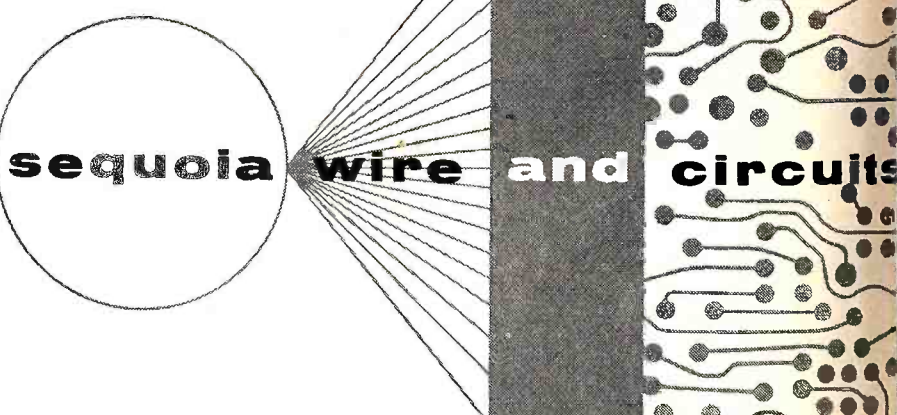


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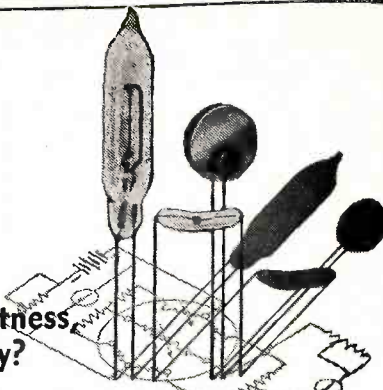
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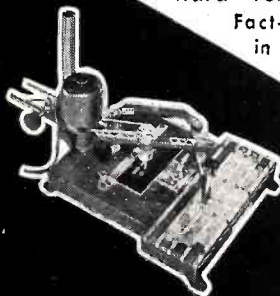
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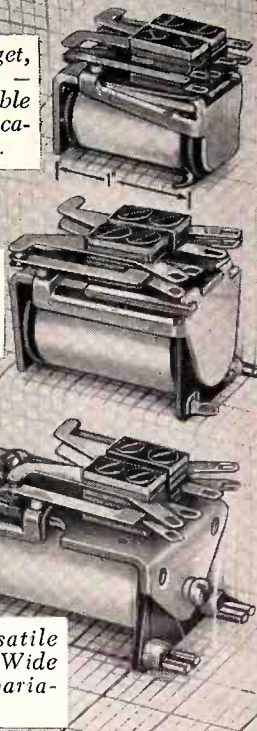
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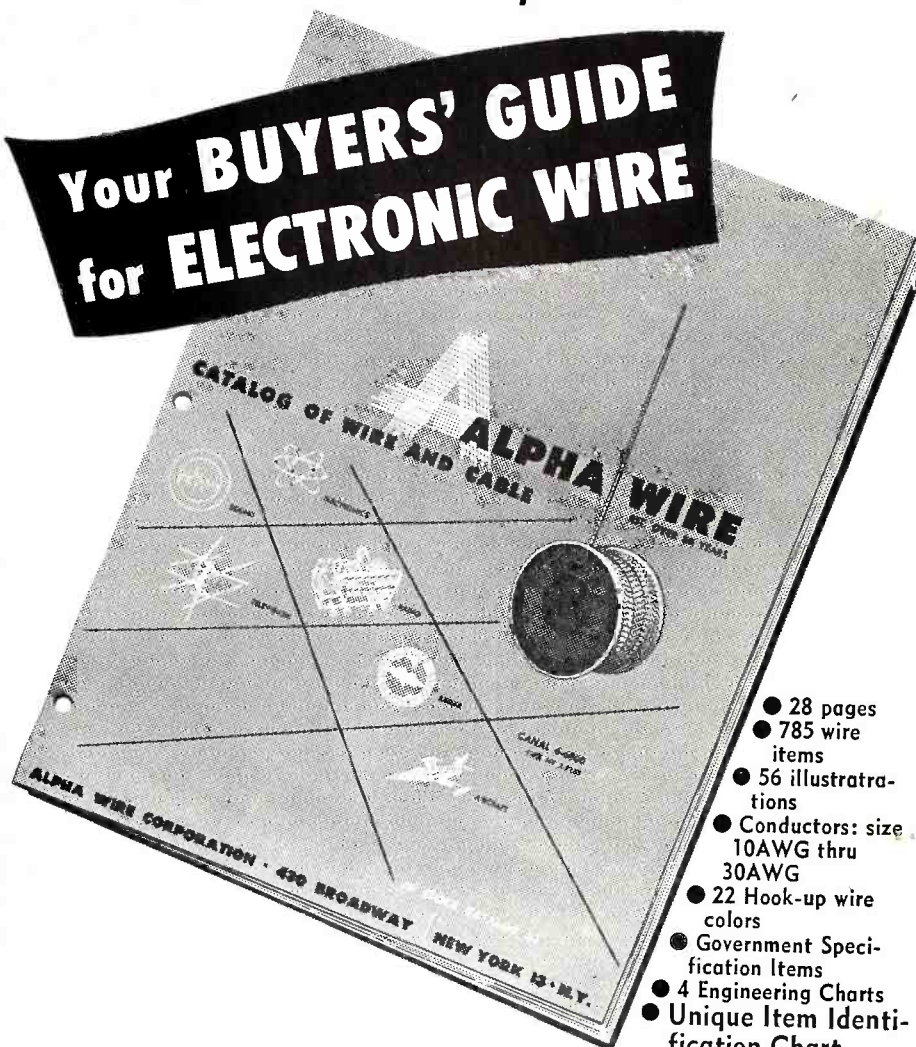
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Type RM



Type RO

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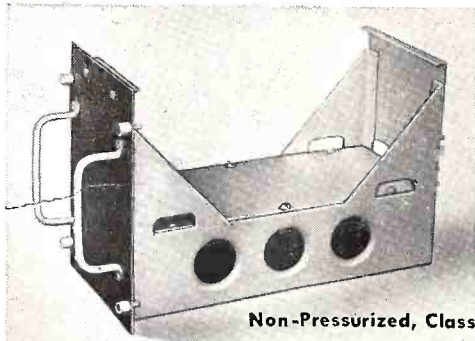
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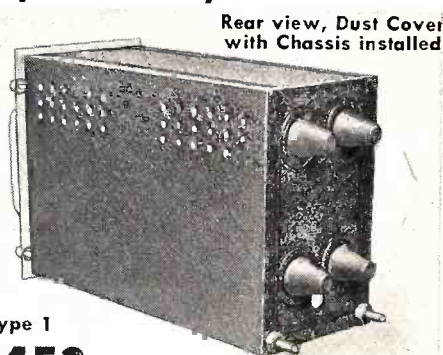
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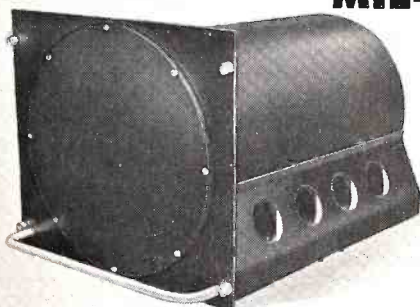


Non-Pressurized, Class 1 Type 1

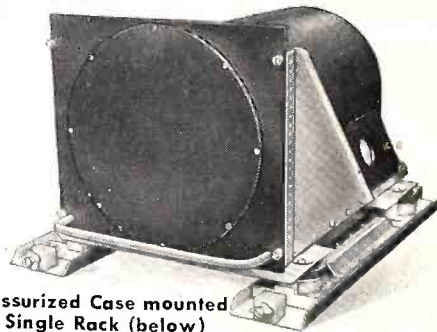
MIL-C-7452



Rear view, Dust Cover with Chassis installed



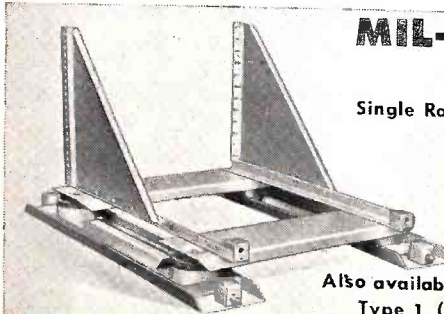
Pressurized, Class 2 Type 2



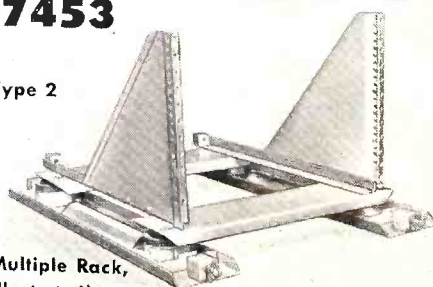
Pressurized Case mounted in Single Rack (below)

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Single Rack, Type 2



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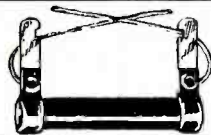
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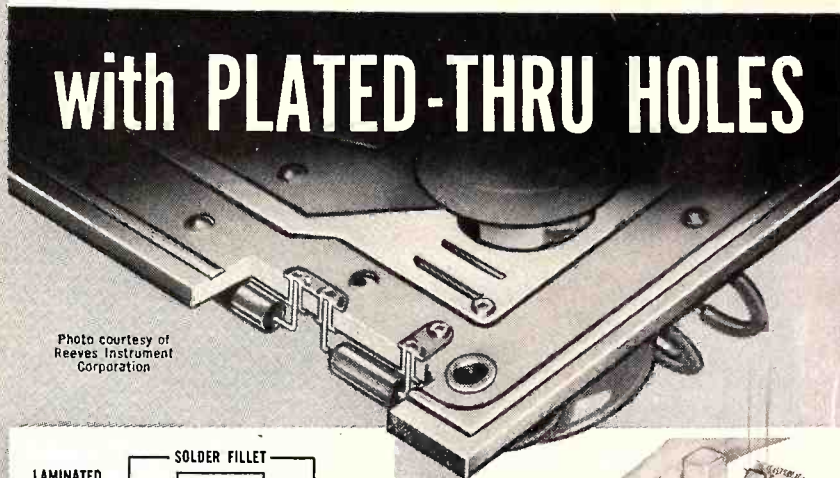
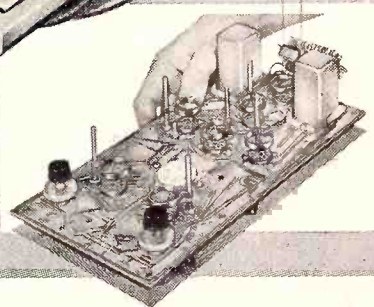
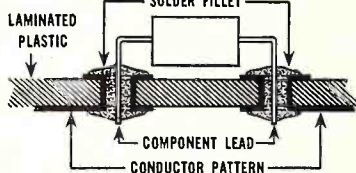


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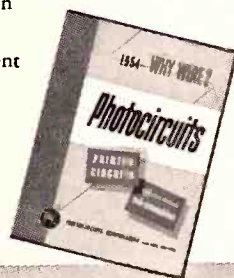
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| 245 B | .0005-500 | 6 | 10% | 10C-250KC | 7 Megohms 15 MMF | 3000 |
| 247 | .00005-500 | 13 | 30% | 10C- 50KC | 7 Megohms 15 MMF | 30000 |
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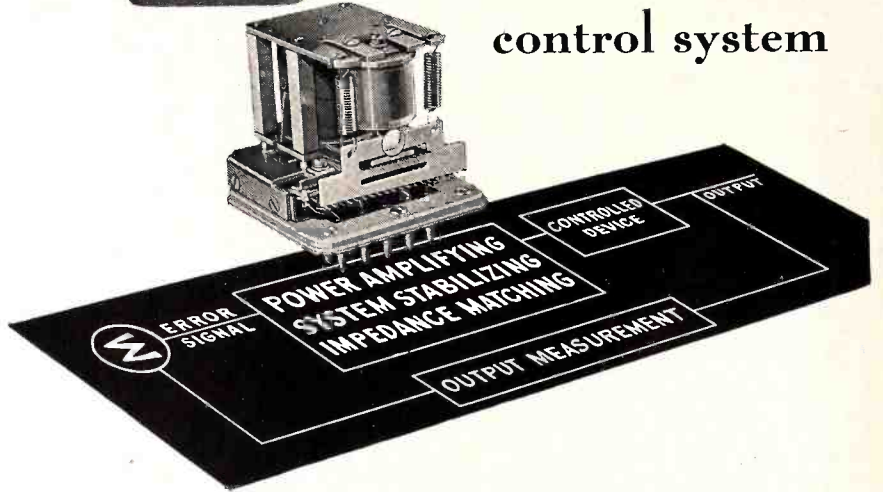
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1 **SMALL SIZE** • Regohm is a compact, plug-in device; lightweight, extremely rugged and position-free. The unit's small size does not limit its power-handling capacity. This makes Regohm a "natural" where economy of space and weight are your major considerations.

2 **POWER AMPLIFYING** • Regohm is a high-gain electro-mechanical power amplifier. Milliwatt variations in signal energy can control energy changes millions of times greater.

3 **IMPEDANCE MATCHING** • Signal and controlled circuits are isolated, both electrically and structurally. Signal coils may have ratings from 0.01 to 350 amperes. Controlled resistors on a panel in which Regohm is plugged, can have values from zero to infinity, depending on the controlled system.

4 **SYSTEM STABILIZING** • A thoroughly reliable, sturdy dashpot aids in system damping. It can easily and readily be adjusted over a wide range to match the

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5 **ANALYTICALLY DEFINABLE** • The response of Regohm is independent of the rest of the servo system. Its response characteristic can be expressed in terms of conventional "transfer functions." Regohm acts as an integrating error-rate proportional controller. No appreciable steady-state error can occur. Regohm's effect can be calculated in advance, simplifying the design and facilitating the prediction of performance.

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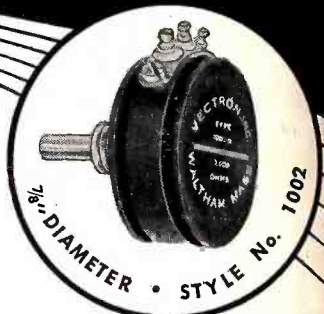
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VECTRON

PRECISION LINEAR WIRE-WOUND POTENTIOMETER



GENERAL SPECIFICATIONS

Over-all Resistance: 50 ohms to 50,000 ohms
Resistance Tolerance: $\pm 5\%$ standard ($\pm 1\%$ or $\pm 0.5\%$ if specified)
Independent Linearity: $\pm 1\%$ standard ($\pm 0.5\%$ or $\pm 0.25\%$ if specified)
Temperature Coefficient of Resistance: 0.00002 parts per $^{\circ}\text{C}$, above 250 ohms or 0.0007 parts per $^{\circ}\text{C}$, 250 ohms or less
Power Dissipation: Nominal dissipation including 2 watts at 25°C . Rated 5 watts at 5°C under specific conditions
Electrical Rotation: $320^{\circ} \pm 5^{\circ}$ standard or $357 \pm 1^{\circ}$ if specified
Resolution: Optimum—based on resistance
Terminal Assembly: Treated, electrical grade, laminated phenolic with plated terminals.

Always to Your Specification

From Vectron's three basic Potentiometer styles, $7/8$ " diameter, $1\ 1/16$ " diameter and 2 " diameter, units can be made to your individual requirements. Multiple ganged units with individual phase special stops and even specially tapped units supplied to order, individually or in quantity. Additional new sizes and types are being prepared as this publication goes to press. Standard shafts supplied in any length or detail; special bushings and shaft locks to order.

High Linearity — Superior Performance

Vectron Potentiometers provide superior performance. Uniformity and linearity beyond normal specification requirements are the result of long experience. Close tolerances and special processing insure minimum run-out and bearing angularity.



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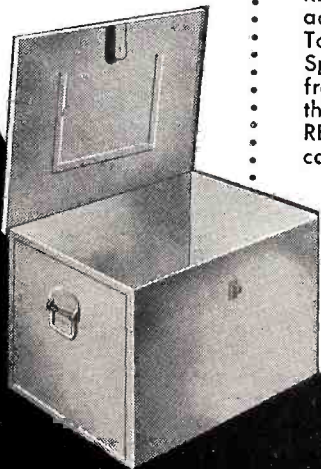
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New **VECTRON** MICROWAVE SPECTRUM ANALYZER **SA25**

A Sensitive Test Instrument for Design, Manufacture, Installation and Maintenance of Microwave Radar, Altimeter, Guided Missile, Television Relay, Communication and Control Equipment.

Accurate Microwave Measurements including:

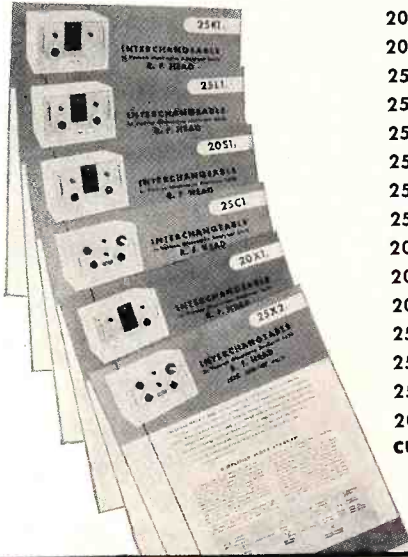
1. Basic frequency of the carrier and all side bands
2. Undesired microwave frequencies being generated
3. Relative intensity of signals, wanted and unwanted
4. Instability in terms of frequency and power output.

Engineered to meet present and future requirements

Vectron's SA25 Microwave Spectrum Analyzer has been engineered to serve present needs while it anticipates future trends in electronic and communication equipment. As this yearbook goes to press, the Bulletins listed below are only a few weeks old. They present a complete description of and detailed specifications for the SA25 and its Interchangeable RF Heads. Improvements and new features will be covered in the literature you receive.

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- 1. Interchangeable R. F. Heads for specific frequency (or band) coverage — 300 mc/s to 40 kmc/s.
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| 20S1 | 2400-3650 mc/s |
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| 25X2a | 5700-7425 mc/s |
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| 20X1b | 9500-10,250 mc/s |
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| 25K1 | 15,300-17,700 mc/s |
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*Complete
Description
and Detailed
Specifications
for the Basic Unit*

If your frequency coverage requirements are not met by any of the RF Heads listed, please write and tell us your specific needs. These will be met in any one of three ways:

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3. A new Vectron RF Head, completed too late to appear in this yearbook.

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VECTRON, inc. *Electronic and Electro-Mechanical Equipment*
404 MAIN STREET, WALTHAM 54, MASS.

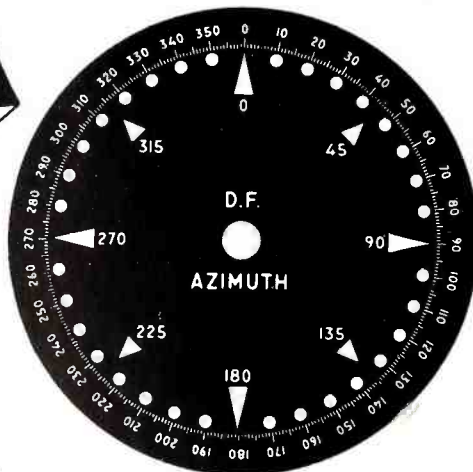
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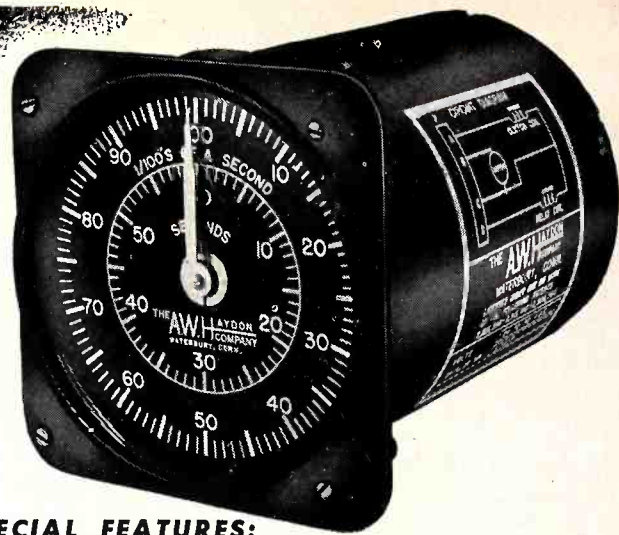
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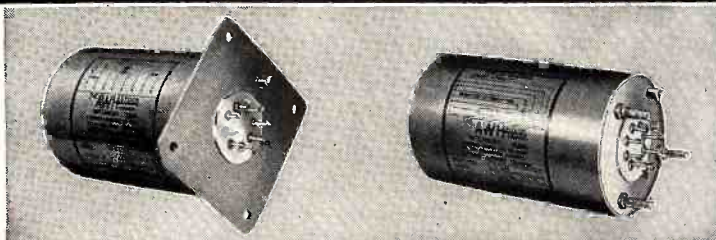
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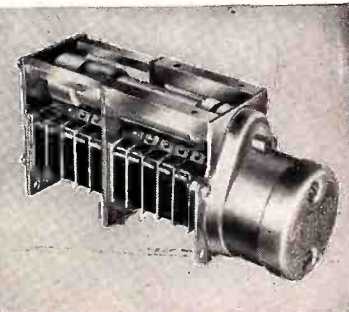


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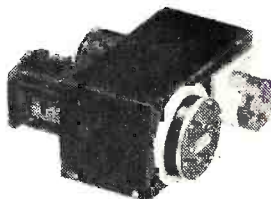
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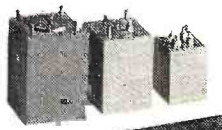
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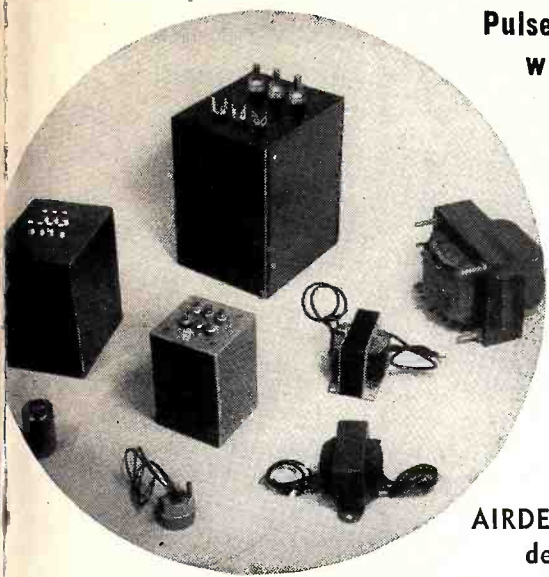
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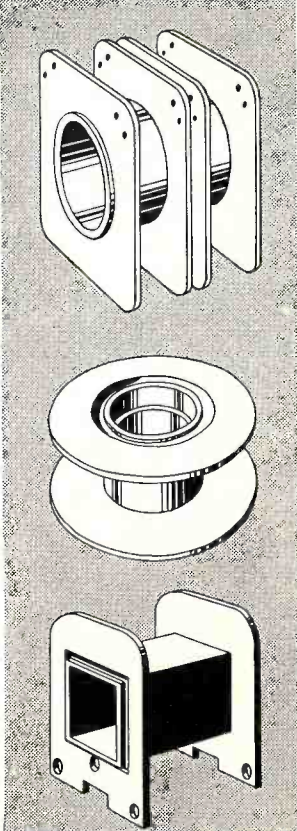
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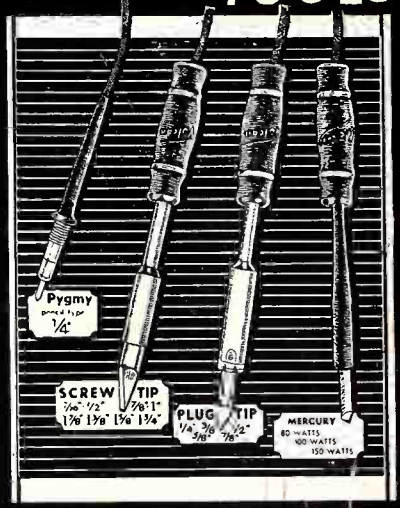
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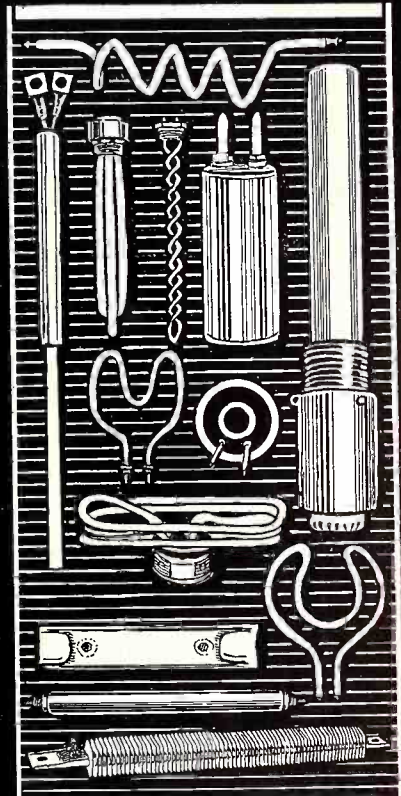


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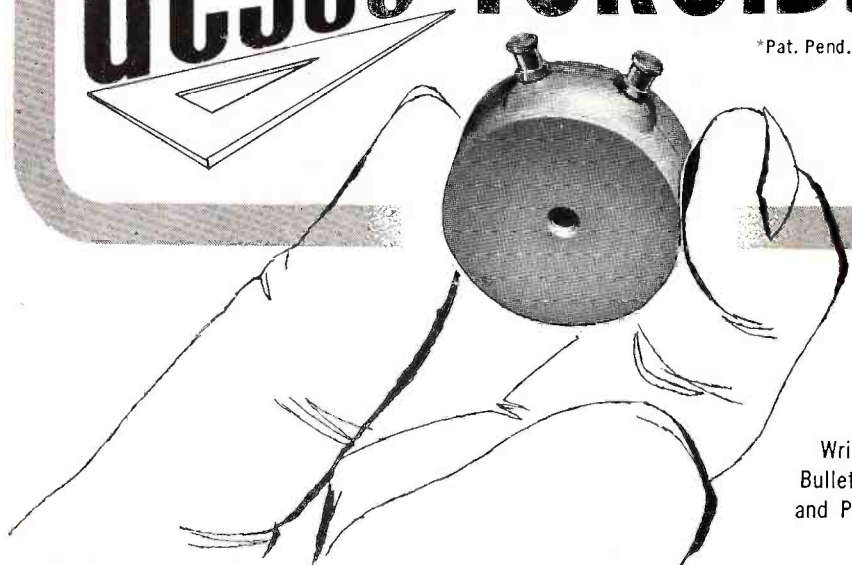
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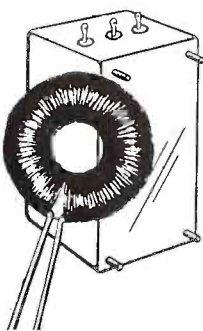
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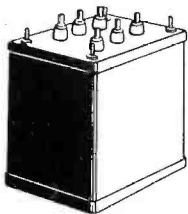
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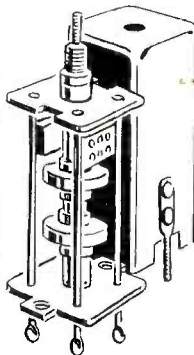
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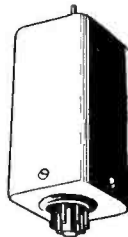
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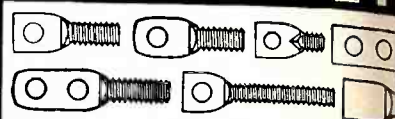
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Select the instrument exactly suited to your specific counting and control application. Without high "custom design" costs, without time-consuming modifications, you can choose the right instrument for your operation from the wide variety of plug-in units available. A typical unitized instrument is the Preset Counter (right). Tell us your counting problem! Atomic has over ten "standard" counters, registers, etc. with unitized modifications to suit your needs. Ask for Bulletin G-10 for descriptions.



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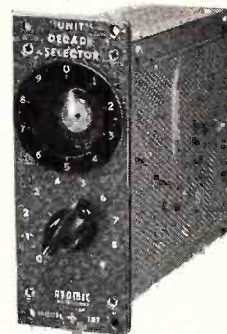
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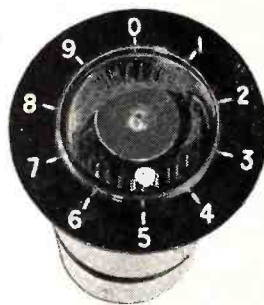


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PRECISION**

by
film capacitors, inc.

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|----------------------------|----------------------------|----------------------------|----------------------------|
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| Voltage Range, D. C. | 100 to 30,000 | 100 to 30,000 | 5 KV to 60 KV |
| Capacitance Range | .001 to 20 MF | 0.001 to 20 MF | .0001 to 1.0 MF |
| Power Factor | .02% @ 1 KC | .02% @ 1 KC | 0.3% @ 1 KC |
| Dielectric Absorption | .01% | .01% | 0.1% |
| Voltage Derating at 85° C | none | none | 30% |
| Voltage Derating at 125° C | not operable | none | 66% |
| Voltage Derating at 150° C | not operable | none | not operable |
| Voltage Derating at 200° C | not operable | 33% | not operable |
| Temperature Coefficient | -100 PPM/° C | -100 PPM/° C | +500 PPM/° C |
| I.R. at Room Temperature | 10 ⁸ megohms/MF | 10 ⁸ megohms/MF | 10 ⁸ megohms/MF |
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The sales representatives of ELECTRONICS are also the sales representatives of NUCLEONICS. They have much evidence pointing to the opportunities in this great NEW field. Ask them to show you what your potentials can be.

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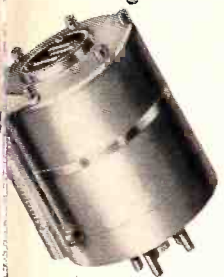
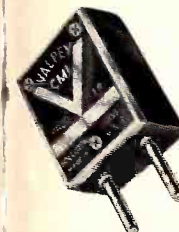
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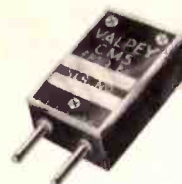
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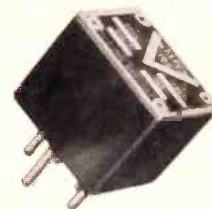
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| APPLICATION | TYPE | FREQUENCIES | TOLERANCE | TEMPERATURE RANGE |
|-------------------------------------|-------------------|---|---|--|
| Commercial or Military (Jan HC 6/u) | VR6 VR6 VR6 | 1.5 to 2.0 Mc 2.0 to 30.0 Mc 30.0 to 75.0 Mc | .005% .005% .005% | -40°C. to +70°C. -40°C. to +70°C. -40°C. to +70°C. |
| Commercial or Military (Jan Spec.) | CM1 & CM5 | 1.5 to 30.0 Mc 1.5 to 30.0 Mc | .005% .005% | -40°C. to +70°C. -40°C. to +70°C. |
| Marine | CM1 | 2.0 to 3.2 Mc | .01% | -10°C. to +60°C. |
| Marine | CM5 | 2.0 to 3.2 Mc | .01% | -10°C. to +60°C. |
| Marine | VD5 | 2.0 to 3.2 Mc Dual Crystal | .01% | -10°C. to +60°C. |
| Standard | XL100 | 100 Kc | .005% | 0°C. to +50°C. |
| Standard | DFS | 100 — 1,000 Kc Dual Crystal | .005% | 0°C. to +50°C. |
| Close Frequency Oven | VDO | 1.0 to 30.0 Mc | .002% | +15°C. to -5°C. of Temp. |
| Broadcast and Close Frequency Oven | CBC-0 | 60 Kc to 10.0 Mc | .002% | +15°C. to -5°C. of Temp. |
| Amateur | CM5 | 160M Bands 3.5 to 4.0 Mc 7.0 to 7.4 Mc 8.0 to 8.222 Mc 14.0 to 14.8 Mc 12.0 to 12.3 Mc 24.0 to 24.666 Mc 25.0 to 27.00 Mc 28.5 to 29.7 Mc | ±1 Kc ±1 Kc ±1 Kc ±1 Kc ±5 Kc ±5 Kc ±5 Kc ±5 Kc ±5 Kc | 0°C. to +50°C. 0°C. to +50°C. 0°C. to +50°C. 0°C. to +50°C. 0°C. to +50°C. 0°C. to +50°C. 0°C. to +50°C. 0°C. to +50°C. 0°C. to +50°C. |

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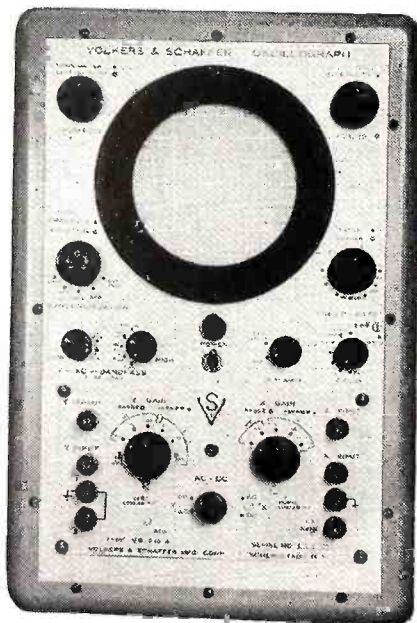
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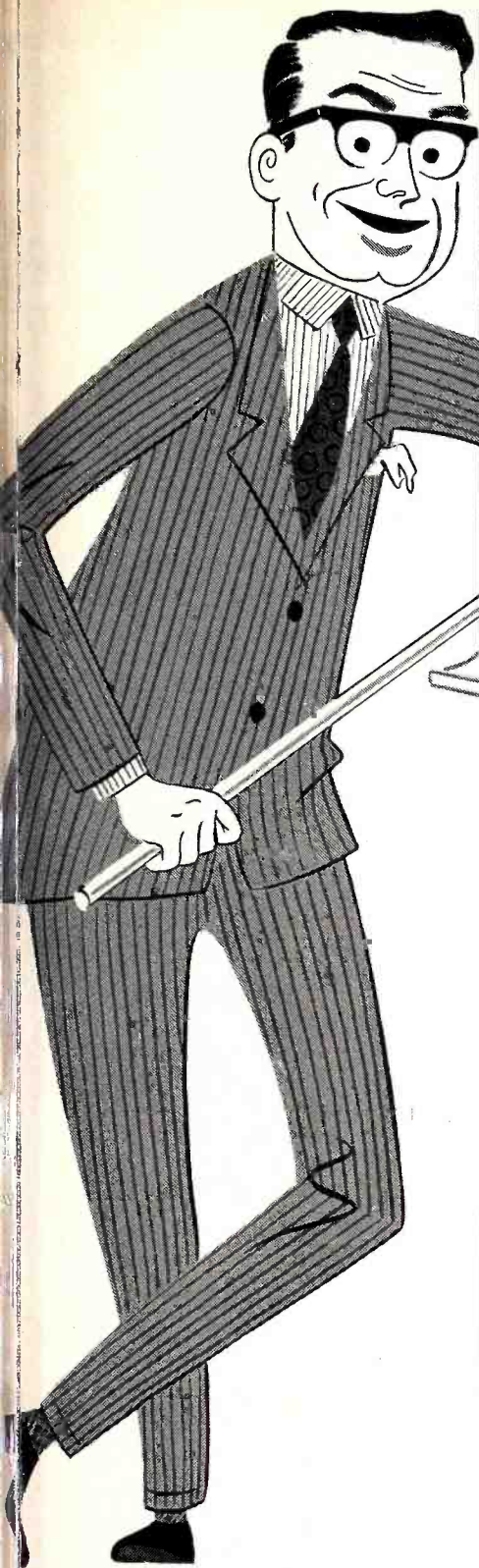
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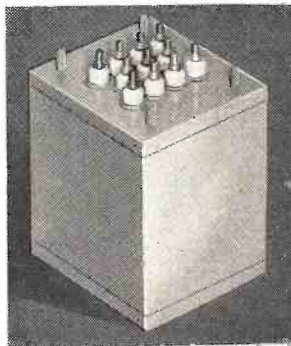
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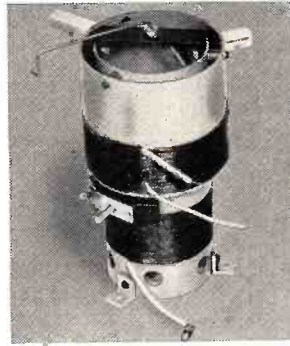
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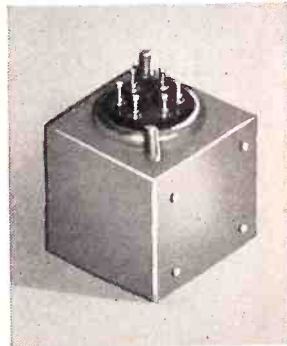
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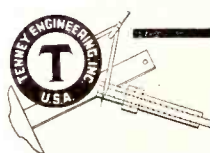


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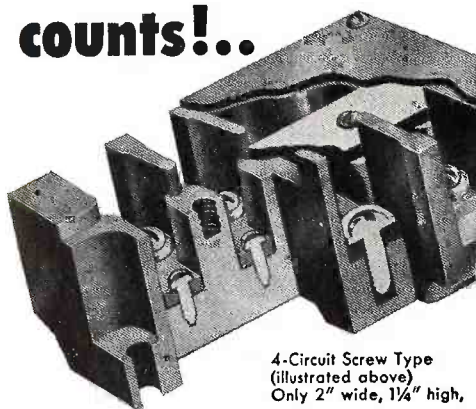
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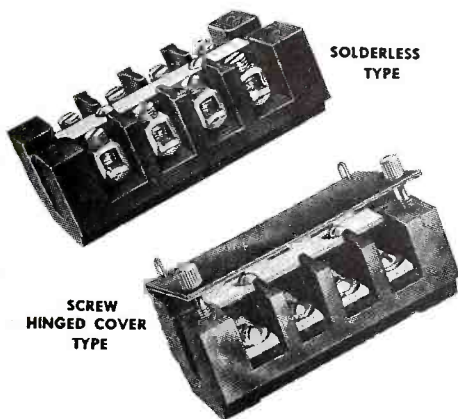
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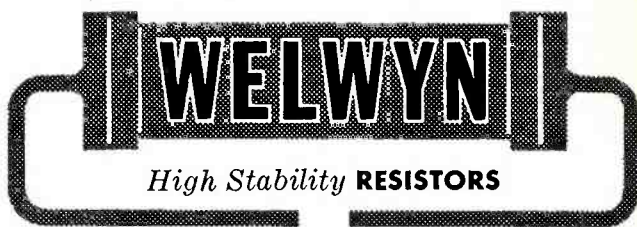
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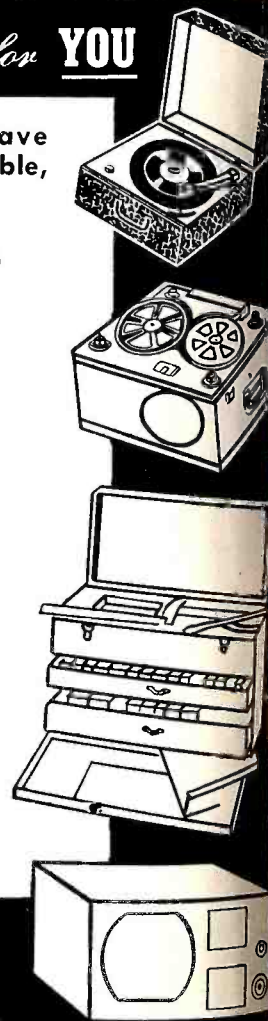


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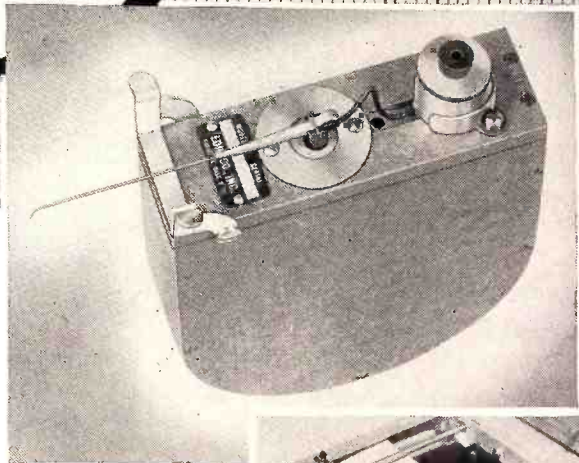
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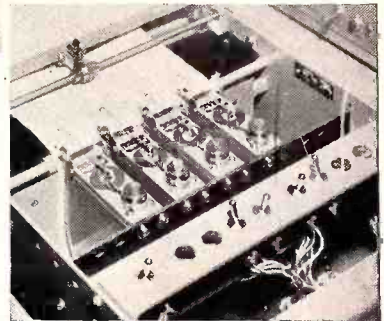
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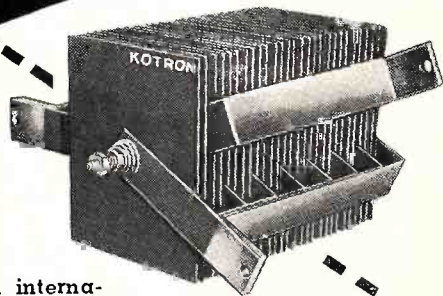
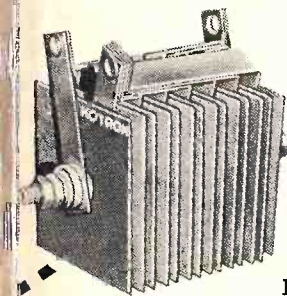
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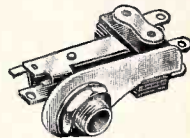
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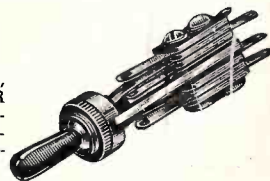
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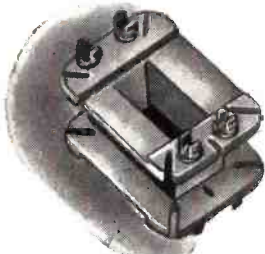
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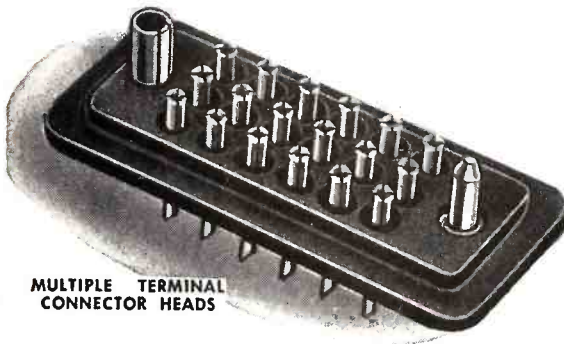
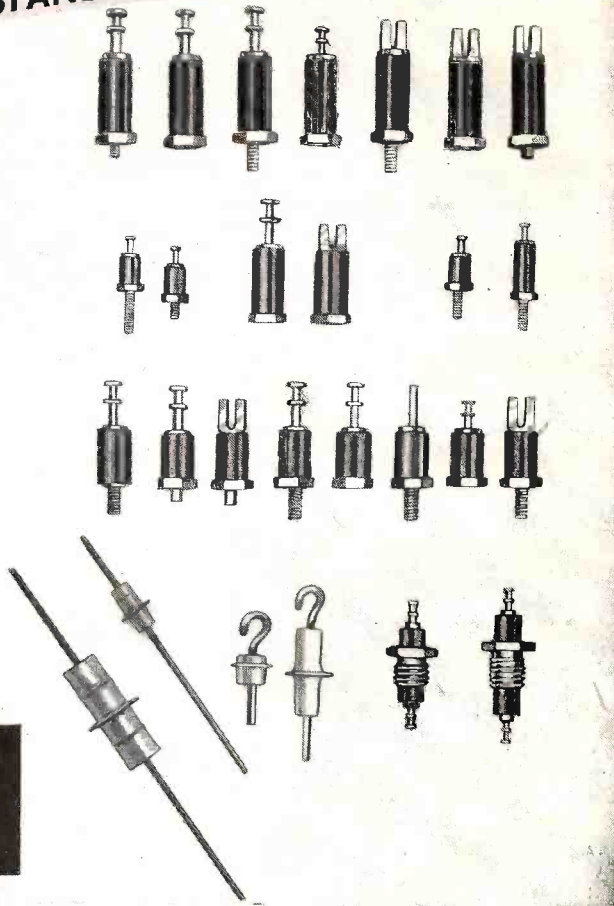


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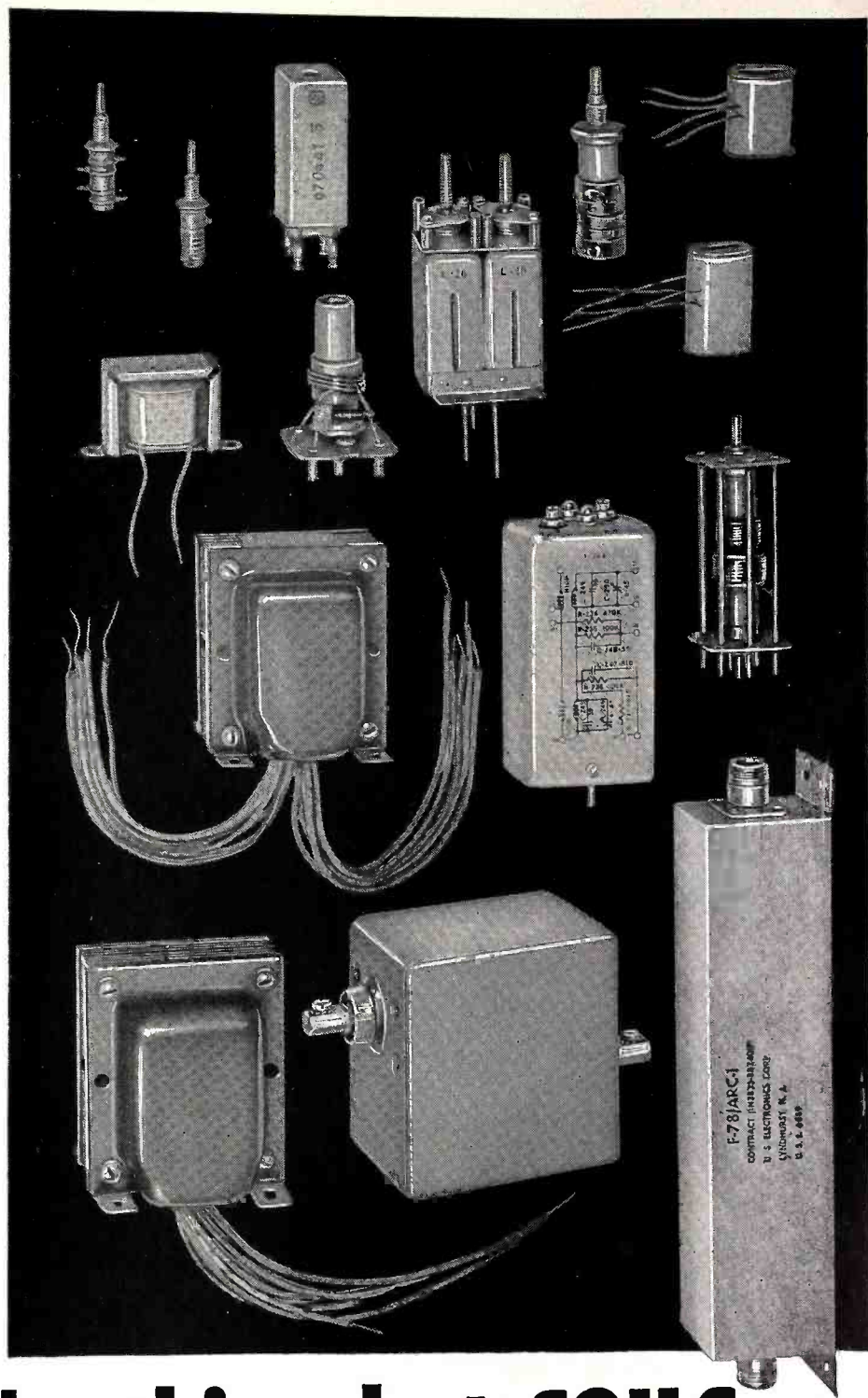
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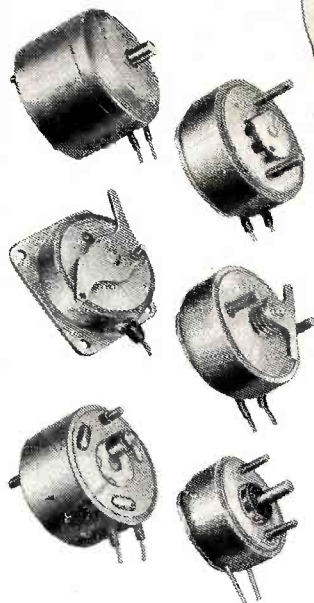
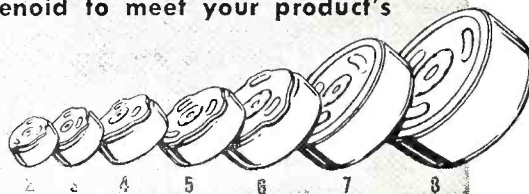
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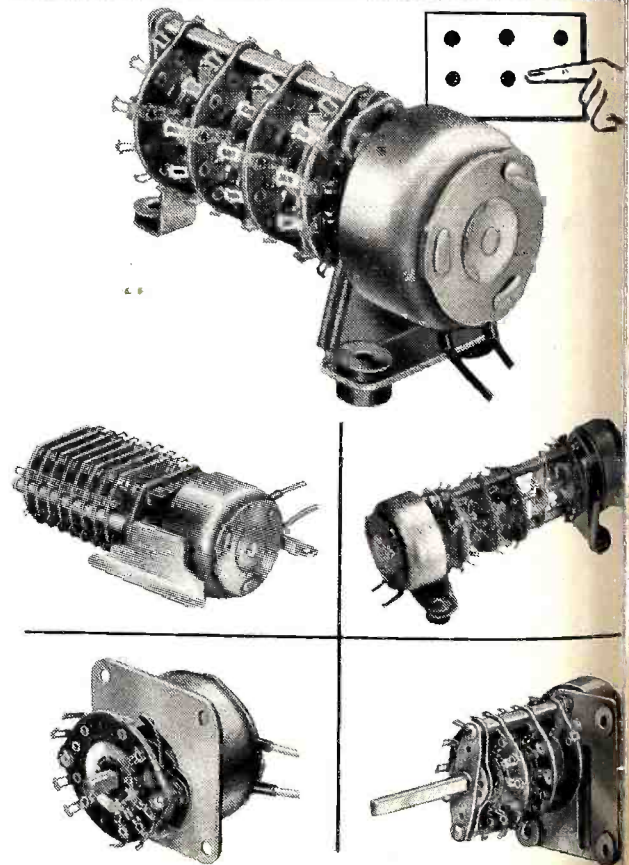
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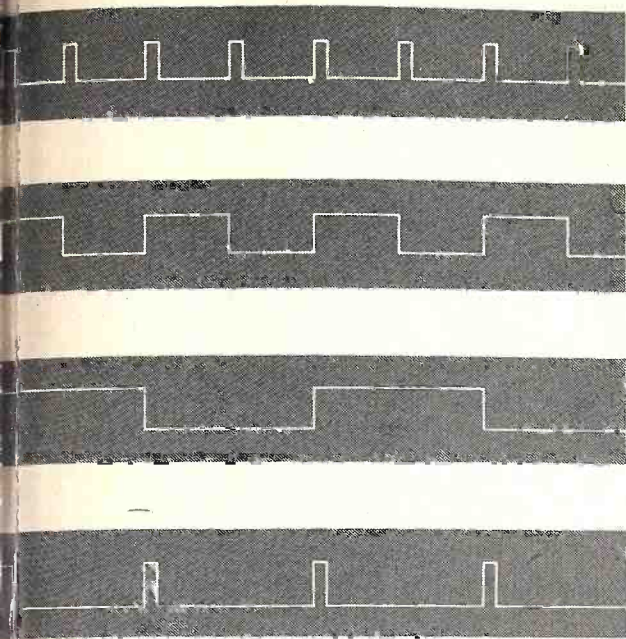
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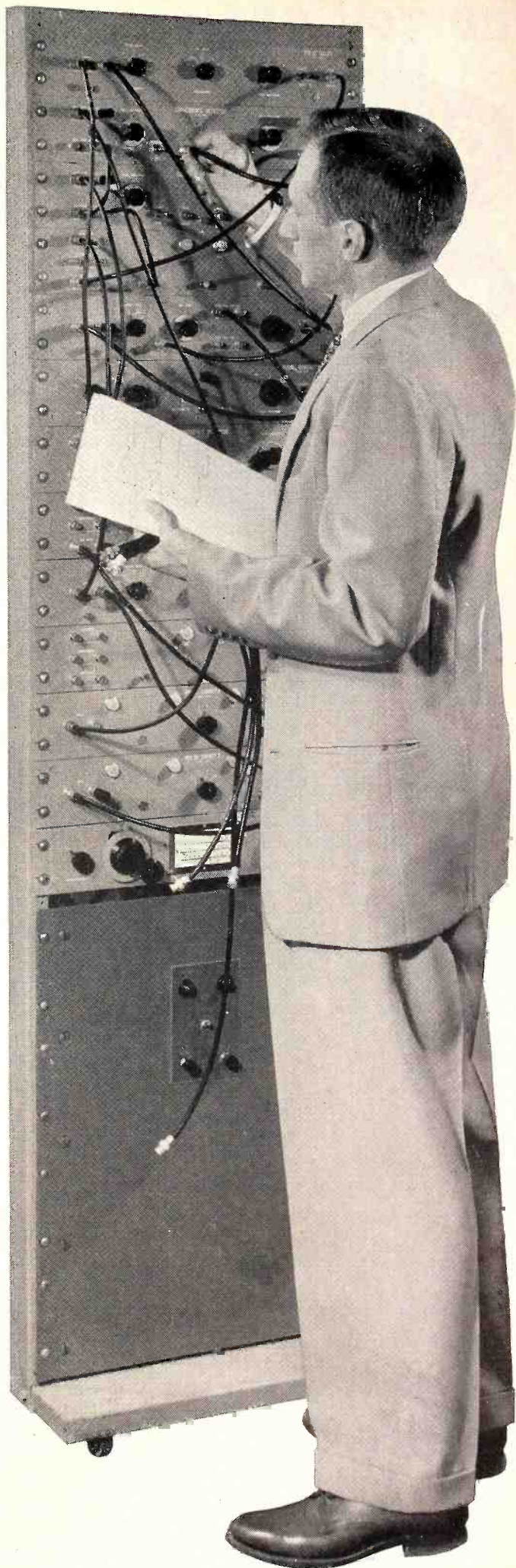
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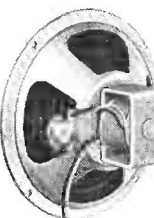
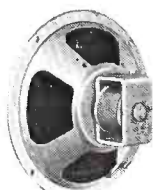
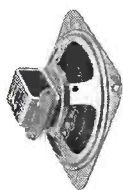
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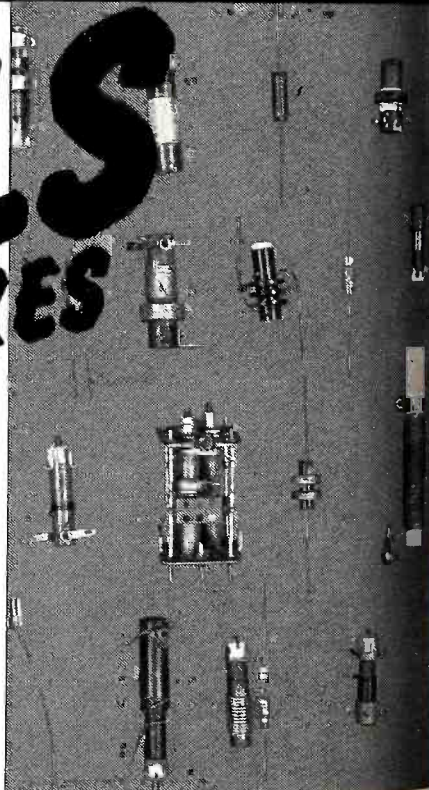
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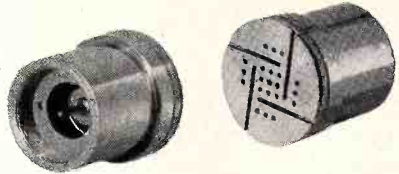
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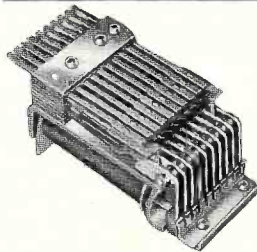
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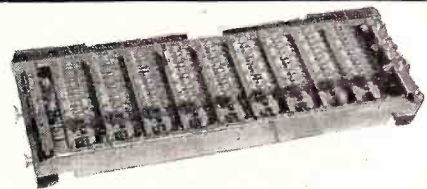
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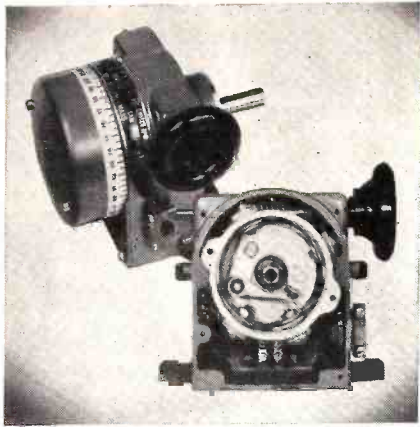
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Adjustment is made by a handwheel that operates a 25-to-1 worm gear. A scale showing the position of the operating point, in degrees from a fixed reference point, makes repeat setting easy and accurate. The operate point of the switch can be adjusted while the connected machine is in motion and, once set, is automatically held by the high pitch of the worm gear.

The switching element is a set of automatic distributor points, which are noted for long life at high speed. These contacts are actuated by a hardened and polished steel cam, once for each revolution of the drive shaft. Cams are available for either normally open or normally closed circuits. The user can adjust the duration of open-or closed-circuit time by turning a screw; a locking screw fixes this setting. The electrical system is designed to handle one ampere at 125 volts a-c. Current is fed to the contacts by brushes and slip rings allowing continuous adjustment in either direction. Screw terminals and cable clamp are provided in the housing.

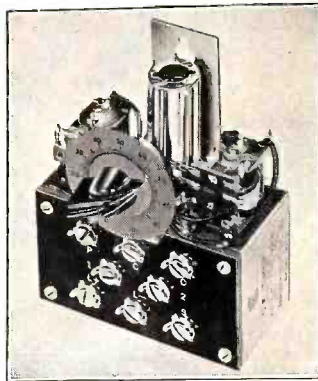
Other features are: high-quality ball bearings with sealed-in lubrication; means for lubricating the actuator cam; half-inch diameter keyed drive shaft; and compact, cast aluminum housing. Overall dimensions are: 6-3/32" long, 5 3/4" wide, and 5-1/16" high.

Descriptive bulletin free on request



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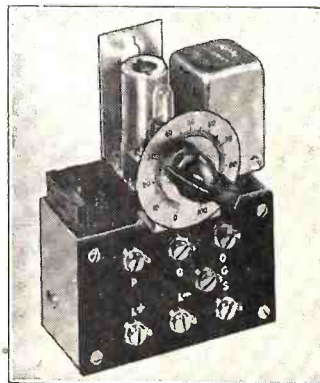
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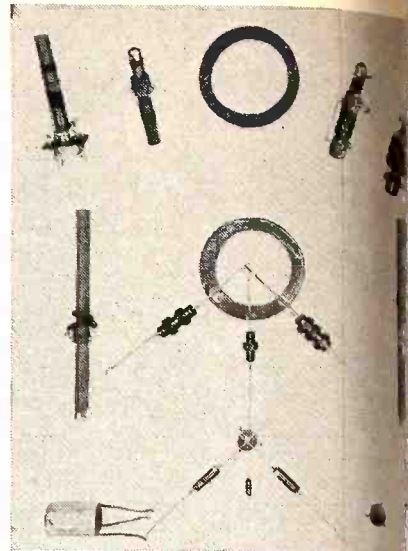
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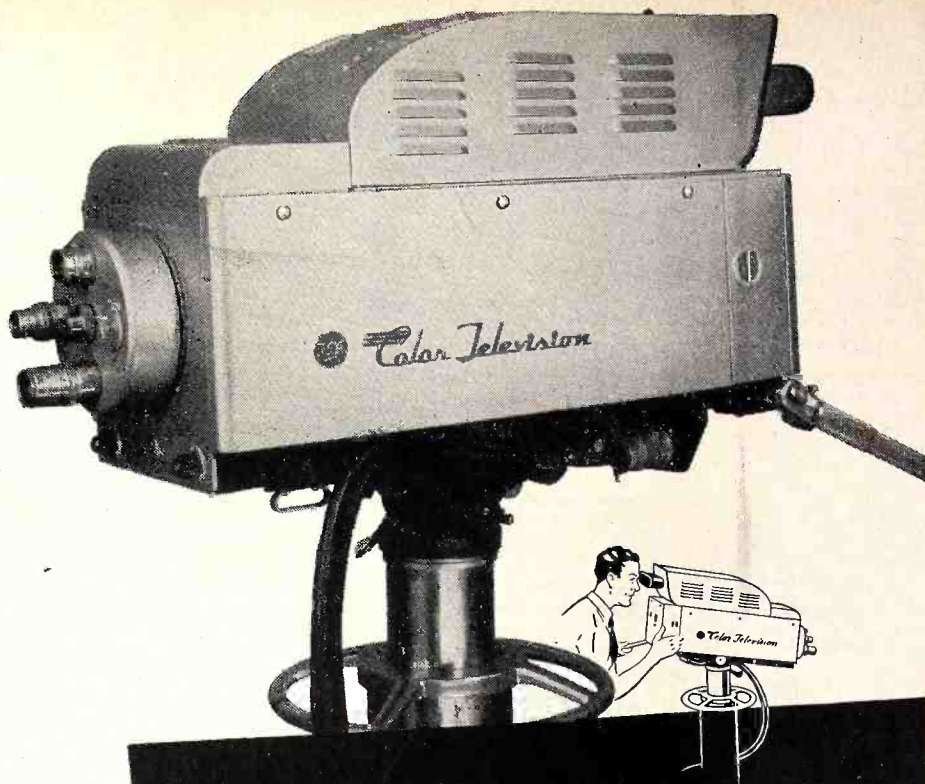
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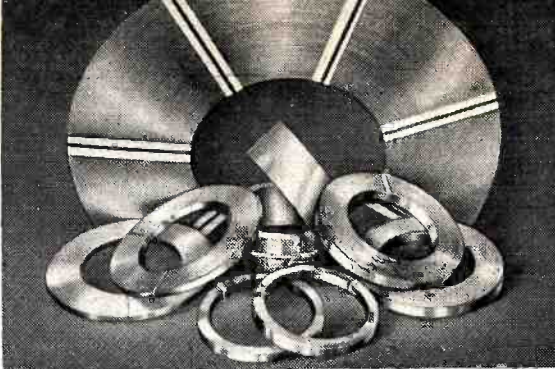
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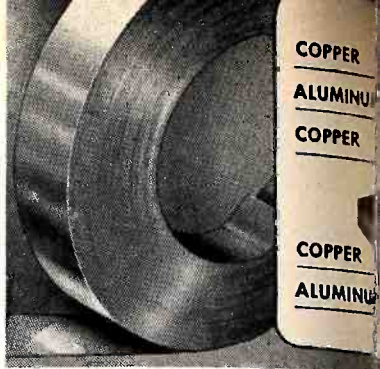
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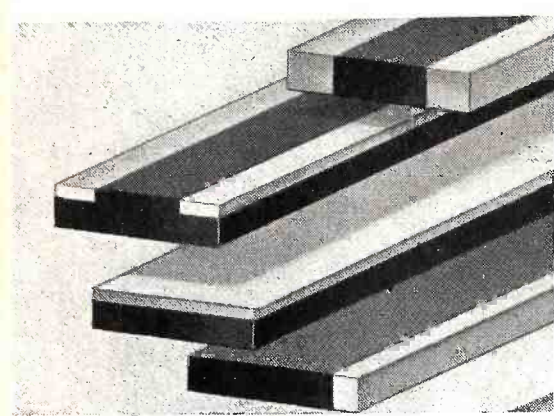
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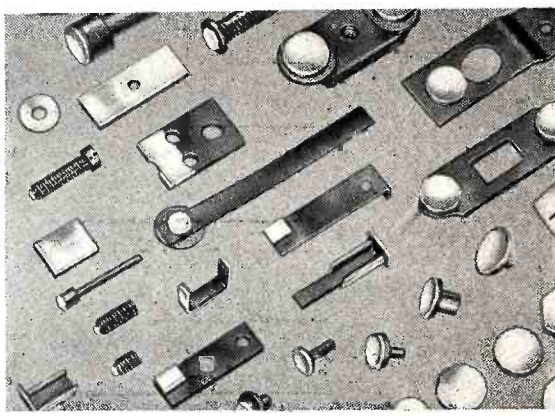
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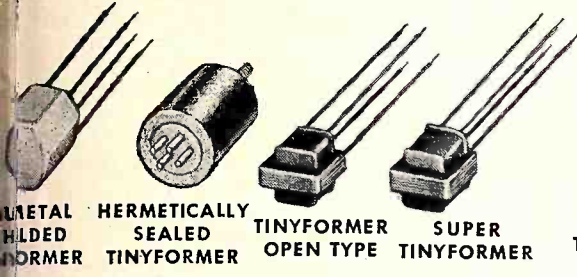
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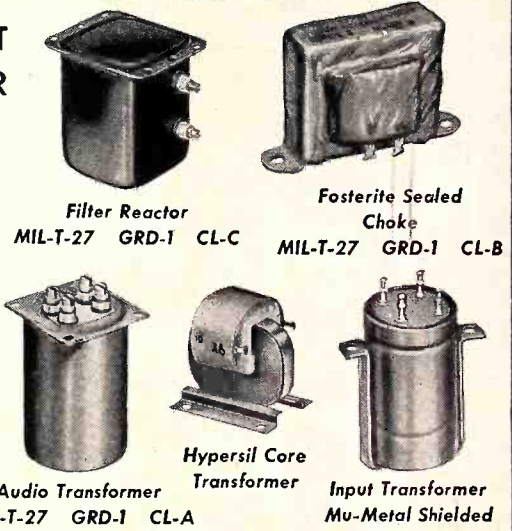
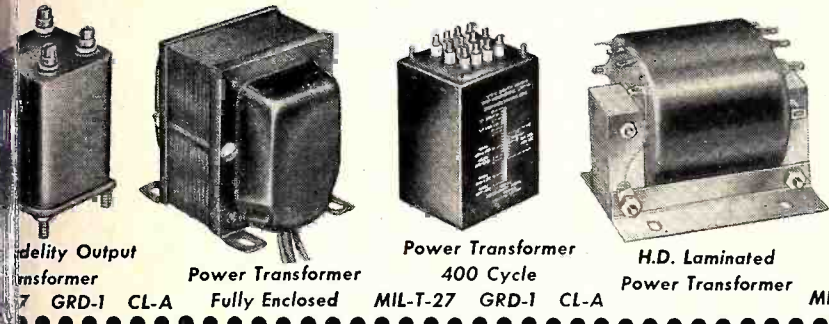
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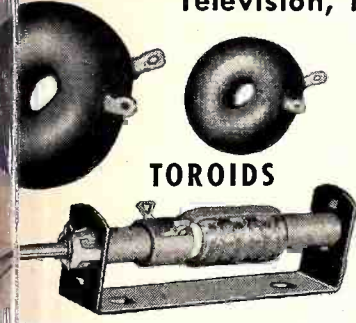
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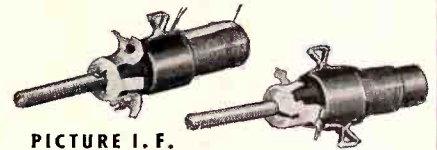


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| CHH | 1/4 | 10 to | 1.0 | 300 | { RN-15 RN-20 | 0.531 | 0.188 |
| CVF | 1/2 | 10 to | 3.0 | 350 | | 0.547 | 0.172 |
| CHF | 1/2 | 10 to | 3.0 | 350 | | 0.656 | 0.266 |
| CVG | 1/2 | 10 to | 5.0 | 500 | | 0.688 | 0.234 |
| CHG | 1/2 | 10 to | 5.0 | 500 | | 0.750 | 0.328 |
| CVB | 1/2 | 10 to | 7.5 | 500 | | 0.797 | 0.172 |
| CHB | 1/2 | 10 to | 7.5 | 500 | | 0.906 | 0.265 |
| CVC | 1 | 10 to | 20.0 | 500 | RN-25 | 0.938 | 0.297 |
| CHC | 1 | 10 to | 20.0 | 500 | | 1.000 | 0.406 |
| CVD | 2 | 20 to | 100.0 | 1000 | RN-30 | 2.063 | 0.297 |
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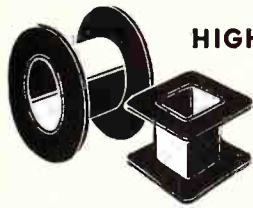


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We can produce, to order, a wide range of low-cost conductor and resistor networks, moisture and rain-detecting grids, commutators and switches capable of over 100 million revolutions, resistor and tuning networks on flat or tubular bases for TV and radio circuits, etc.

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100 WR..... 1.10
 100 WR..... 2 watts
 100 WR..... 1KW

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ATTENUATORS:

100 WR..... 1.10
 100 WR..... 1 watt
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ATTENUATORS:

100 WR..... 30 db
 100 WR..... 1.25
 100 WR..... 20 db..... 1.15

\$40

ATTENUATORS:

100 WR..... mechanism
 100 WR..... 30 db
 100 WR..... 1.25

\$40

ATTENUATORS:

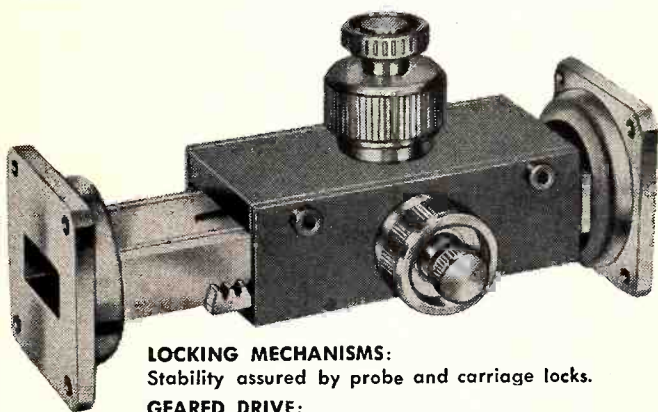
100 WR..... 30 db
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Fine tuning facilitated by rack and pinion drive.

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Double blowers for applications requiring 100 CFM of air. Powered by Type D shaded pole induction motor. Requires infrequent oiling. Non-radio interfering. For 115 volts, AC, 60 cycles, 35 watts, 3150 RPM (free air). Other voltages and frequencies on request.

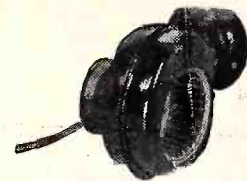
TYPE DS

Single blower, with all the advantages of Type DD, but approximately half the air delivery, 115 volts, AC, 60 cycles. For CW and CCW operation, 35 watts, 3100 RPM (free air). Other voltages and frequencies on request.



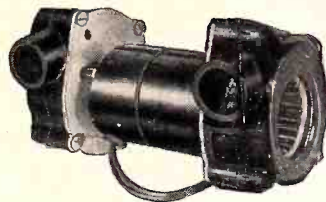
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Quiet, dependable units, delivering 100 CFM, 4 pole motor and large balanced air rotor. ZRD has absolute minimum of vibration, 115 volts, AC, 60 cycles, 1650 RPM (free air) 45 watts. Available for 230 volts or 50 cycle operation.



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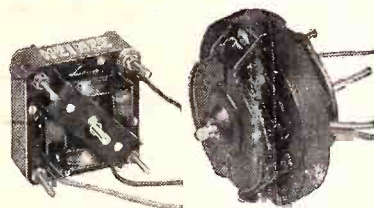
Most compact 50 CFM blowers available. Sturdy low speed Z shaped pole induction motor, 3% balanced air rotor, 115 volts, AC, 60 cycles, 1650 RPM (free air) 40 watts. Can be supplied for 230 volt operation. Various mountings.



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AM

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Practical design concepts based upon precision control of Faraday rotation at microwave frequencies.

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The UNILINE is a unidirectional transmission line element used widely in microwave test measurements to provide substantial isolation between source and load with negligible loss in transmitted power. It can also eliminate "long line" effects which are detrimental to the operation of traveling wave tubes or klystrons where antennas are located remotely. UNILINE also avoids "pulling" due to impedance variations produced by scanning antennas. Loss-type attenuators are being replaced by UNILINES in many exacting microwave test applications where load isolation must be achieved without loss of transmitted power. Operation is based upon "Faraday-effect" properties of ferrites at microwave frequencies. No external power supply is required.

Gyraline

Another Cascade Research ferrite device, the GYRALINE is essentially a continuously variable microwave attenuator controlled by an applied magnetic field. It may be used on the output of a CW operated klystron to provide an amplitude modulated microwave signal without danger of undesirable frequency modulation and doublemoding. GYRALINE provides an excellent level-set attenuator since the microwave output may be controlled by varying percent modulation of the audio driving voltage applied to the GYRALINE coil. AGC functions are also possible by application of suitable control voltages to the GYRALINE coil. An external audio driver (see D-92), or source of fixed DC potential is required.

| ITEM | MODEL NO. | FREQUENCY RANGE | PRICE | PHYSICAL DIMENSIONS |
|----------|-----------|------------------|--------|---------------------|
| UNILINE | 96-104B | 9600-10,400 Mcs. | 115.00 | |
| UNILINE | 88-96B | 8800-9600 Mcs. | 115.00 | |
| UNILINE | 69-74 | 6900-7400 Mcs. | 215.00 | |
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| UNILINE | 38-42 | 3800-4200 Mcs. | 225.00 | |
| GYRALINE | 1000 | 9600-11,200 Mcs. | 150.00 | |
| GYRALINE | 920 | 8500-9900 Mcs. | 150.00 | |
| GYRALINE | 720 | 6900-7400 Mcs. | 250.00 | |
| GYRALINE | 670 | 6400-6900 Mcs. | 250.00 | |
| GYRALINE | 620 | 5900-6400 Mcs. | 250.00 | |

A VIEW TO THE FUTURE

Most of the new equipment listed below will be available after June 1, 1954.

GYRALINE: 3800 to 4200 Mcs.

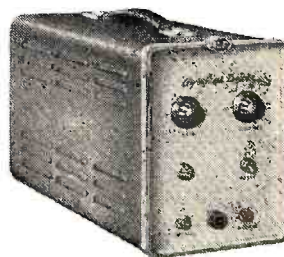
"S" BAND UNILINE AND GYRALINE: covering limited portions of "S" band.

"X" BAND POWER UNILINE (Covers limited portions of "X" Band): 125 watts in transmit-direction.

RUGGEDIZED "X" BAND UNILINE (Covers limited portion of "X" Band): Designed to withstand unusual shock and vibration.

LINEAR PHASE SHIFTERS: Covering same frequency ranges as Gyralines #620, #670, #720, #920 and #1000.

D-92 GYRALINE DRIVER



A flexible and convenient source of audio power for operating Models 920 and 1000 Gyralines. Circuit consists of an audio oscillator having a frequency range of 800 to 1200 cps. This oscillator drives an 8 watt resistance coupled amplifier with output impedance to match Gyraline input. Frequency response is essentially flat to 3000 cps. This unit drives the Gyraline to greater than 90% modulation. Price \$240.00.

Drivers for other Gyraline models are presently under development.

Write for descriptive literature



CASCADE RESEARCH
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LINK

AVIATION

Hi-Precision

SERVO COMPONENTS

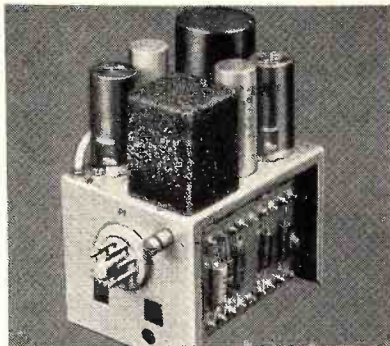
Link Aviation comes a new kind of flexibility for servo design and manufacture. Tested and proved in production electronic equipment, Link Hi-Precision Servo Components can be used interchangeably in laboratory prototypes and actual production models. This new technique assures improved performance during research — reduces costs in production design — saves time in tooling-up in the fast-changing electronics field.

Write Department EBI for full specifications on the typical servo parts shown here — or for the *complete* Link Servo Components Catalog.

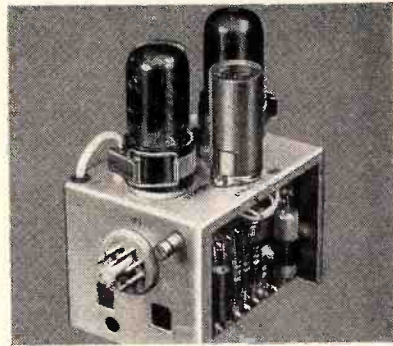
precision base and upright plates designed to eliminate alignment problems — yet permit full design flexibility for mounting electronic and mechanical parts in a single compact unit.

precision gear boxes with gear ratio from 20:1 to 3125:1 — constructed virtually friction-free construction — low inertia — and high torque. Gear boxes in all ratios are practically backlash-proof.

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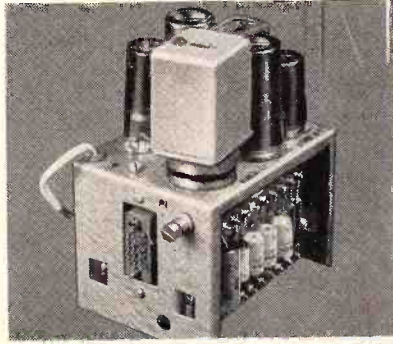
Linear Phase Detectors
Model 302, illustrated, produces a D.C. voltage at its output proportional in magnitude to an A.C. 60 cycle voltage at the input with polarity proportional to the phase at the input.



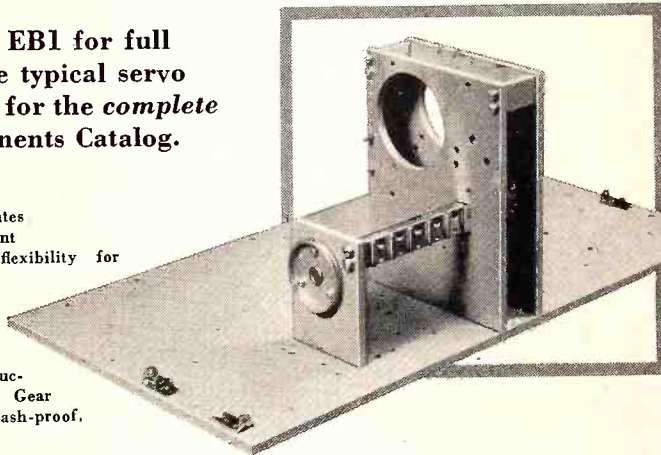
Servo Amplifiers
Model 300, illustrated, provides a versatile high gain, low phase shift for use at 60 and 400 cycles. The amplifier can be coupled directly to plate servo motors or matched to a specific motor.



Summing Amplifiers
Model 301, illustrated, performs the functions of isolation with low output impedance, as a phase inverter — in conjunction with a network in the grid circuit, as a summing amplifier.



Phase Detectors
Model 303, illustrated, compares a 60 cycle voltage input of reversible phase with a reference voltage of fixed phase. Ultra sensitive. Model 303 requires only a minimum differential to energize or de-energize a relay.



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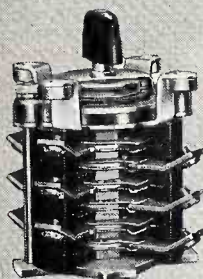
A subsidiary of General Precision Equipment Corporation

ROTARY SWITCHES

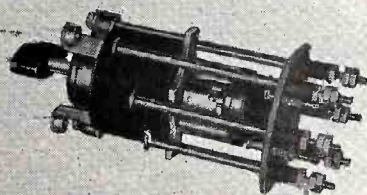
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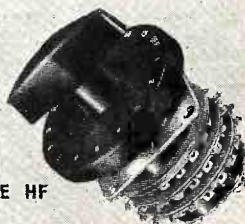
TYPE JR



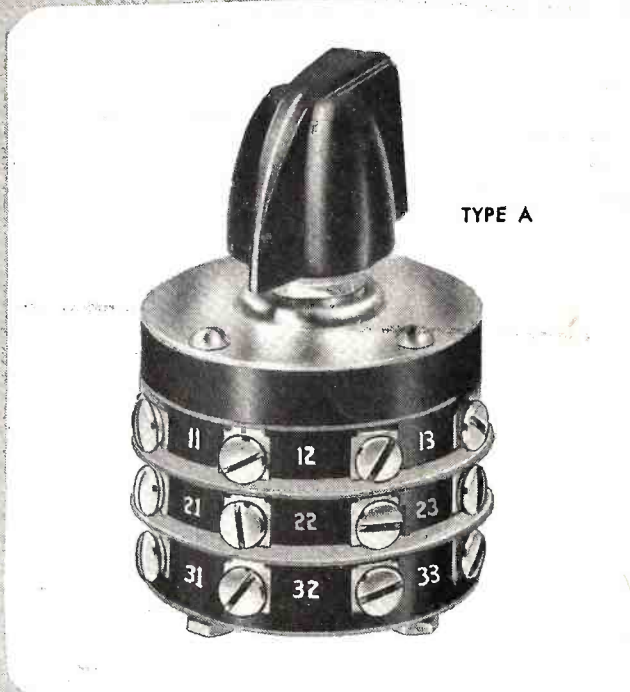
TYPE P, 30A



TANDEM TYPE P, 30-10A



TYPE HF



TYPE A

- Save valuable panel space
- Simplify control of complex circuits
- Give "dead-front" mounting safety
- Listed by Underwriters Labs, Inc.
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CALIDYNE

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For Tests To Air Force, JAN, MIL and Other Specifications
(environmental tests and improved product performance)

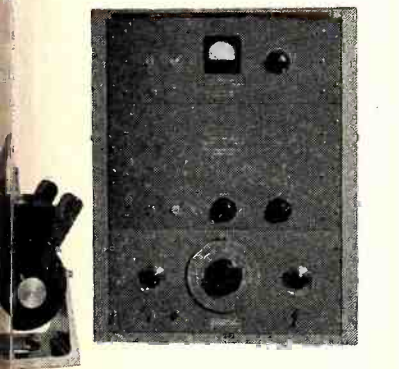
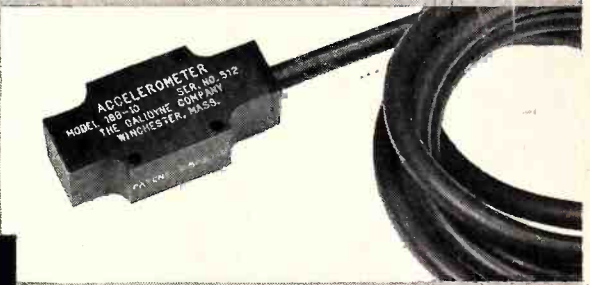
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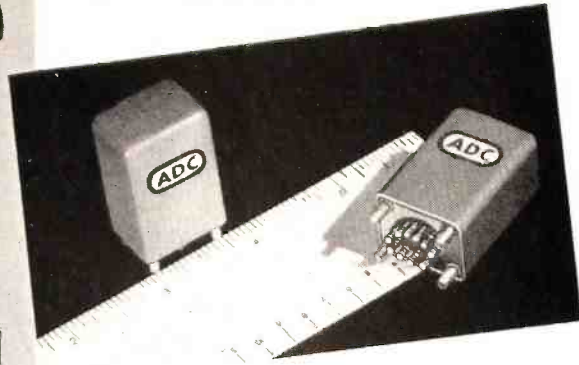
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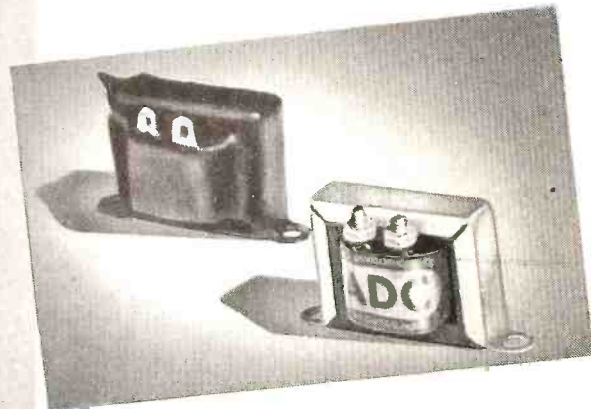
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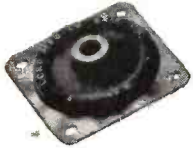


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—Standard—for steady vibration and severe shock. Have great radial stability. Loads from $\frac{1}{2}$ to several thousand pounds.



Tube Form Vertical Snubbing Mounting
—isolate steady vibration . . . cushion shock. Used for mobile equipment.



F.H.P. Flexible Mountings—have exceptional torsional flexibility to accommodate parallel angular misalignment. Ratings from 1 ft-lb to 1 hp.



Radiofocal Mounting Bases—Maximum Protection for Airborne Equipment

- Insure protection on steep inclinations.
- Dampers prevent excessive motion.
- Equipment does not sag or droop.
- Made to fit JAN-C-172A cases,

CAPACITORS



FILTERS

PULSE CAPACITORS

25 to 100 KV 50 Megawatts

Designed for extremely low temperature rise when used in pulse-forming networks above 25,000 volts. Can pass 2500 amperes at 0.0005 duty cycle.

| Catalog No. | Mfd. | Peak KV | Body dimensions (inches) |
|-------------|--------|---------|--------------------------|
| GPC-601672 | 0.0167 | 60 | 8x8x24 3/4 H. |
| KPC-401252 | 0.0125 | 40 | 5x6x24 H. |
| APC-401672 | 0.0167 | 40 | 5x6x24 H. |
| RPC-402509 | 0.0250 | 40 | 6x7x24 3/8 H. |
| APC-357501 | 0.0075 | 35 | 5x7x8 3/8 H. |



PULSE-FORMING NETWORKS

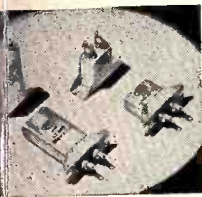
Any pulse width from 0.1 to 40 microseconds. Any impedance from 5 to 500 ohms. Any voltage rating from 1000 to 25,000 volts. Write for data sheet.



MIL-C-25A CAPACITORS

CP04 • CP05 • CP08 • CP09
CP10 • CP11 • CP53 • CP54
CP55 • CP61 • CP63 • CP65
CP67 • CP69 • CP70

Metal-cased, hermetically sealed capacitors, non-inductively wound of aluminum foil and finest kraft tissue; impregnated and filled with pure mineral oil, Tempall (askarel), or polyester resin. Write for catalog #5403 containing complete list of capacitances, voltage ratings, dimensions, and mounting styles.



OTHER TOBE PRODUCTS

Energy-storage capacitors • Metallized-paper capacitors • MIL-C-91 capacitors • Molded tubular capacitors (85°C and 125°C) • Toroidal coils • Power capacitors • Delay lines • "Durator" metal-cased capacitors for 125°C service.

RADIO INTERFERENCE FILTERS

We manufacture radio interference filters in all sizes, ratings, and styles. A few popular items are listed below; or special requirements, utilize Tobe's unequalled experience and facilities in the field in which, as early as 1929, this company was known as "the pioneer and recognized authority"

SUB-MINIATURE WIDE-RANGE

Filterette No. 1561-A . . . weighs only one ounce; in case only 1 1/8 x 1 x 11/16 inch; handles 3 amperes at 0.400 cps; provides better than 40 db attenuation from 0.150 to 400 megacycles.



MINIATURE • 20-AMPERE

Filterette No. 1547 . . . gives better than 86 db attenuation through most of the 0.150 to 1000 megacycle range; hermetically sealed in case 2 x 2 x 1 3/16 inches; operates at 500 volts d-c or 130 volts a-c to 1700 cps; meets military specifications for use from -55 to +105C.



MINIATURE • 5-AMPERE

Filterette No. 1558 . . . specially designed for aircraft service; hermetically sealed case only 1 1/4 x 1 1/8 x 1 3/4 inches; attenuation above 86 db from 0.6 to 30 megacycles; operates at 130 volts, 0-1000 cps; designed for bulkhead mounting.



FEED-THRU SUPPRESSION CAPACITORS

Using the efficient feed-thru construction originated by Tobe to provide high attenuation over a broad band, these are the simplest of all effective radio interference filters. Available ratings: 10 to 250 amperes, 125 volts a-c to 4000 volts d-c. Write for catalog.



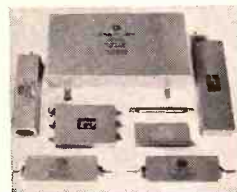
FILTER PACKS

Multi-circuit filter packs combine, in a single, compact housing, all the elements needed to suppress radio interference in many separate circuits. Designed and built to your circuit requirements, Tobe Filter Packs provide better miniaturization than individual filters, and reduce the space to be pressurized, with no sacrifice in filter performance. Call on us for recommendations in your early design stages — where we can do the most to help you.



SCREEN-BOOTH FILTERS

Used throughout industry to keep radio interference out of shielded areas. Handle high current with negligible voltage drop. Designed for easy installation in conformity with correct electric wiring practices.



| Cat. No. | Amps. | V.d.c. | V.a.c. | H. | W. | L. |
|----------|-------|--------|--------|----------|---------|----------|
| 1137AC* | 25 | 600 | 220 | 2-9/16 | 4-3/4 | 15-7/16 |
| 1739* | 30 | 1000 | 500 | 2-5/16 | 3-1/16 | 13-11/16 |
| 1650-1 | 50 | 600 | 250 | 3-11/16 | 3-5/8 | 14-1/2 |
| 1180-3 | 100 | 1000 | 500 | 3-11/16 | 3-5/8 | 12-5/8 |
| 1756 | 250 | 1000 | 500 | 1" diam. | x 7-1/4 | |

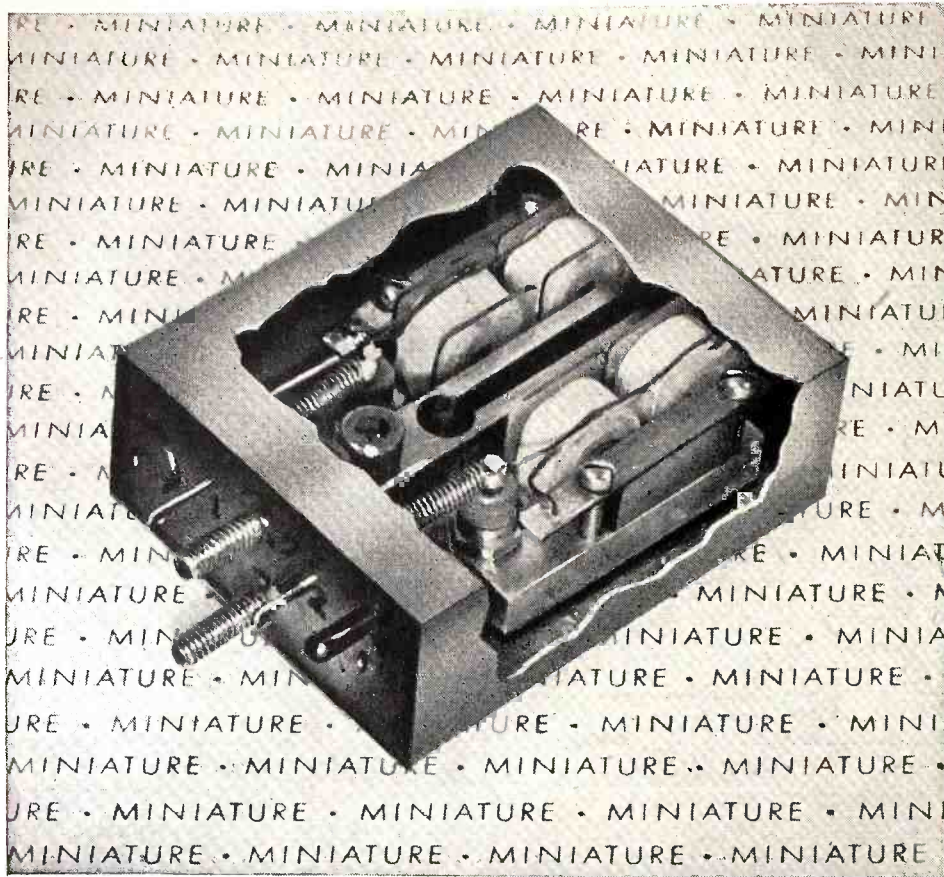
*2-circuit

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1 part in 10,000 (.01%) or 1 part in 2,000 (.05%),
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From 400 to 2,000 cycles in either accuracy rating.

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Thermally compensated, solder-sealed and evacuated, completely interchangeable, internally mounted using shock retarding silicone rubber, externally designed for fastening to chassis through silicone rubber grommets thus providing excellent vibration and shock isolation.

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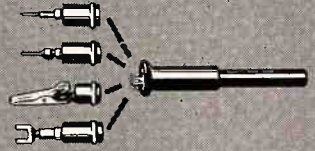
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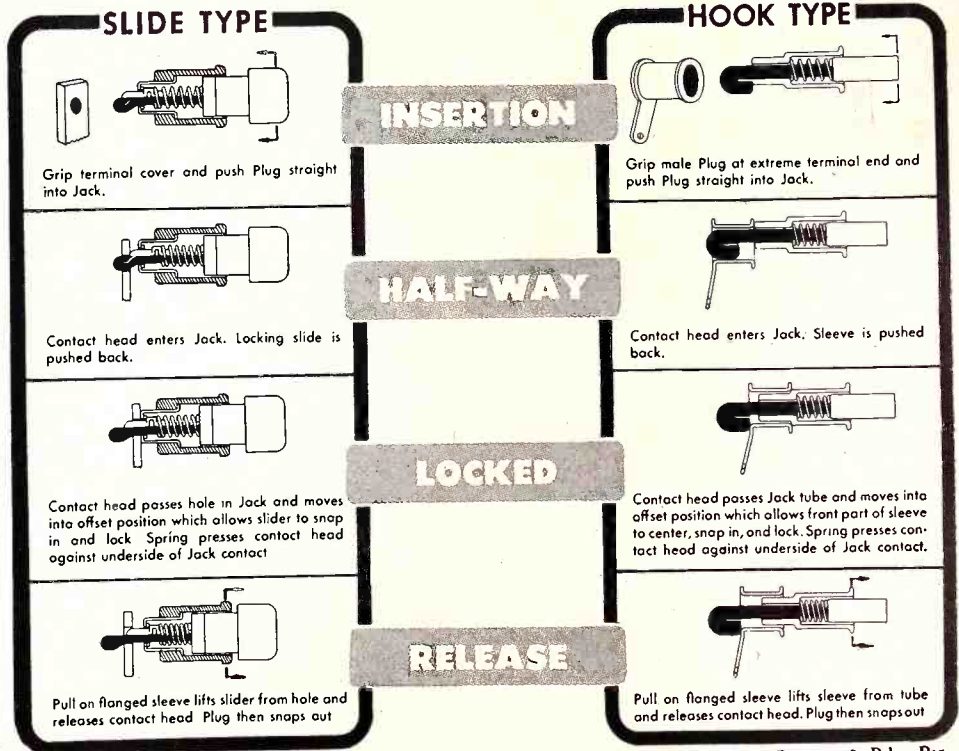


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Here's an exclusive, new concept in electrical connector design. Hubbell Interlock's line features an Automatic Locking — Quick Disconnect action for fast, easy wiring and wiring maintenance. The Interlock plug locks automatically when plugged in, stays locked in use, yet can be quickly disconnected when desired. This locked, vibration proof connection has con-

stant low contact resistance and actually makes contact on two separate surfaces, which are under constant coil spring pressure. Above, are illustrated the versatile line of Interlock Connectors, including the newly developed Type "C" Sub-Miniature Connector that has proved ideally adaptable to the "printed" circuit.

Locking and Contact Action

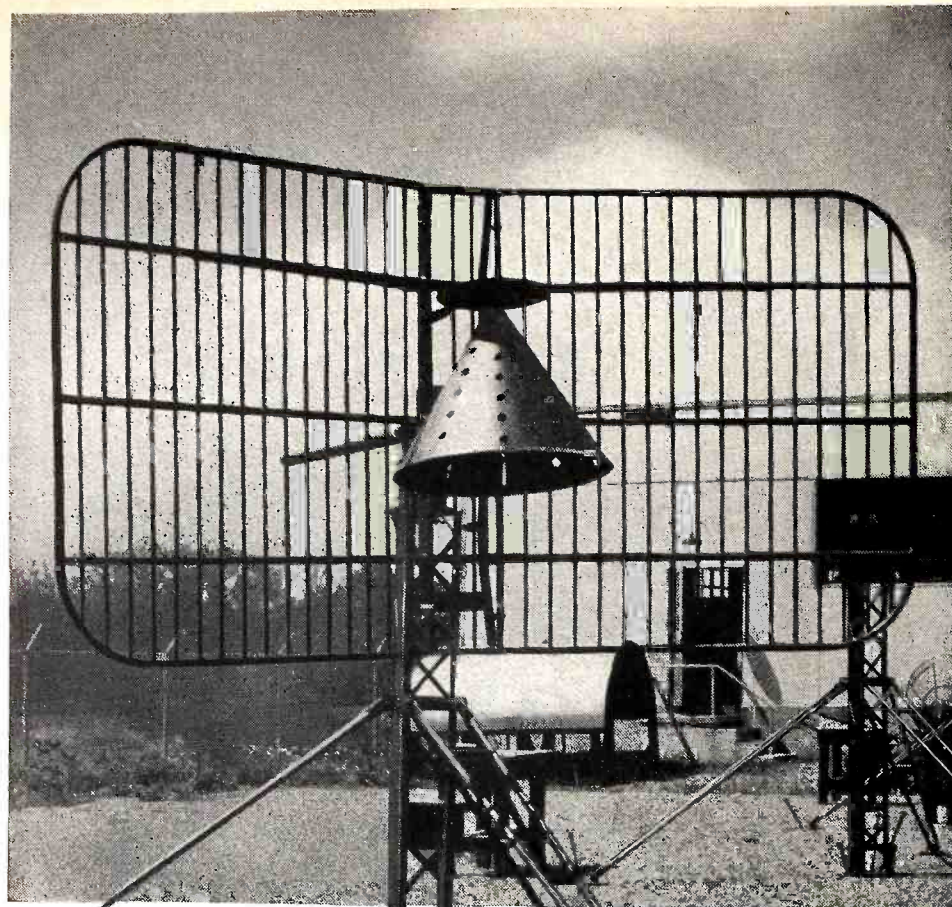


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Interlock Dept., Bridgeport 2, Conn.



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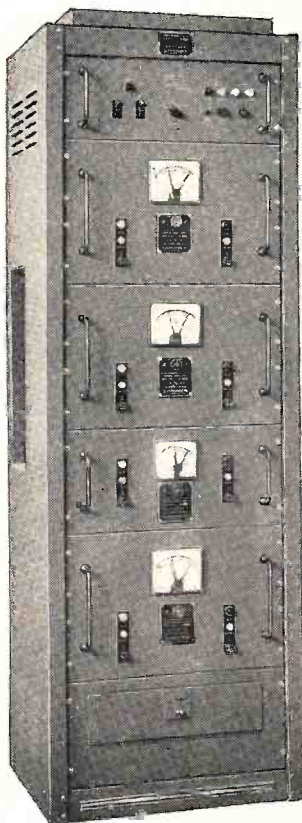
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IMPROVED CIRCUITRY: Temperature compensated balanced bridge d-c amplifiers, pentode connected series tubes, helipot voltage control on wide range units, 5651 voltage reference source, optional fail-safe protective system which cuts off supply or entire equipment.

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METERS: Weston rectangular instruments are available on all models.

CUSTOM FABRICATION: We will manufacture single units or systems to your specifications.



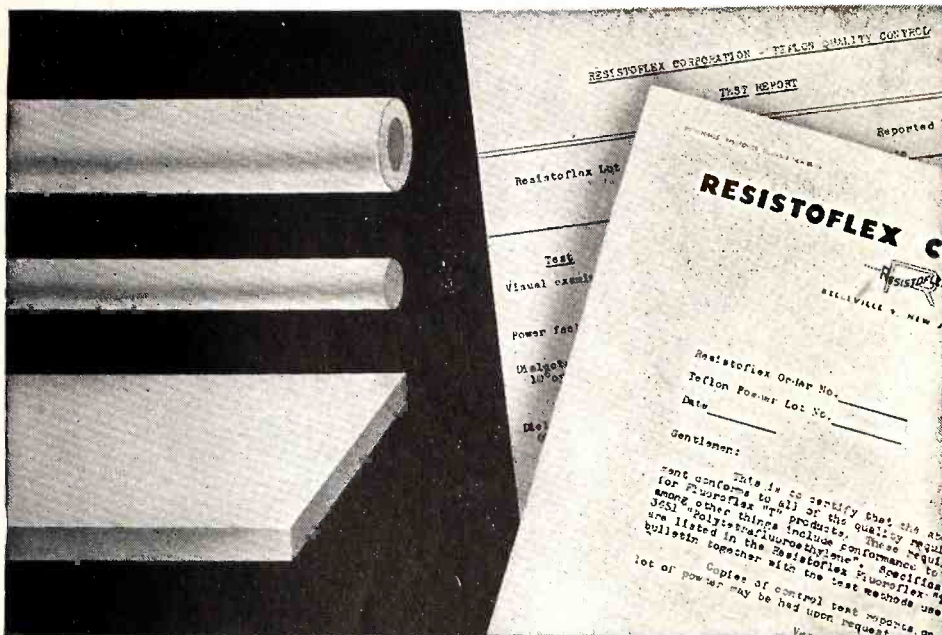
Computer Power Supply System Built for Bell Telephone Laboratories

Write for catalog B-E for list of available standard units.

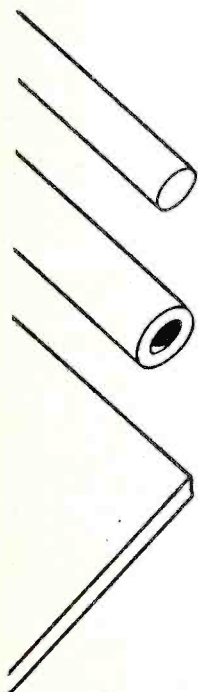
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TERMALINE-THRULINE Coaxial Line Instruments

MODEL 612

TERMALINE Direct-Reading RF Wattmeters 30 mc-500 mc; 50 ohms; 1/2 W-5 KW — Load Type
THRULINE Direct Reading RF Wattmeters 25-1000 mc; 10-500 watts — "Thru" Type

TERMALINE Wattmeters

The TERMALINE wattmeter is a direct-reading, absorption type instrument for simple, fast and accurate power measurement of transmitters operating between 30 mc and 500 mc. With the TERMALINE coaxial load resistor built into the input connector of the wattmeter feeds a dc meter which is calibrated directly in RF watts. Accuracy of 5% of full scale or better is assured. Model 611 is the commercial version of the Army-Navy ME-11/U RF wattmeter, widely used by all government services. Most transmitter manufacturers use the TERMALINE wattmeter for production and field test work and recommend it to maintain performance.

Frequency Range.. 30 to 500 mc. (See Table)
 Power Range..... 1/2 watt to 5000 watts
 Impedance 50 ohms
 Accuracy 5% of full scale. VSWR less than 1.1

| Model | Freq. Range | Max. Power | Ranges Scales | Input Connector |
|-------|-------------|-----------------------|------------------------------|--|
| 611 | 30-500 mc | 60 W | 2 { 0-15 0-60 | Female N. Takes UG-21/U plug |
| 612 | 30-500 mc | 80 W | 2 { 0-20 0-80 | Female N. Takes UG-21/U plug |
| 67 | 30-500 mc | 500 W | 3 { 0-25 0-100 0-500 | Coplanar. Adapter to UG-21/U supplied. Available accessories: RG-17 and RG-19 Cable assemblies, adapters to rigid lines. |
| 67C | 30-500 mc | 2500 W (Water cooled) | 3 { 0-100 0-500 0-2500 | |
| 824 | 30-220 mc | 5000 W (Water cooled) | 1 0-5000W | |

Special scale Model 61 for low powers such as 0-1, 0-5 watts also available.

TERMALINE-Coaxial Terminations

The Termaline coaxial load resistor is designed to have a constant 50 ohm impedance over a wide frequency range. Its unique design puts reactance to work and produces an almost purely resistive load, with little or no sensitivity to frequency change. The active power dissipating portion is the outer surface of a cylindrical film-type resistor, which forms the center conductor of a special self-terminated coaxial structure.

It is as a dummy load for high frequency transmitters. Radiating, adjustment of transmitters can be made without FCC rules. Thousands are now being used in military. It is incorporated as standby in many commercial and as a test load.

50 ohms 5w.-2500w.

| Model | Max. Power | Useful Freq. Range | Max. VSWR | Input Connector |
|-------|------------|--------------------|-----------|--|
| 80-F | 5 W | 0-4 KMC | 1.2 | Type N Female |
| 80-M | 5 W | 0-4 KMC | 1.2 | Type N Male |
| 80A | 20 W | 0-500 MC | 1.1 | Type N Female |
| 81 | 50 W | 0-4 KMC | 1.2 | Type N Female |
| 81B | 80 W | 0-4 KMC | 1.2 | Type N Female |
| 82 | 500 W* | 0-3 KMC | 1.2 | Coplanar. Adapter to UG-21/U supplied. Available accessories: RG-17 and RG-19 Cable assemblies, adapters to rigid lines. |
| 82A | 500 W | 0-3 KMC | 1.2 | |
| 82C | 2500 W** | 0-3 KMC | 1.2 | |

* At max rating fan necessary

** Water cooled

CH—Coaxial Selector Switch

View Model 74

MODEL 74
Single Coaxial Circuit
Six Positions

MODEL 718
Single Coaxial Circuit
Eight Positions

MODEL 72R MODEL 72-2
Two Two
Coaxial Circuits Coaxial Circuits
Reversing Switch Two Positions
(DPDT, etc.) (DPDT, etc.)

50 ohm switch for use in coaxial circuits. Characteristic is maintained through all switch details and low standing result. In V.S.W.R., switch is comparable and as good as tor and cable with which it is used.

Female connectors are standard on all models to receive series plugs. Adaptors may be used to enable switch to other cable and connectors.



Model 43 Thruline DIRECTIONAL WATTMETER

Reads Directly ...
 → WATTS FORWARD
 ← WATTS REFLECTED
 ...In 50 Ohm Coaxial Lines

The Thruline Wattmeter is a direct reading wattmeter designed for insertion between transmitter and antenna or load resistor. It provides a simple, accurate means for measuring power into the load or power reflected by this load. Full scale power range and frequency range are determined by the selection of plug-in elements as shown in the table.

| FREQUENCY RANGE, MEGACYCLES | | | | |
|-----------------------------|-----------|------------|------------|-------------|
| 25-60 mc | 50-125 mc | 100-250 mc | 200-500 mc | 400-1000 mc |
| 10 W | 10 W | 10 W | 10 W | 10 W |
| 25 W | 25 W | 25 W | 25 W | 25 W |
| 50 W | 50 W | 50 W | 50 W | 50 W |
| 100 W | 100 W | 100 W | 100 W | 100 W |
| 500 W | 500 W | 500 W | 250 W | |

Note: ELEMENTS must be specified for both power and frequency range.

Thus: Element, 100 watt, 100-250 mc, is correct ordering information.

The entire instrument is housed in a rugged cast aluminum case equipped with sockets for extra elements and with a carrying strap.

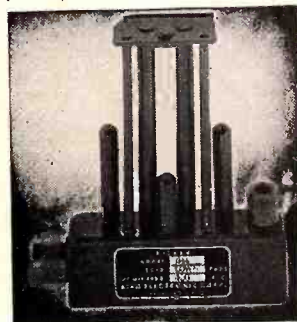
Available with female "N", male "N" or female UHF (So239) connectors.

S RF FILTERS

Suppression of low order harmonics in VHF and UHF transmitters may be handled thru these filters. Insertion loss and VSWR are very

low thru pass band. Rugged construction thruout assures reliability. All are of 50 ohms impedance and are reversible with equal results. Attenuation in pass band is less than 1/2 db and in stop band 40 db or better is realized.

| PASS BAND | STOP BAND | MAX. POWER | VSWR | CONNECTORS |
|-----------|--------------|------------|--------|--|
| 0-400 MC | 500-2000 MC | 150 W | 1.35 | One male and one female N |
| 0-1200 MC | 1900-4000 MC | 100 W | 2 to 1 | One male and one female N |
| 0-1200 MC | 1800-4000 MC | 3.5 KW | 2 to 1 | Coplanar. For use with Models 67 and 67C |



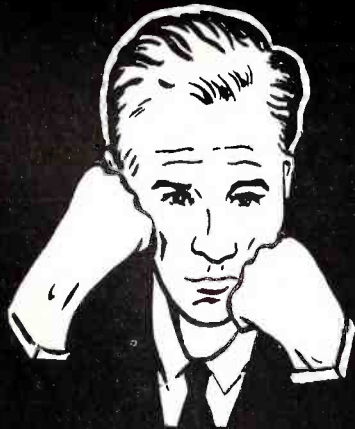
MODEL 522

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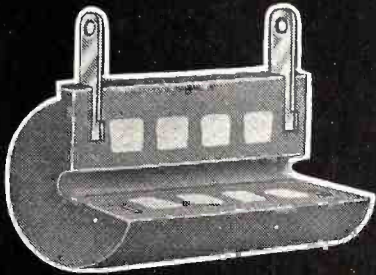
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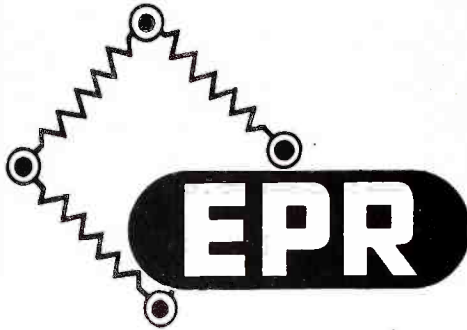
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When You Think of RESISTORS



N-CAPS

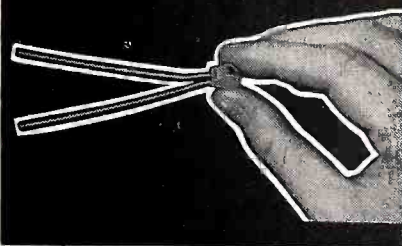
Encapsulated Wire Wound Resistors. N-Caps are precision wire wound resistors: encapsulated in a hermetically sealed plastic jacket. The encapsulating process is your assurance of utmost protection against the deteriorating effects of salt water and the destructive effects of mechanical shock. N-Caps provide maximum stability over longest periods. Sizes: MIL-R-93A RB15, 16, 17, 18, 19, RB52 Series and specials. Surpasses Spec. MIL-R-93A.

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Hi-Temperature Precision Wire Wound Resistors. EPR research does it again! EPR gives you the resistor that triumphs over the ravages of heat. Hi-Temperature resistors withstand continuous heat up to 200° C. They are completely encased in ceramic with axial lead mounting for easy connecting. Available with glass, silicone or teflon covered wire. Surpasses all MIL-R-93A Specs.

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Highly stabilized matched temperature co-efficient precision wire wound resistors. These types have been widely accepted because they meet general requirements, can be made with resistance values covering an extensive range and tolerances; and will withstand a considerable maximum load under severe operating conditions.

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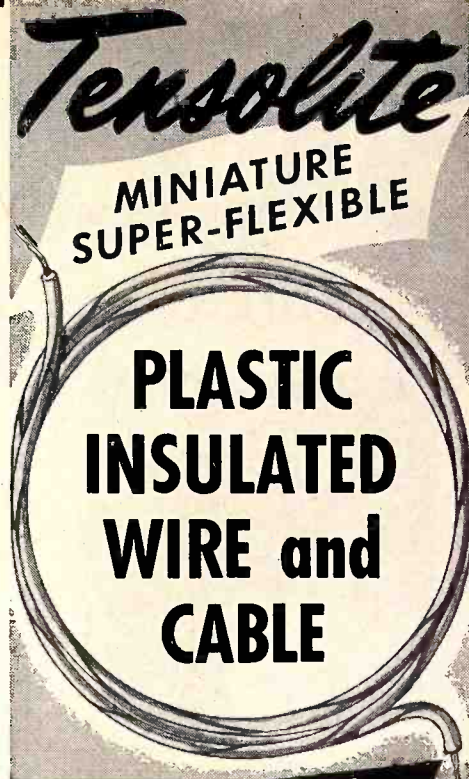
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Types LW, MW, and HW available in small wire sizes in all standard colors including spiral striping. Nylon jackets can also be supplied for greater resistance to abrasion.

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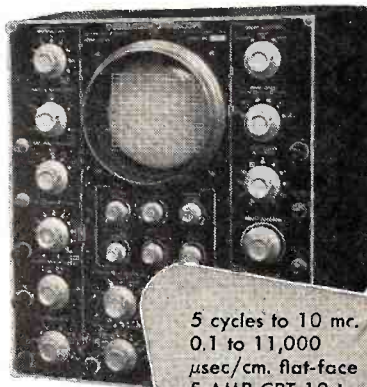
SCOPES

for laboratory and production uses



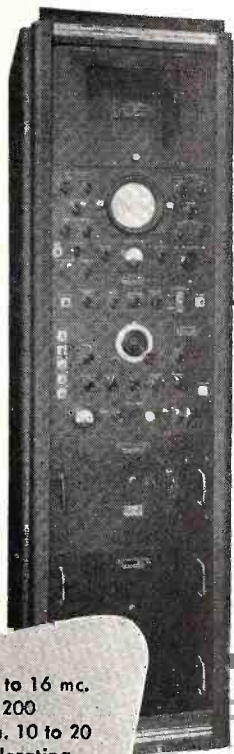
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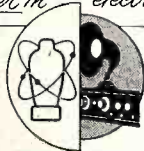
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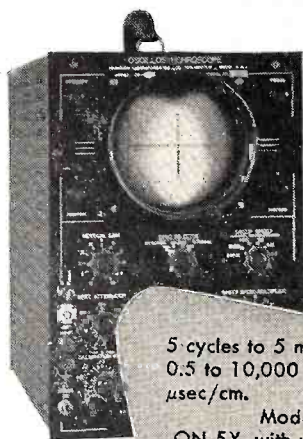
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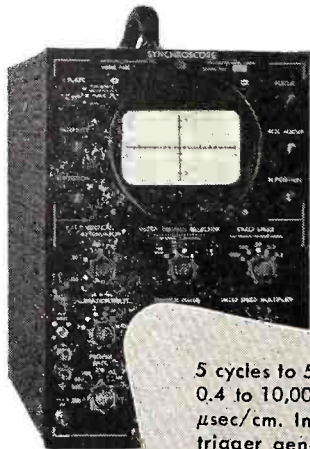


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| Duranickel ("Z" Nickel) | Almet 305 Almet 308 Almet 309 | | Alray C (62 Ni—15 Cr—Bal Fe) |
| Monel | Almet 310 Almet 314 Almet 316 Almet 317 | | Alray D (35 Ni—18 Cr—Bal Fe) |
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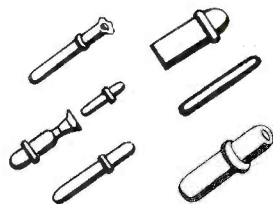
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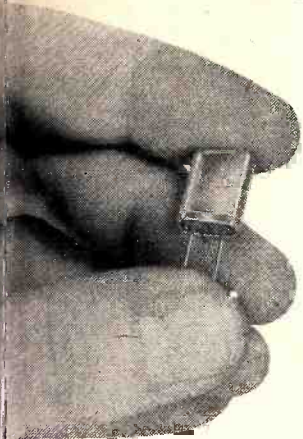
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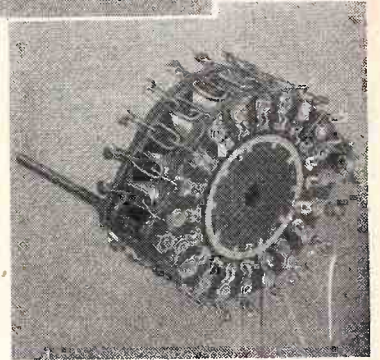
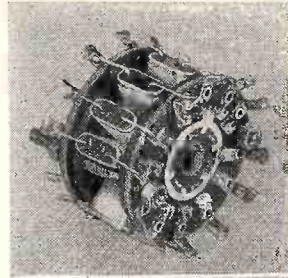
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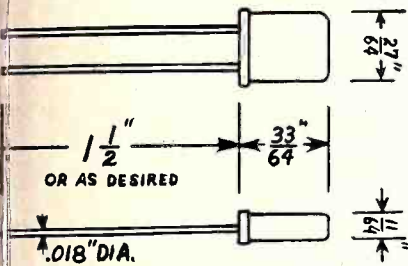


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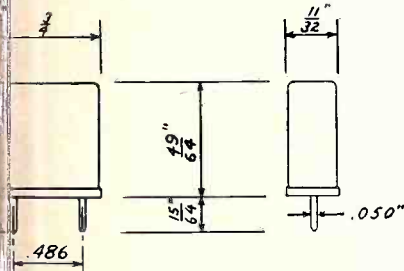


The switching assemblies shown here (2" diameter and 1 1/4" diameter) are illustrative of the space saving qualities of our M-20 "McMite" crystals.



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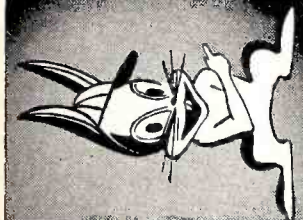
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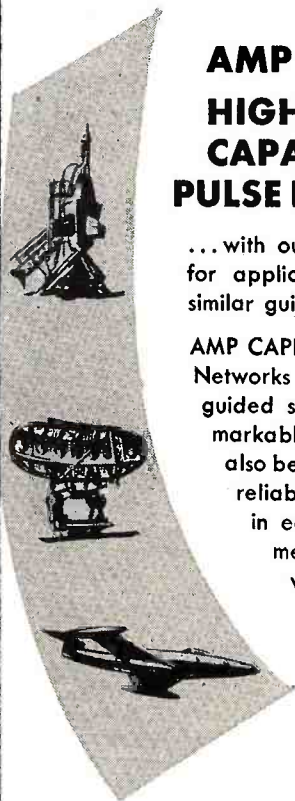
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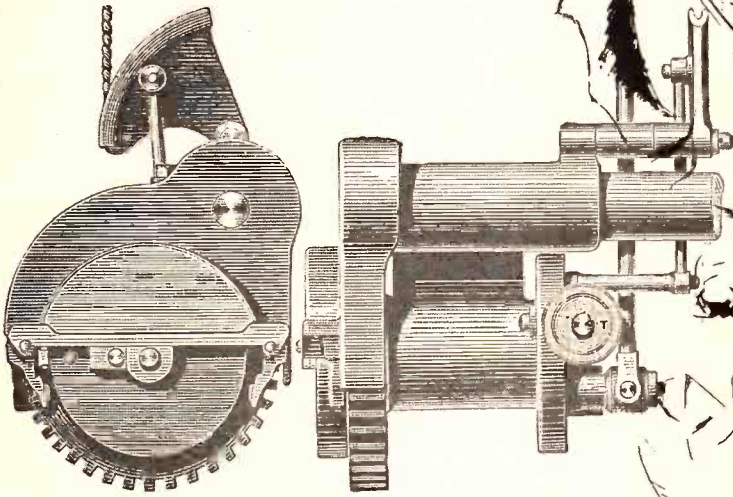
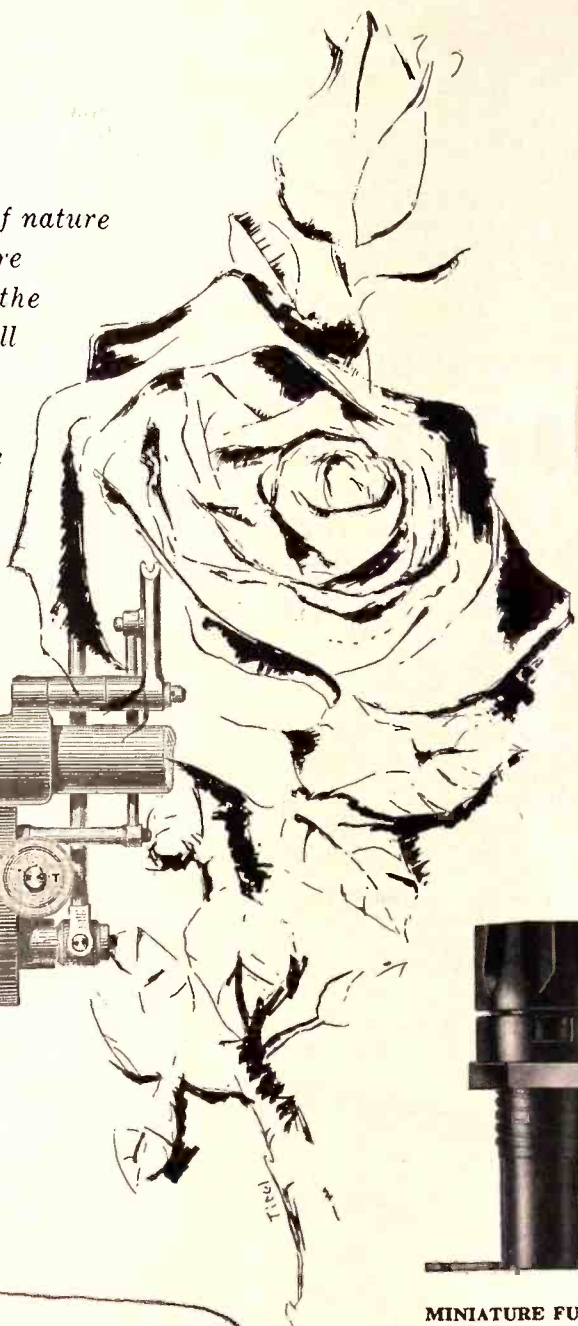
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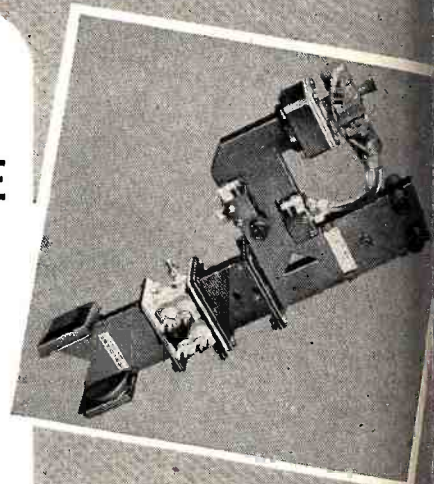
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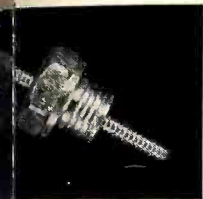
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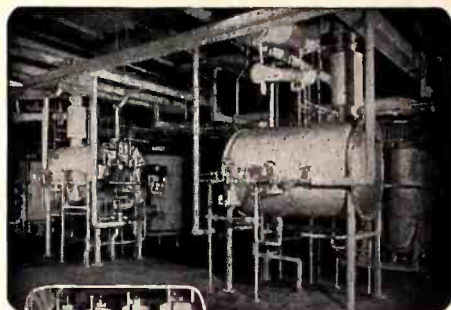
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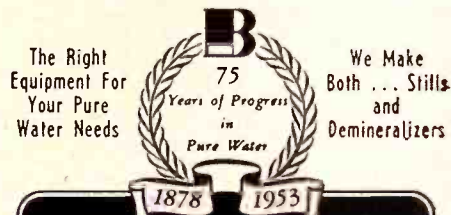
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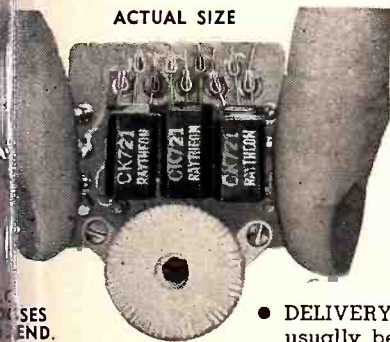
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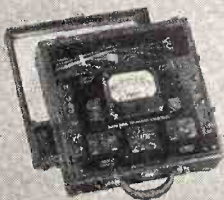
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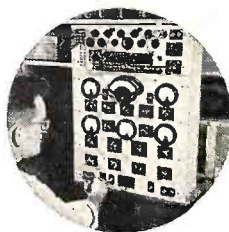
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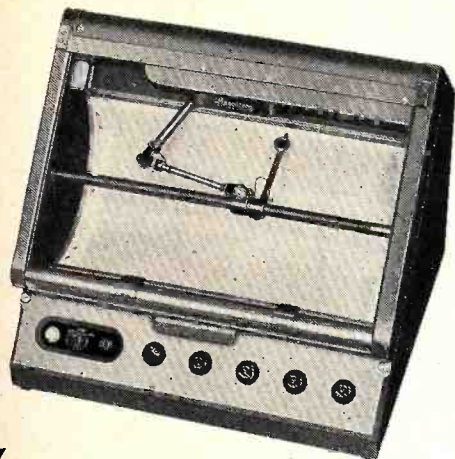


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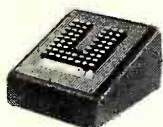


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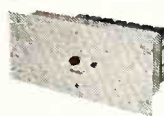
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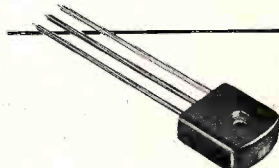
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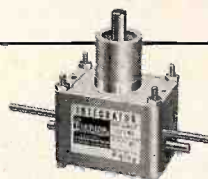
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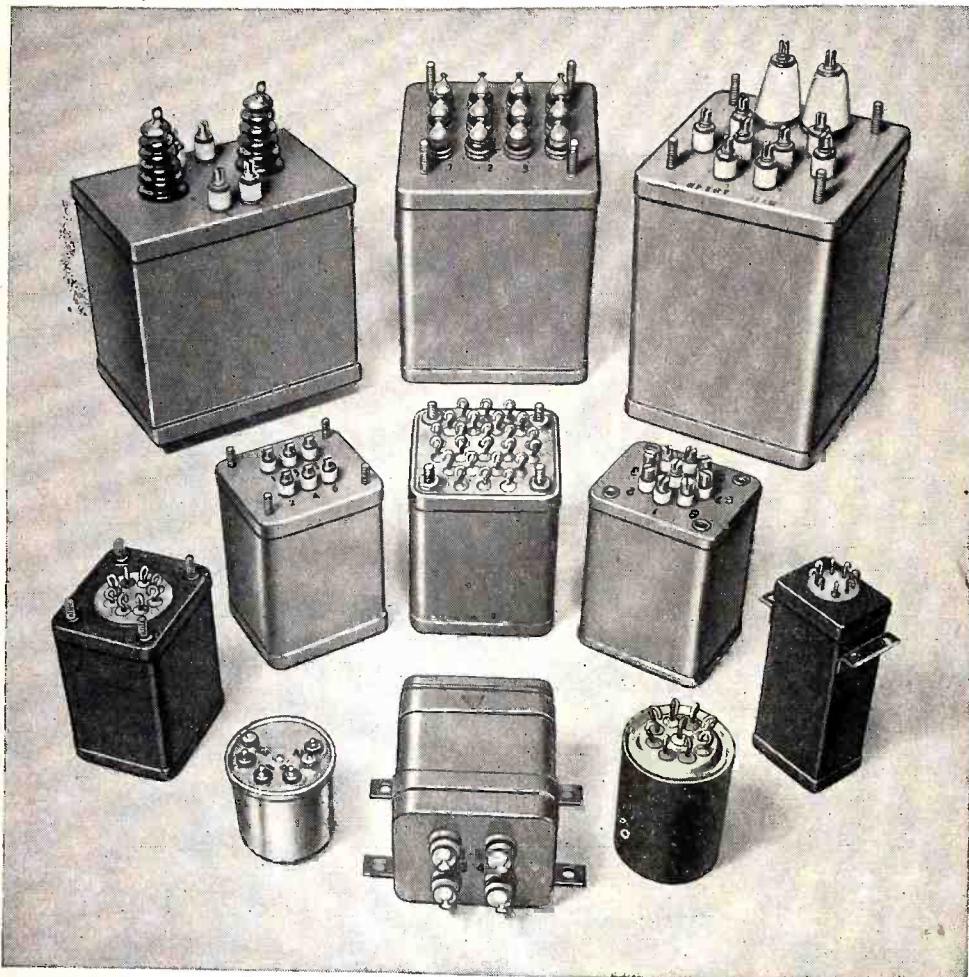
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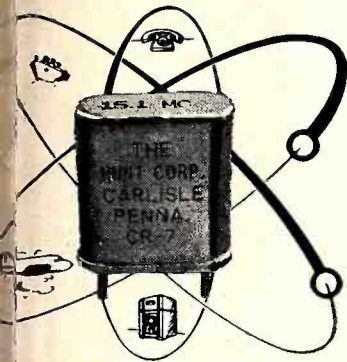
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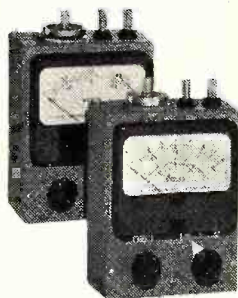
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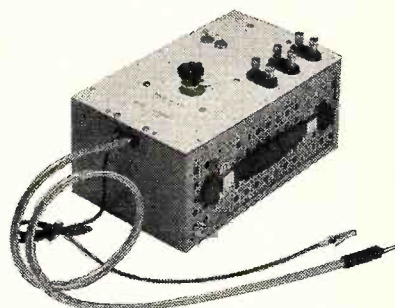
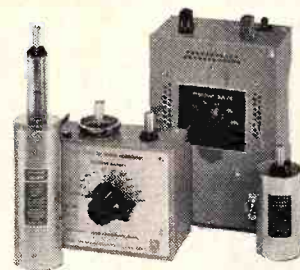
Keithley Instruments

Vacuum Tube Electrometer (Model 210) is a line-operated dc voltmeter, has ranges of 0.8, 2, 8, 20, and 80 volts, a 10^{14} ohm input, grid current within 10^{-13} ampere, accuracy within 2% of full scale, output amplifier with 0-5kc response and 10-volt output full scale on all ranges, output terminals for balanced or unbalanced recorders and amplifiers. Can be used with accessories below and as a preamplifier which has an ultra-high input impedance.



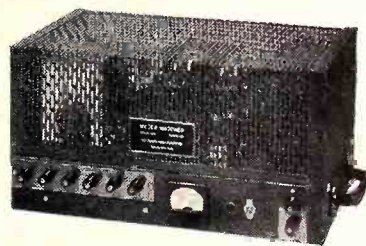
Vacuum Tube Electrometers (Models 200, 200A) are battery-operated dc voltmeters, have ranges of 2 and 20 or 2 and 8 volts, inputs of 10^{14} ohms, grid currents below 5×10^{-13} ampere, accuracy within 2% of full scale. Accessories described below permit use as polarity-sensitive kilovoltmeters, micromicroammeters of extreme range, and meg-megohmmeters.

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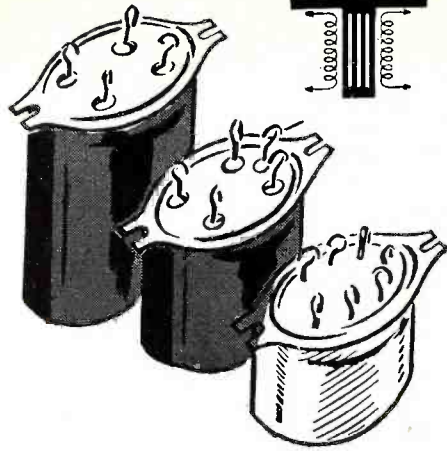


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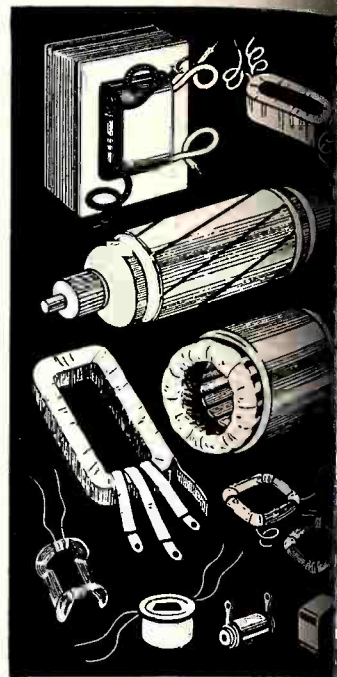
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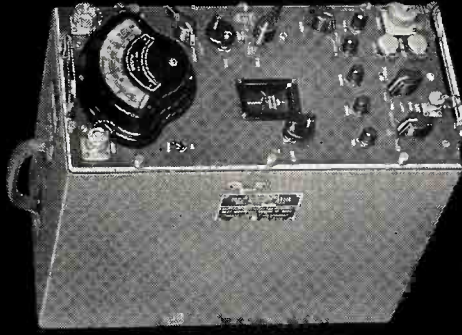


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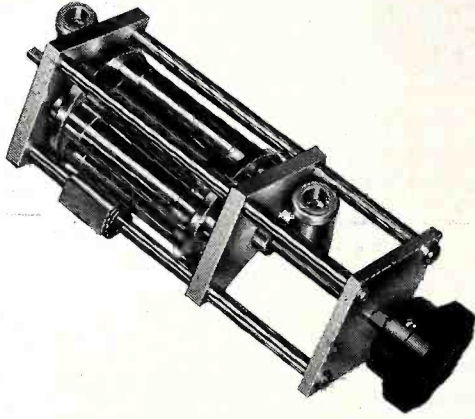
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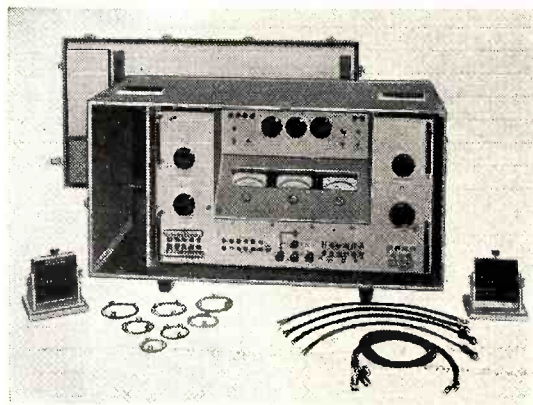
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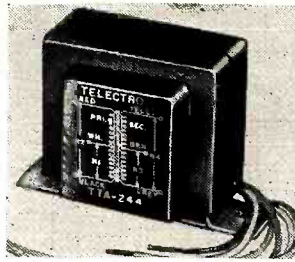
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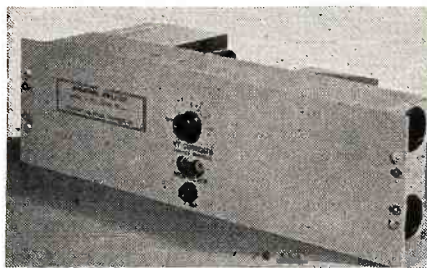
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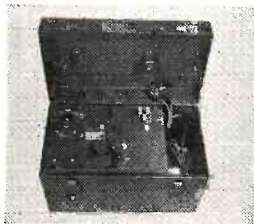
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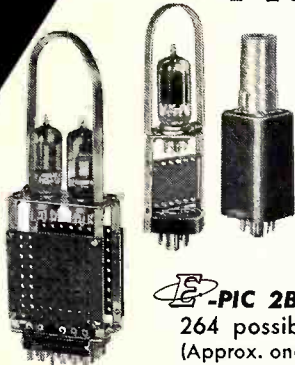
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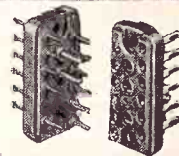
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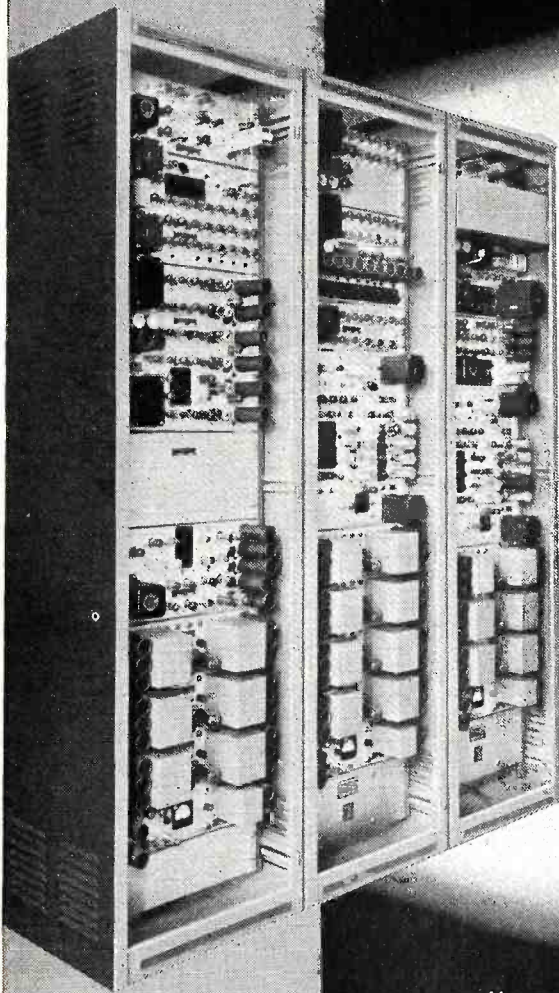
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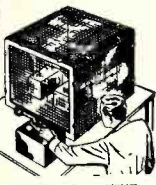
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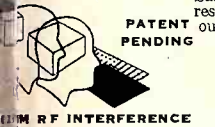
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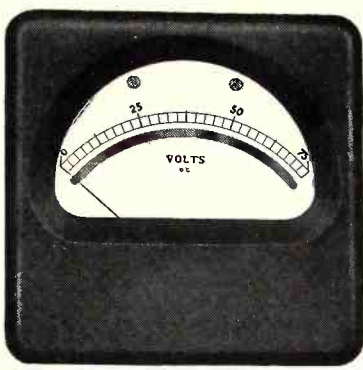
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 with Interchangeable Round or Square Bezels



1 1/2", 2 1/2", 3 1/2" and 4 1/2" sizes

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 (Built to JAN-I-6 & MIL-M-6A)
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For applications not subject to extreme shock, the Phaostron CUSTOM Meter incorporates the same basic movement as the famous Phaostron RUGGEDIZED Instruments with the exception of the shock mounts.

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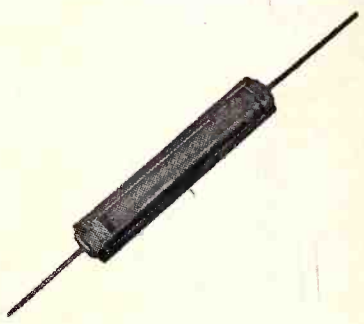
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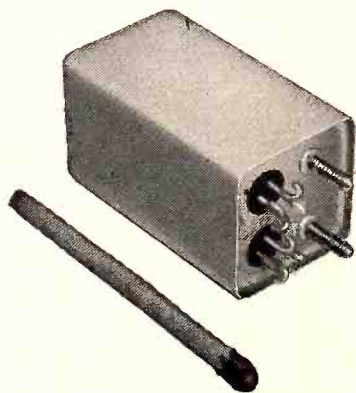
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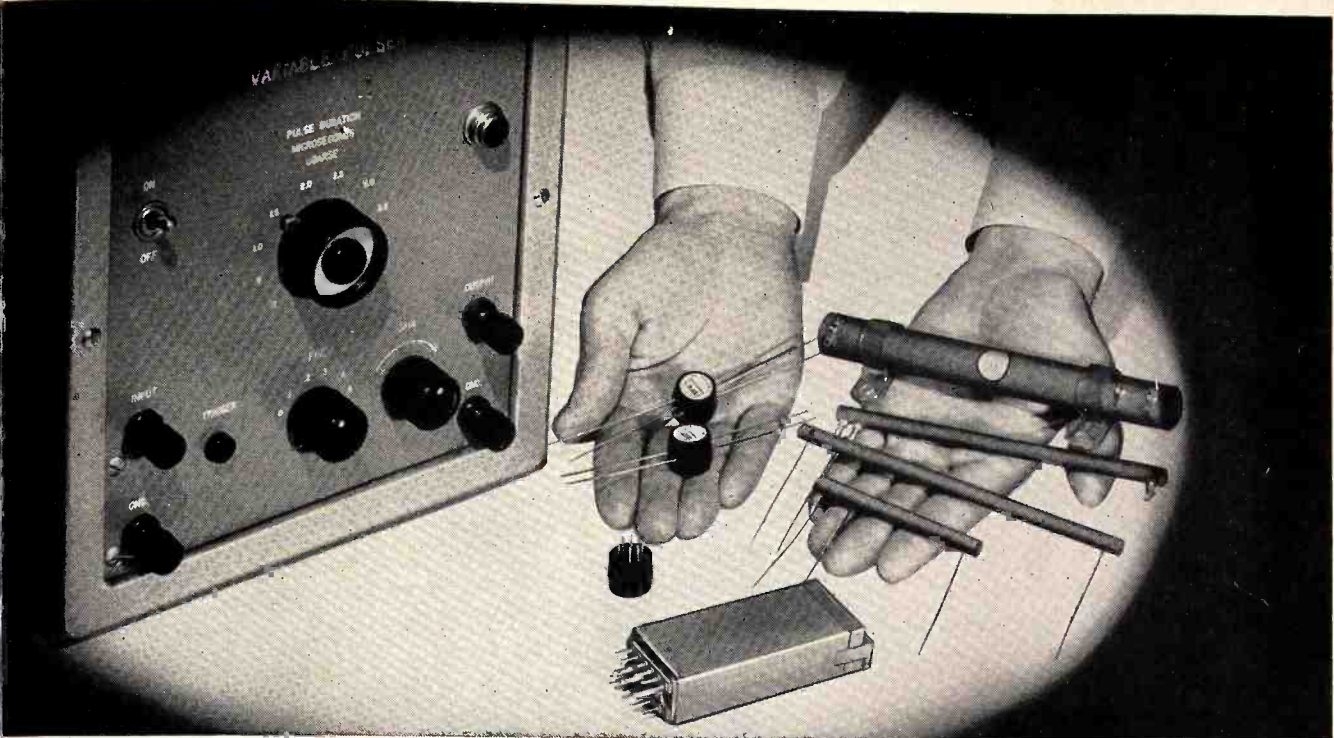
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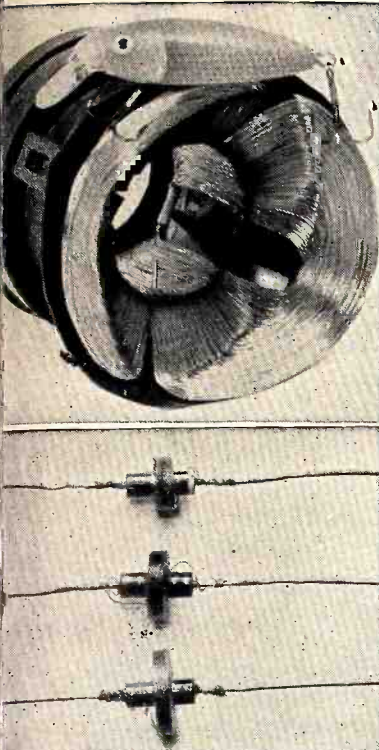
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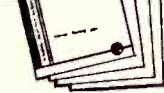


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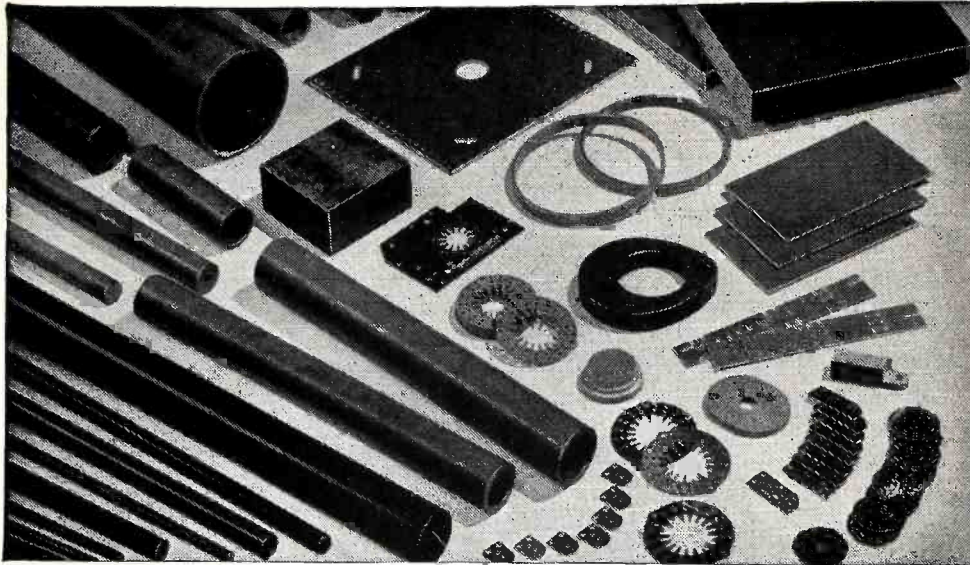
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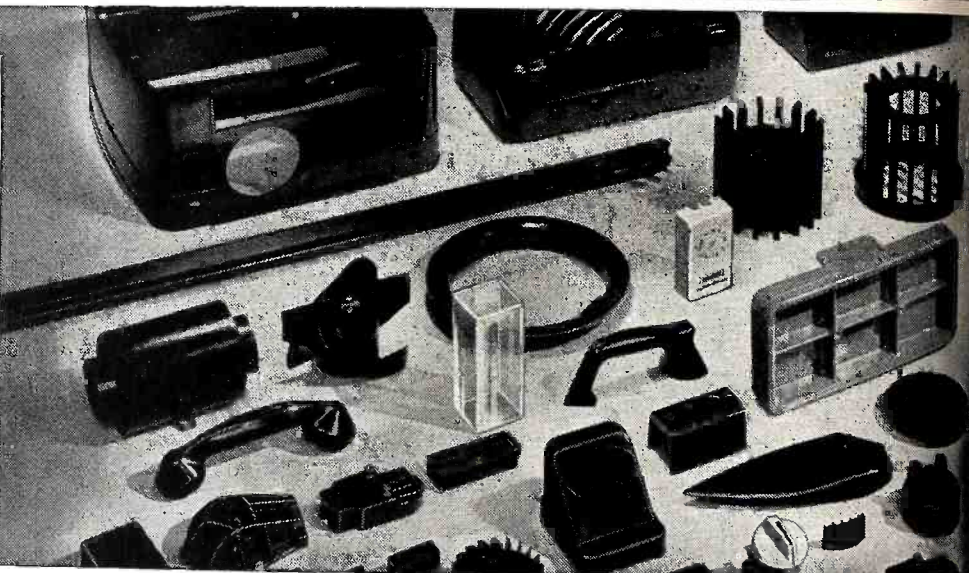


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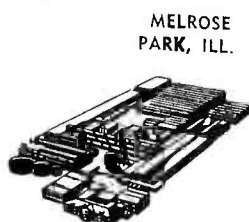
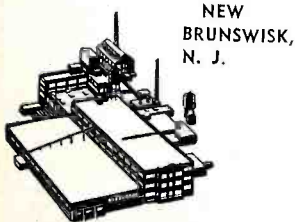
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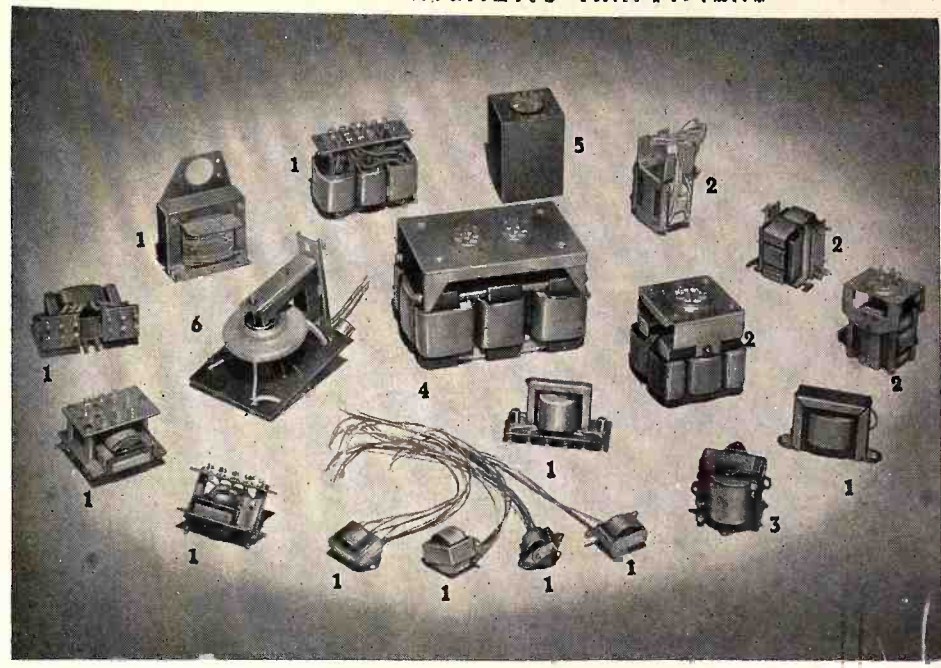
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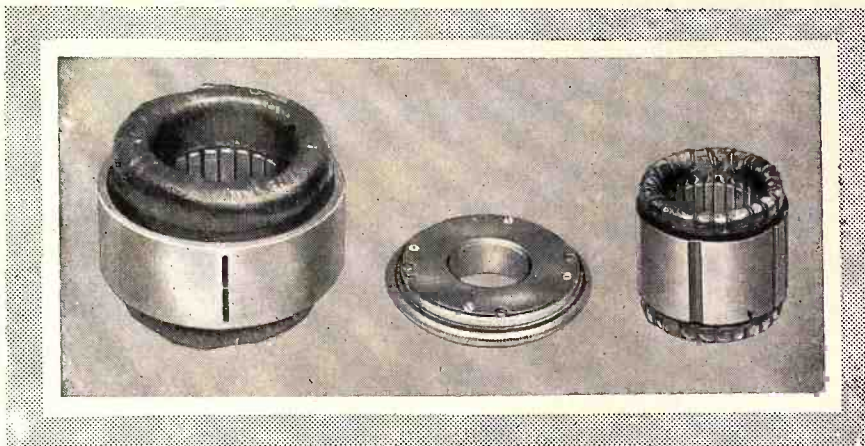
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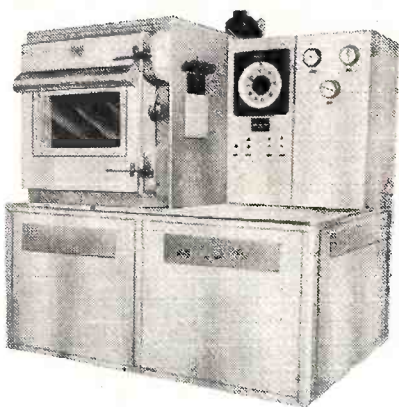
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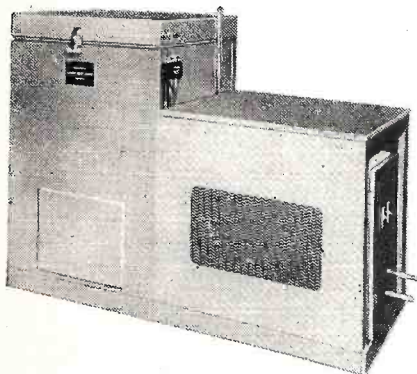
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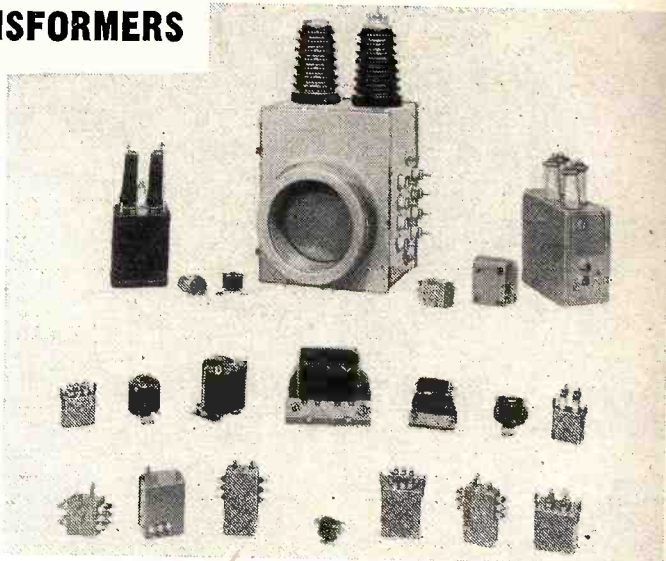
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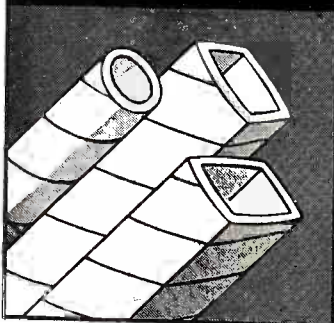
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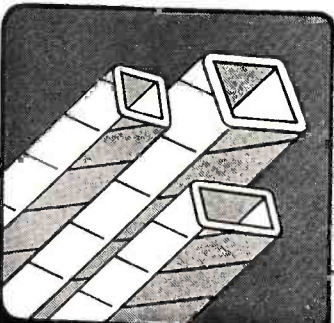


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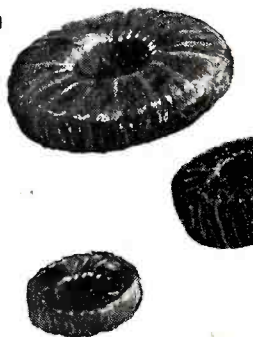
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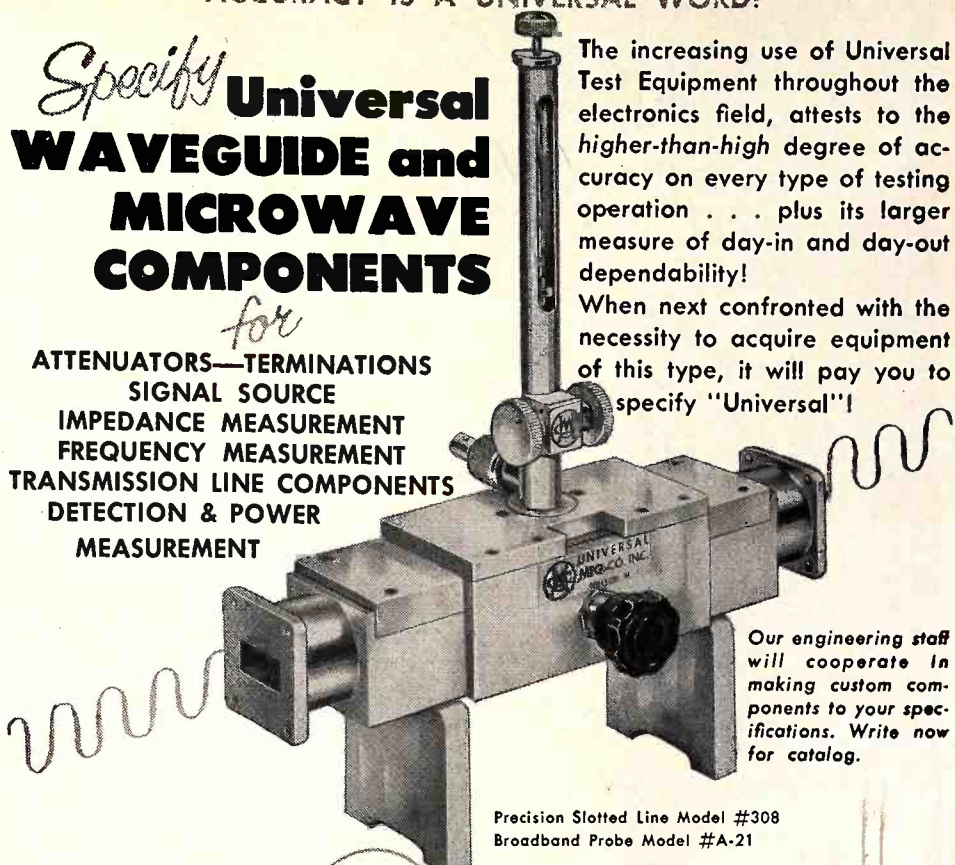


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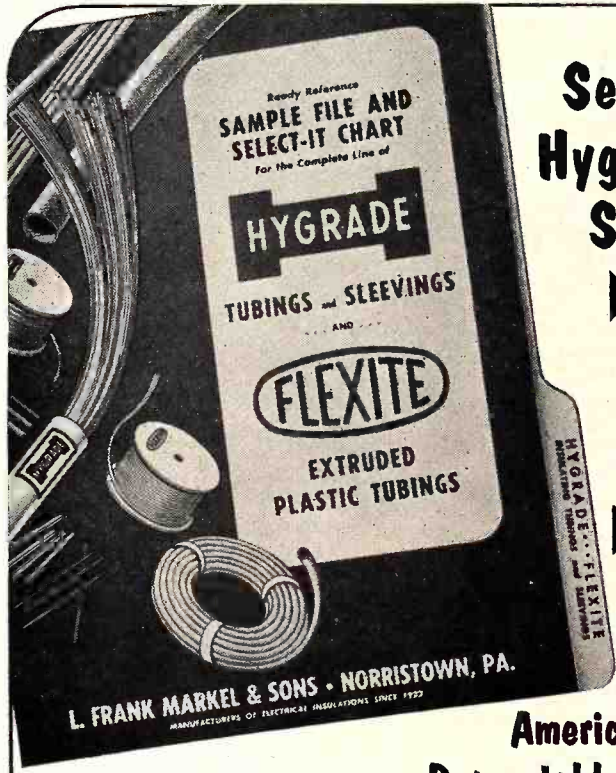


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Model 4900

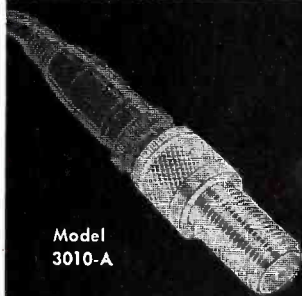
New Electro Proximity Pick-up System

Actuates Electronic or Electro-Mechanical Devices for counting parts . . . indicating position and distance . . . detecting presence of metallic mass . . . sequence timing . . . limiting control . . . operating from 0 to over 12,000 times a minute.

Produces Constant Electrical Output in Excess of 5 Volts when any metallic mass approaches the pick-up. Output voltage is independent of the speed or proximity of the actuating mass and remains constant while it's close to the pick-up and drops to 0 when removed.

Model 4900-R has built-in relay for operating power equipment.

Special Types for sensitivity up to several inches as well as hollow core pick-ups can be supplied.



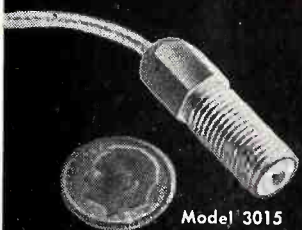
Model 3010-A

Electro Magnetic Pick-up

Indicates Without Contact or "Loading" RPM . . . rate of speed or motion. For acceleration and velocity studies . . . precision ignition timing . . . ballistic research . . . many others.

Produces Variable AC Electrical Output in proportion to any magnetic object's rate of speed. It can be actuated by displacement or vibration of magnetic material in the field of the pick-up, such as a keyway in a shaft, gear tooth, pin or slot in the moving part. Low cost permits use in production machinery.

Special Magnetic Pick-ups for high temperature and deep space applications. Also available with AN type connectors.



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Produces Variable AC Electrical Output in proportion to any magnetic object's rate of speed. No mechanical contact with exciting metal necessary. Self-energized by built-in permanent magnet. Ruggedly constructed to withstand severe shock and vibration. Weighs only 1/3 ounce.



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MEASURE STATIC OR DYNAMIC DISPLACEMENT

Electro Dynamic Micrometer

Accurately Measure Without Contact vibration in heat exchangers, motors . . . shaft whip . . . radial expansion due to high RPM . . . rate of acceleration . . . valve travel. Adds no "load" or distortion to object measured.

Independent of Acceleration or Frequency of Displacement. Measure static distance plus the amplitude of dynamic movement down to .0001 inch at any speed. Sensing unit is calibrated for direct reading. Direct viewing of displacement contour can be seen on the oscilloscope. Accuracy to within 1% of total displacement ranging from static to 200,000 RPM or vib./min.



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All SKL Series 300 precision variable electronic filters are designed to have responses identical to constant k-pi section filters. The filters have 18 db per octave per section attenuation in the rejection band. Max. attenuation 36 db per octave for Models 302 and 306.

| MODEL | FUNCTION | CUT-OFF FREQUENCY RANGE | ACCURACY |
|-------|---|-------------------------|--|
| 300 | Hi or low pass | 20 cps to 200 kc | $\pm 3\%$, 20 cps to 20 kc $\pm 5\%$, 20 kc to 200 kc |
| 302 | Hi or low pass Band pass & rejection | 20 cps to 200 kc | " |
| 305 | Hi or low pass | 2 cps to 20 kc | $\pm 3\%$ over entire range |
| 306 | Hi or low pass Band pass & rejection | 2 cps to 20 kc | " |

WIDE-BAND CHAIN AMPLIFIERS: SERIES 200

Broad bandwidth, short rise time, stable gain, and linear phase shift make SKL Chain Amplifiers ideal for amplifying either wave signals or pulses. Each model comes with a regulated power supply.

| MODEL | BANDWIDTH | GAIN | APPLICATIONS |
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| 202D | 1 kc - 210 mc | 20 db | Pre-amplifier |
| 200B | 1 kc - 210 mc | 10 db | Phase Inverter |
| 214B | 200 cps - 100 mc | 30 db | Pulse Amplifier for C.R.T. |
| 212A TV | 40 mc - 225 mc | 21 db | TV Distribution Systems |

504 SQUARE WAVE GENERATOR

A rise time of .05 microseconds and a wave form without tilt or overshoot characterize the performance of this moderately priced instrument. The Model 504 Square Wave Generator has a frequency range from 0.5 cps to 1 mc in eight steps. The output voltage is continuously variable from 0 to 10 volts peak to peak. The unit comes complete with its own regulated power supply.

503 PULSE GENERATOR

Provides a rectangular pulse shape with a rise time of less than 1 millimicrosecond. Pulse width is varied by changing length of external cable; minimum pulse width less than 1 millimicrosecond while maximum pulse width is unrestricted. Pulse repetition rate is variable from 50 to 150 pps. The pulse output voltage is continuously variable up to 150 volts; either positive or negative. Output impedance is 50 ohms. The Model 503 Fast Rise Pulse Generator is a convenient instrument for testing the response of any wide-band network.

600 CATHODE RAY INDICATOR

Designed to utilize the high writing speed capability of the type 5XP cathode ray tube in applications too advanced or special for standard oscilloscopes. In conjunction with the Model 610 Sweep Generator writing speeds up to 500 centimeters per microsecond may be observed. Conveniently mounted on the front panel

610 SWEEP GENERATOR

Provides continuously adjustable sweep speeds of from 0.05 to 500 centimeters per microsecond for a C.R.T. or other applications requiring a linear, rapidly-rising voltage. Used with the SKL Model 600 Cathode Ray Indicator, ignition voltages, lightning, dielectric breakdown and other very fast pulses may be displayed in detail.

WIDE-BAND TELEVISION DISTRIBUTION SYSTEM: SKL manufacturers complete T.V. distribution systems for community, apartment house, and industrial use. Details upon request.

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TRUMPETS Model 7102 exemplifies the rugged construction and progressive engineering behind every University product. Model 7102 is the *only* loudspeaker ever approved by Underwriters' Labs for Class II Groups E, F, & G hazardous area duty. Features include re-entrant trumpet (pioneered by University) for compactness and greater efficiency, heavy duty 25 watt driver unit with exclusive University "W" shaped Alnico V magnet, and *built-in* line matching transformer with impedances of 16, 45, 500, 1000, 1500, and 2000 ohms. See general catalog for trumpets of all sizes.

IMPROVED WIDE ANGLE HORNS These models feature the research of University's ingenious engineering — the famous twin air columns in a single assembly. By combining two identical precision die-castings to produce a "pair of exponential horns" without other separate parts to loosen and vibrate, smooth even sound radiation free from cancellations is projected from these wide angle horns.

BREAKDOWN-PROOF DRIVER UNITS The **FIRST** driver unit with the built-in line matching transformer was introduced by University and it has never been successfully imitated. Exemplifying the highest production standards, all driver units are permanently weather-proofed, thickly insulated and constructed with the exclusive University "W" shaped gold dot Alnico V magnet.

PAGING AND INTERCOM SPEAKERS Employing the University commutate reflex air columns with hermetically sealed driver units, the directional, radial, and bi-directional speakers supply the highest efficiency and outstanding reproduction at any volume level. Due to their optimum performance and long-life qualities, these typical University pace-setting paging and intercom speakers are widely used for all types of speaker installations.

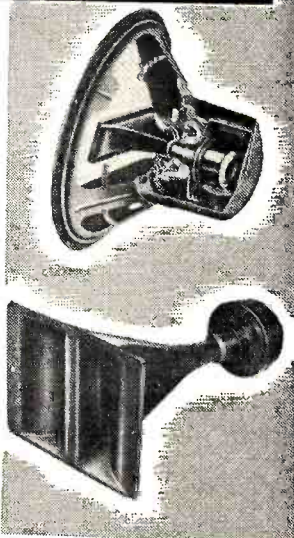


SUBMERGENCE-PROOF SPEAKERS These types are designed for use where extreme ruggedness and immunity to spray, gases, live steam or dust are essential. Function even under water, drain automatically, operate continuously regardless of exposure. Models available for directional or radial projection, wall or bulkhead mounting, swivel mount and with or without built-in line matching transformer and attenuator. Design is ideal for railroad use, shipboard, industries, docks, rough mobile work, etc. Model MM-2, illustrated, is rated at 15 watts continuous IPM, frequency 300-6000 cps, impedance 16 ohms.

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HI-FREQUENCY TWEETERS University offers a complete line of single and double tweeter units for both 2000 and 600 cycle crossover. Exclusive University "reciprocating flare" horn construction assures uniform wide angle dispersion. A complete line of accessories are included — crossover networks, adapter for mounting tweeter on a standard cone speaker, etc. These tweeters may be added to any standard amplifier and speaker to provide the finest in high fidelity reproduction — and at a very low cost.



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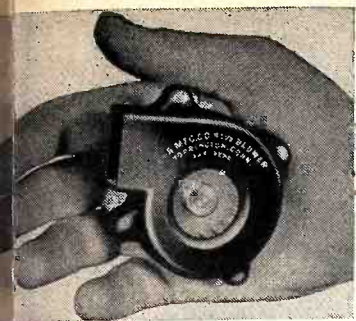
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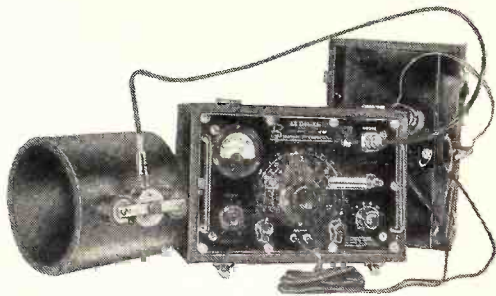
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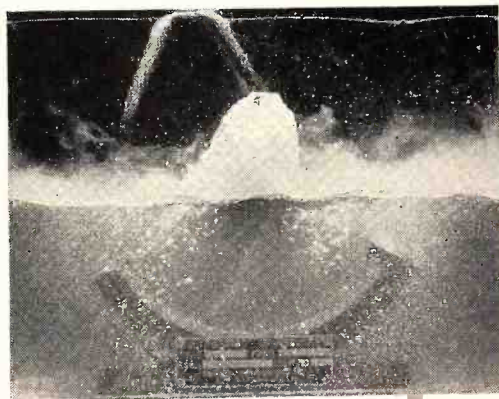
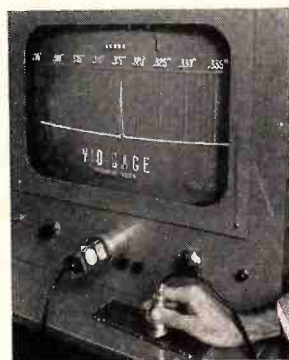
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to
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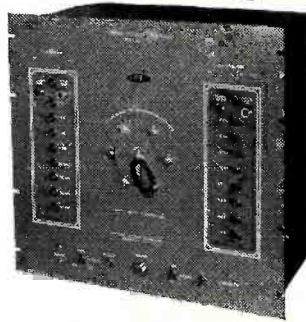
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PULSE AMPLITUDE: From 100 volts to .006 volts in one db steps
OUTPUT IMP: Matched to any impedance to standard coax lines. Two impedance outputs also available
POWER INPUT: 105-125 V, 60 cy, 50 watts
SIZE: 17½" x 19" x 10 3/16" (Rack Mount or Portable)



SERIES 300



Model 200
Double
Pulse
Output



Model 100
Single
Pulse
Output

10mc SCALERS

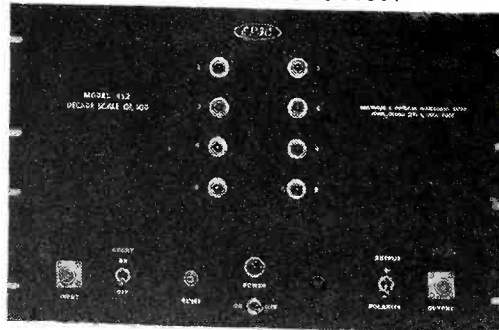
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1. RESOLVING TIME: 0.1 usec.
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Model 412: Decade scale of 100. (Neon light interpolation in both)

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MODEL 412



MODEL 410

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15. Resistance Unit Insulator



Send for bulletin with chart of mechanical and electrical products; design principles for ceramics.

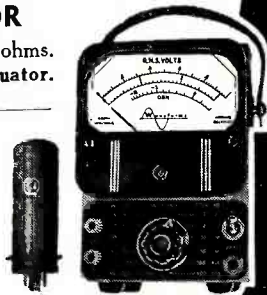
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520-A WIDE RANGE AC MILLIVOLTMETER
1 millivolt full scale to 30 volts.
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Briefcase portable.



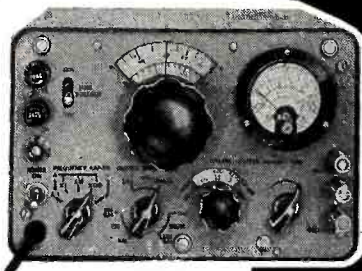
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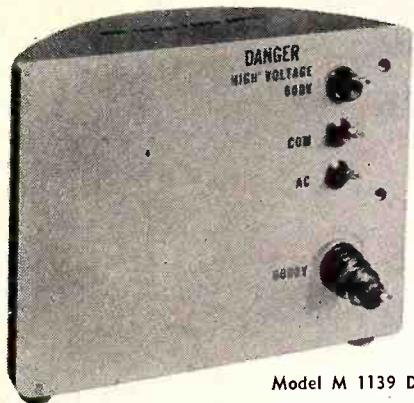
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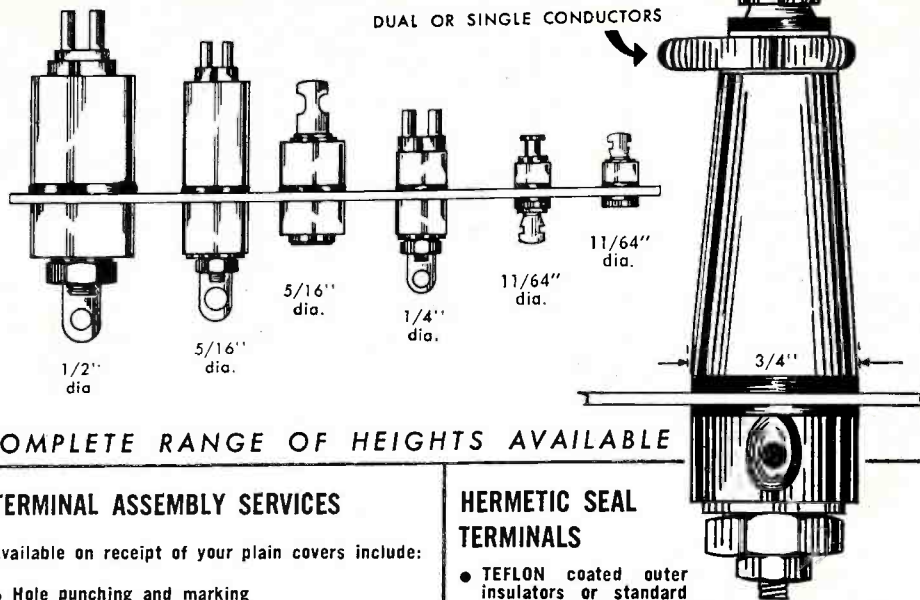
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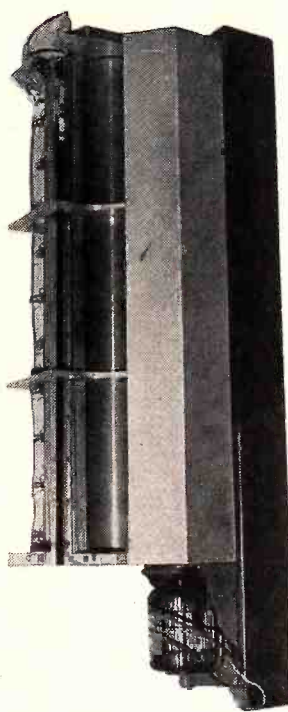
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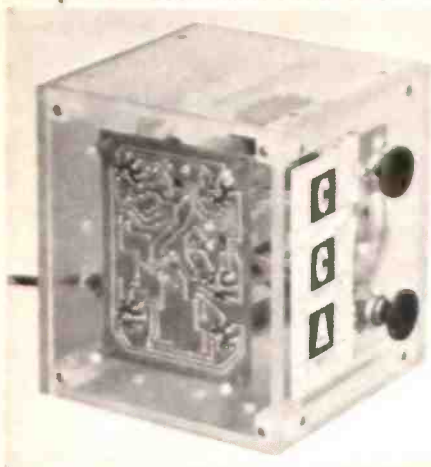
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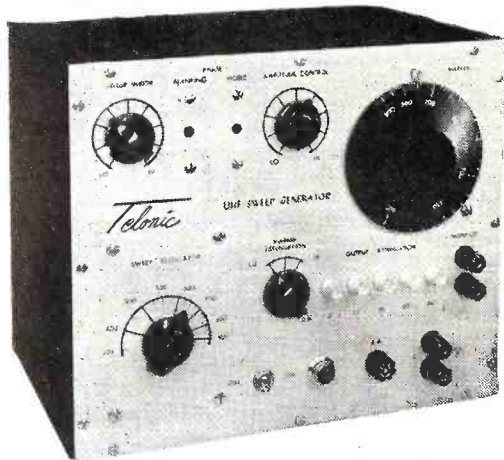
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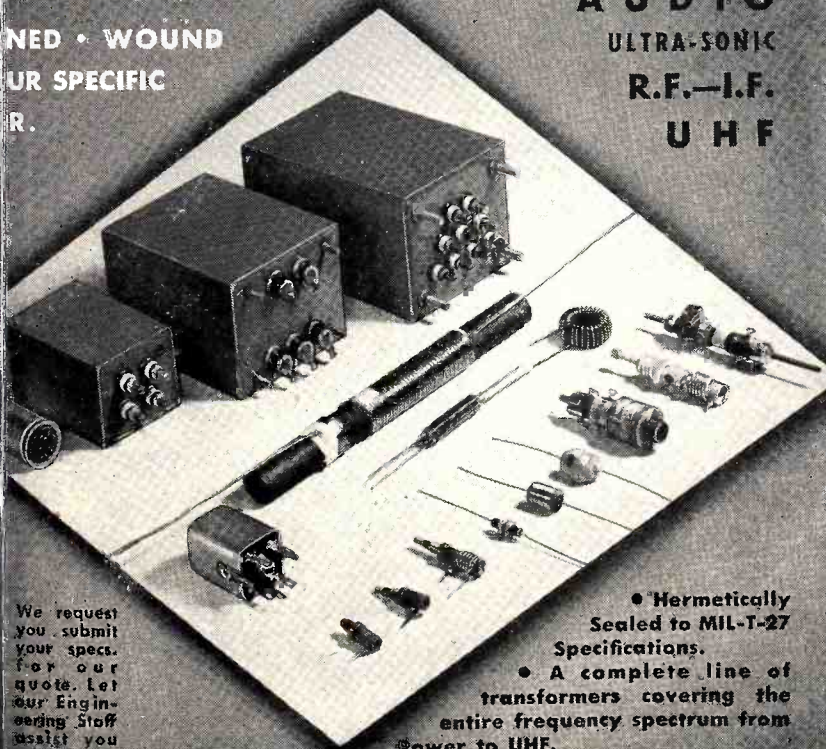


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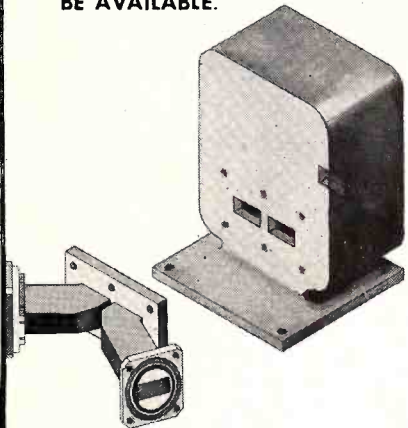
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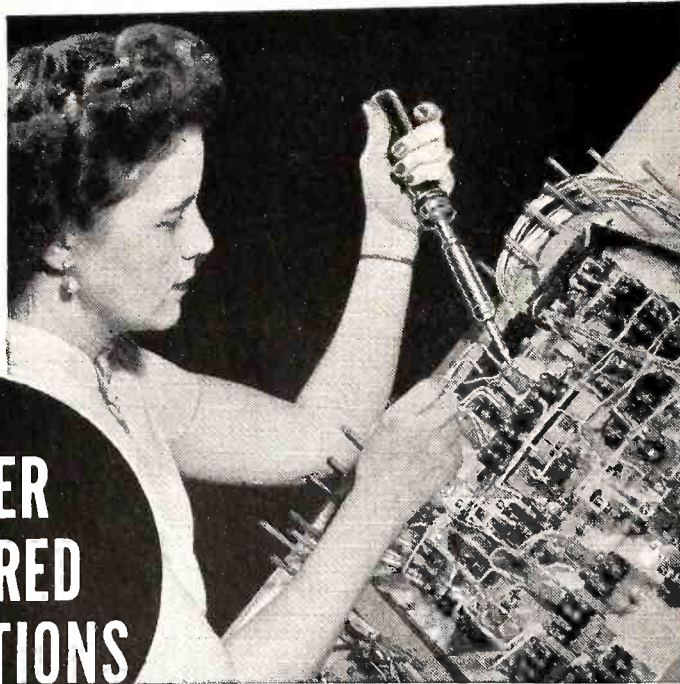


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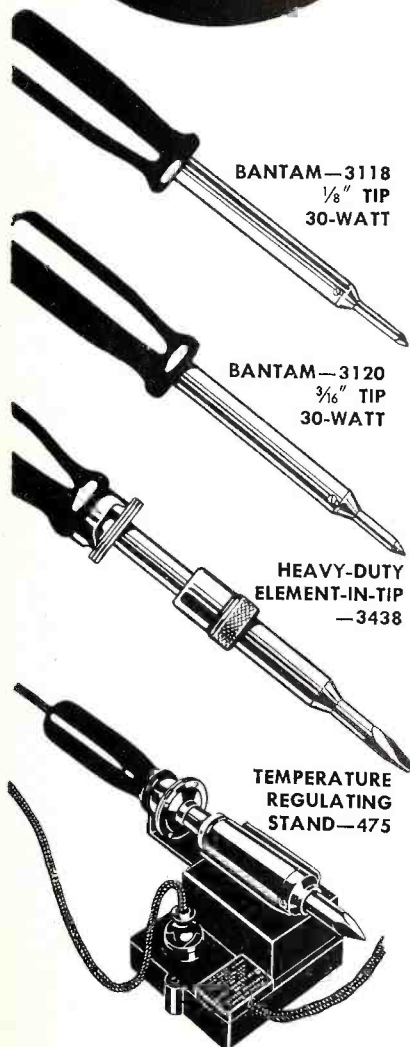
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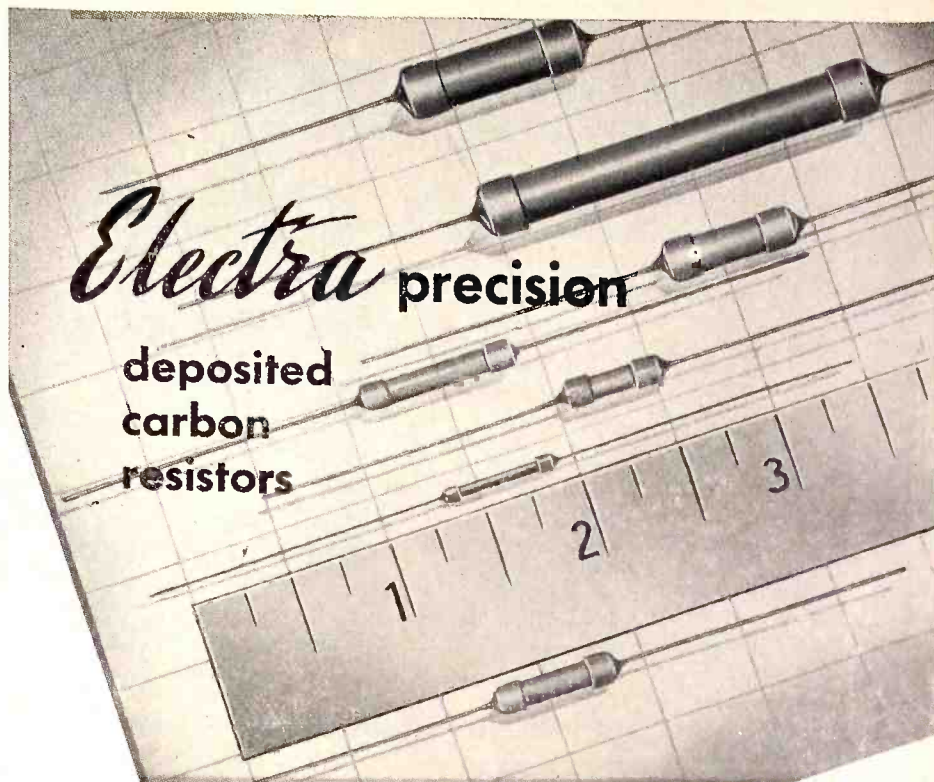
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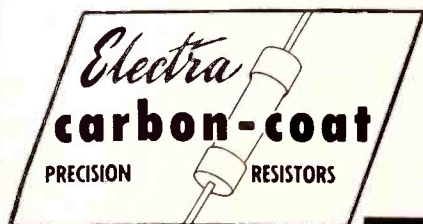
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|-------------|---------|-----------------------|------------------------------|------------|--------|
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| DC-1/4 | .125 | 250 | 4 Ω 250 K Ω | 9/32" | 5/64" |
| DC-1/4 | .25 | 300 | 5 Ω 1 Megs | 17/32" | 3/32" |
| DC-1/2 | .5 | 500 | 6 Ω 5 Megs | 13/16" | 11/64" |
| DC-1/4A | .5 | 350 | 3 Ω 2.2 Megs | 19/32" | 11/64" |
| DC-1/2B | .5 | 500 | 3 Ω 5 Megs | 11/16" | 15/64" |
| DC-1/2C | .5 | 350 | 2 Ω 1.1 Megs | 15/32" | 11/64" |
| DC-1 | 1 | 500 | 3 Ω 10 Megs | 15/16" | 9/32" |
| DC-2 | 2 | 1000 | 10 Ω 50 Megs | 2 1/16" | 9/32" |

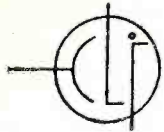
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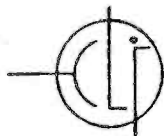


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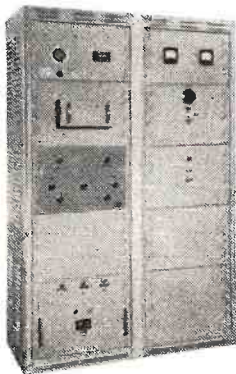


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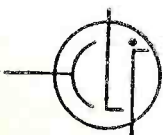
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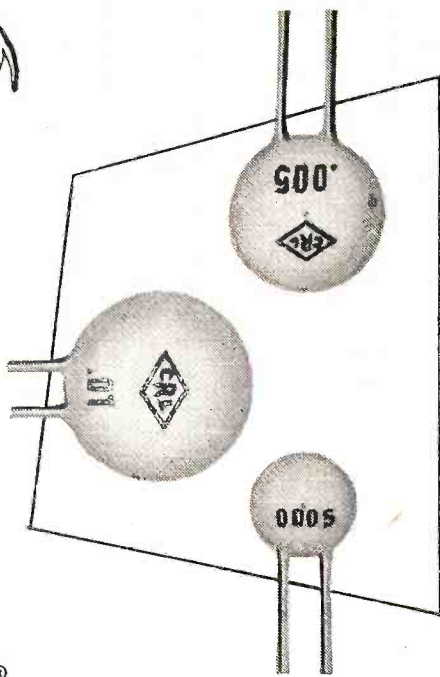
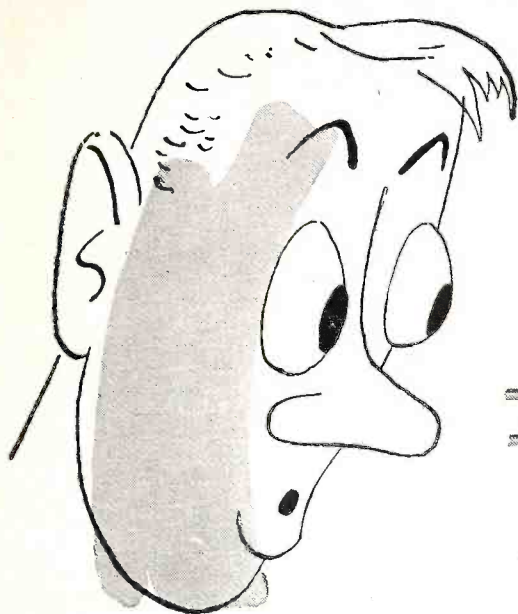
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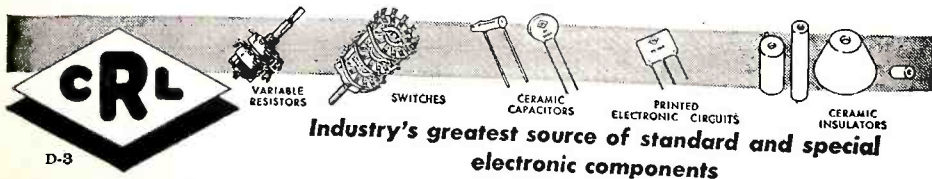
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- CRL introduced ceramic capacitors in the U.S. many years before any other supplier entered the field.
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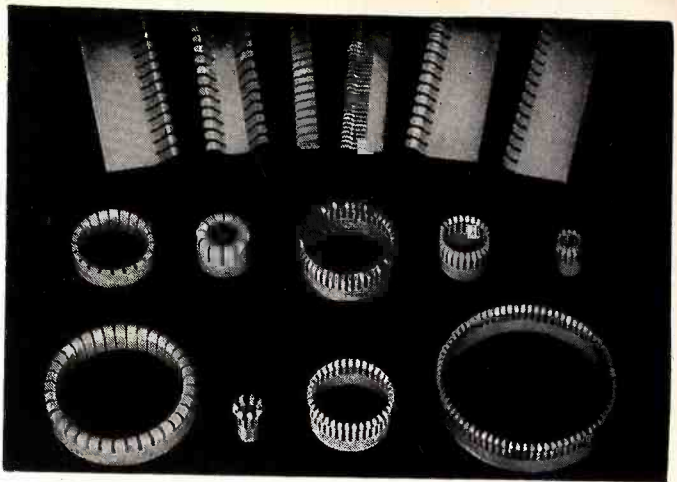
Our specialized experience and the depth of our engineering staff is at your disposal on any problem of spring design. Often you can affect a considerable economy through our Micro-Processed spring fabrication. Then, our vast experience in limitations of material properties in spring design helps you meet your production needs. There is no cost or obligation for this service.

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For prompt model testing, "small-fry" quantities. You can easily and economically check your design performance with regular production line quantities of beryllium copper—without the expense of regular production quantities without resorting to inaccurate prototype springs.

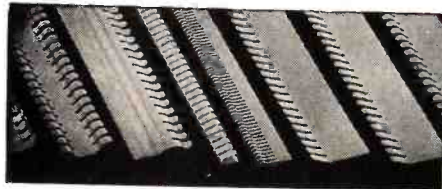
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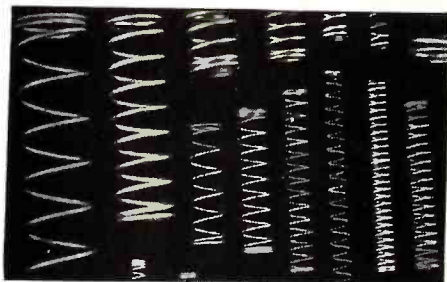
Micro-Processed* Beryllium Copper Springs to help solve your radio-electronic problems



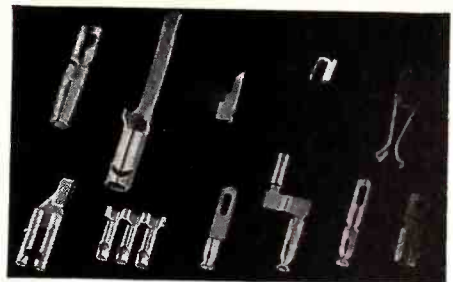
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When you use RMB miniatures in instruments and small mechanisms, you get engineering features which you expect to find only in anti-friction bearings of much larger size. For example, RMB Type RF FILMOSEAL bearing (illustrated) available in sizes from .1969" OD, including the popular R2 size (.375" OD—.125" Bore), has these important design details:

- A—Deep groove races, uninterrupted by filling slot
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The simplest and most compact of the miniature types. Use them where size, weight and cost must be kept low, yet where you want the low friction and greater endurance of a ball bearing. Typical applications: Meter movements, small gear trains, lever pivots. Sizes: From .043" to .423" O.D.



ANGULAR CONTACT Self-aligning with inner race

Similar in capacity and application to the pivot types, but somewhat easier to install because they take cylindrical shafts. These types, as well as the pivot types, are self-aligning, will carry thrust and radial loads. Sizes: From .157" to .787" O.D.



RADIAL Without inner race

Particularly useful where loads are relatively light, low starting torque and high shock and wear resistance are important. Typical applications: Pivots for balance arms; shaft supports in control and recording mechanisms. Sizes: From .1181" to .4724" O.D.



RADIAL Deep Groove with inner race

These Conrad type precision ball bearings, with deep groove design and balanced ball retainer, provide maximum load capacity, high running speeds, long life. Typical applications: Small motors, sound recorders, computers, potentiometers. Sizes: From .1181" to .8661" O.D.



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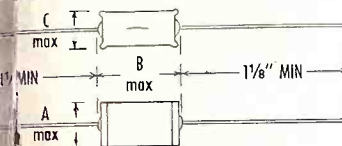
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| 30 | .57 | .25 | 220 | - 470 $\mu\mu\text{f}$ |
| 47 | .93 | .25 | 510 | - 1000 $\mu\mu\text{f}$ |
| 83 | .93 | .31 | 1100 | - 3300 $\mu\mu\text{f}$ |
| | | | 250-vdcw Rating | |
| 24 | .30 | .25 | 220 | - 300 $\mu\mu\text{f}$ |
| 30 | .57 | .30 | 430 | - 1000 $\mu\mu\text{f}$ |
| 47 | .93 | .25 | 1100 | - 2000 $\mu\mu\text{f}$ |
| 83 | .93 | .31 | 3300 | - 5600 $\mu\mu\text{f}$ |



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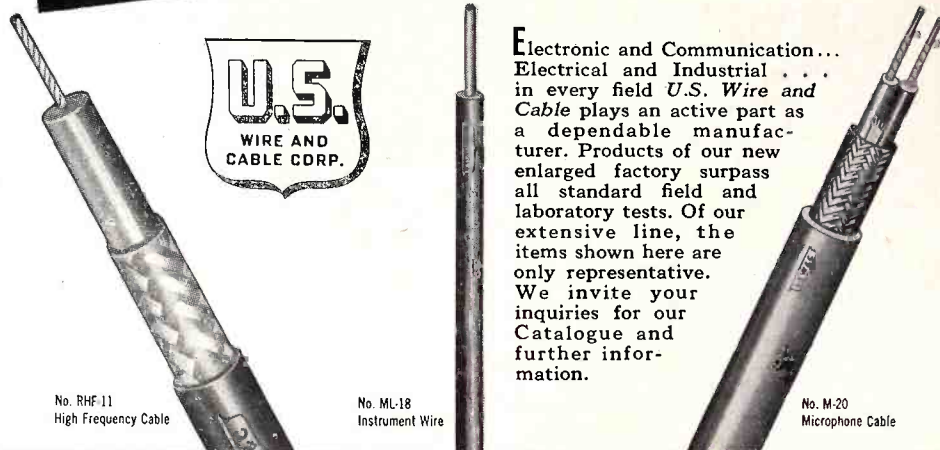
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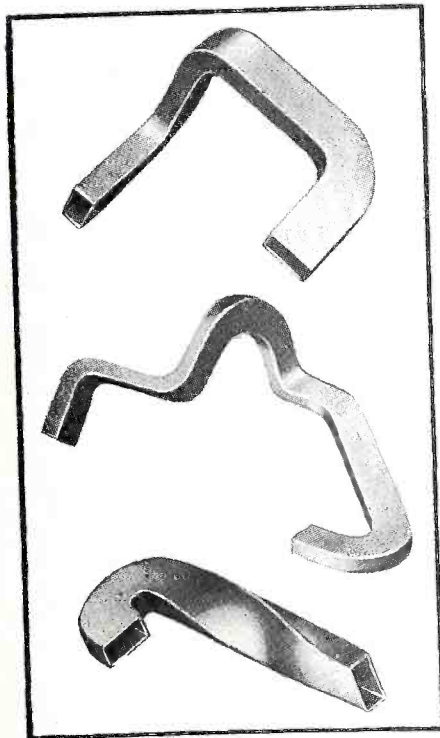
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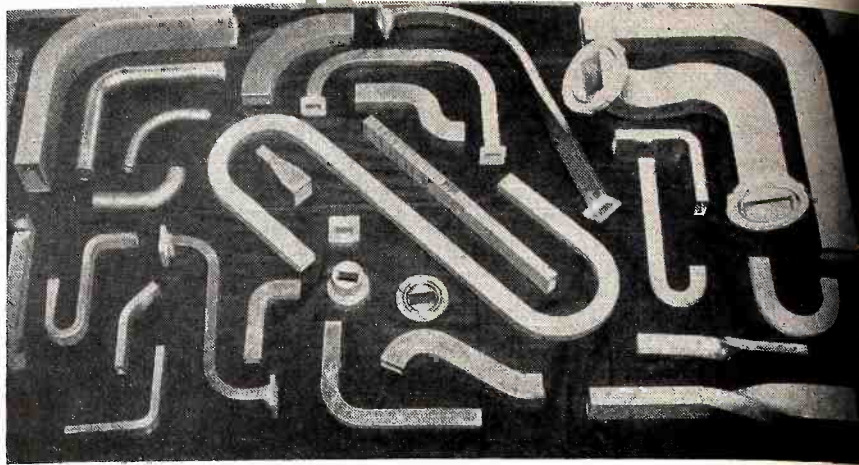
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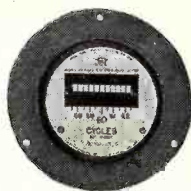
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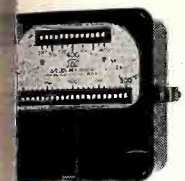
Model 30-F
Range, Double Window



Model 36-FX-21
21-Reed Meter in 3 1/2" Case



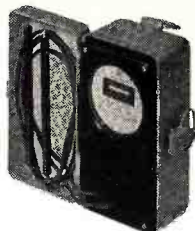
Model 34-FHXX
9-Reed in 3 1/2" Sealed Case



Model 41-FX
Range in 4" Case



Model 15-FHAC
2-Reed in 1 1/2" Sealed Case



Model 33-FP-9M
Portable, Metal Case
TS-328 A/U (400 cy. type) Shown

REED FREQUENCY METERS

Illustrated are typical panel mount-
portable—for use where constant or
frequency is important to efficient
of equipment.

Presently Accurate within $\pm 0.3\%$ or better
reference temperature, depending on the
This accuracy is not affected by poor
form, external magnetic disturbances,
age fluctuations.

and Type for Every Service. Made in a
variety of portable and panel case
reed groupings and frequency ranges
2 to 650 cycles and above; 100-130
urnished unless otherwise specified.

Construction of simplified, patented
with no moving parts to wear out or
of calibration. Ideal for field and
applications.

le for Electronic Circuits because of
ely low power consumption and J-B-T
with high Q and sharp, immediate
ase.

1 1/2" and 2 1/2" SEALED Types

Model 15-FHAC Meters sealed, glass-to-metal
ion with solder terminals, meet or ex-
sealing and electrical requirements of
and MIL-M-6A including the 3000 volt
own, and use the front mounting dimen-
specified. Max. barrel diameter, 2 1/16";
overall depth behind flange. While not
stocked, these meters are in volume
on. New 2 1/2" meters Model 21-FHXX
on special order.

1 1/2" SEALED Types

Model 15-FHAC (illustrated half actual size). 60
cycles, 2 reeds, 8-10 volts, for cathode
circuit. Widely used on audio oscilla-
standardize output. Meets intent JAN-1-6
amendments on sealed meters. Barrel, 1 1/2"
er; detachable flange, 2.094" diameter;
er terminals.

Model 15-FH Series (not illustrated)—Same case,
5 reeds, 58-62 cycles, 100-130 volts, or
4 cycles, 100-130 volts. Variations such
eds or 25 cycles available on special

ASK FOR CATALOG 354

ELAPSED TIME METERS

For Maintenance, Tube
Life Data, and Operat-
ing Time Records—on
Motor Generators, Trans-
mitters, Receivers, Recti-
fiers, Test Set-ups, etc.

Model 31-EX (illustrated)
also known as running-
time or total time meter,
registers in 1/10 hours to 9,999.9 hours, then
automatically resets. Normally stocked for 60
cycles, 110-130 volts. 3 1/2" standard meter
mounting. Variations such as 50 cycles; 230
volts; 0-99,999 hours; 3" rectangular case; and
readings in minutes available on special order.



SEALED TIME METERS

Model 31-EHXX—Completely sealed meter, read-
ing 0-9,999.9 hours, same as Model 31-EX above.
Glass-to-metal construction, solder terminals,
and 3 1/2" detachable flange, all match XX metal
frequency meter case.

Model 33-EHXX—Operates on 400 cycles, 110-
125 volts, to read 0-9,999.9 hours in 1/10 hour
steps. It is presently made only in 3 1/2" flange
sealed metal case, 2 3/4" diameter, 4" deep
behind panel.

Model 21-EHXX—New. 2 1/2" flange, sealed, full
size counter.

FREQUENCY — TIME METERS

Combination Reed-Type
Frequency — Elapsed
Time Meters—One Meter
Does the Work of Two.

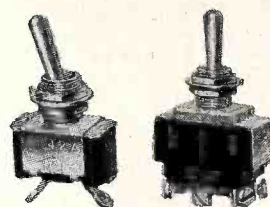
Model 31-FE (illustrated)
pioneered by J-B-T, saves
panel space and cost,
and encourages peri-
odic maintenance; 3 1/4"
flange, metal case, 4 1/16" overall depth, stand-
ard. 3 1/2" case known as 31-FEX-1 supplied on
custom orders. 5 reeds, 60 cycle range, standard;
7, 9, 11 reeds or 50 cycle range on special order.



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Standard J-B-T items are available through
authorized electronics parts distributors.

TOGGLE SWITCHES FOR JAN-S-23



J-B-T now manufactures toggle switches of the
quality required by Specifications JAN-S-23 and
MIL-S-6745. The complete series ST-40 and ST-50
with screw terminals, and ST-42 and ST-52 (with
solder lugs) are available. Solid silver contacts
and rocker arms, rugged construction, and a
tested combination of lubricant, plating and
materials enable these switches to exceed many
of the requirements. Ask for Bulletin TS-4. A
convenient adhesive-backed list of Preferred
Types (PPL-23-ST) also will be sent upon request.

Smaller, lower capacity toggle switches, such as
ST-12, -13, -22, -23, -26 and -27, also designed
for JAN-S-23 will be released for sale in the
third quarter of 1954. Your inquiries are invited.

MOLDED ROTARY SWITCHES

Shorting and Non-Short-
ing... 14 or 20 Positions
... 1 to 6 Decks.

All moving contacts en-
closed — eliminates dirt
and corrosion... contact
lugs permanently inter-
grated into switch
assembly... sturdy con-
struction with 3-post



Model MS-14-2

deck suspension, double-grip collector arms, and
rectangular drive shaft through decks for pre-
cision indexing... interchangeable, electrically
and mechanically with J-B-T Series SS-14 and
20 position Laminated Switches.

Carrying capacity (not make-and-break): 1 amp.;
maximum momentary, normal 5 amp.; maximum
voltage between contacts and ground, 1000
volts R.M.S.; between decks and ground, 2000
volts R.M.S. Average contact resistance 0.007
ohms or less. Also available in 6-pole per deck
double throw construction.

LAMINATED ROTARY SWITCHES

Used widely in quality
test equipment, portable
instruments, inspection
setups and avionics
where trouble-free, de-
pendable performance
counts. Two basic types
— 14 pos. (2" dia.) or 20
pos. (2 3/32" dia.) give
extra contacts in mini-
mum space. One to six decks. Model SS-14-2



Model SS-14-2

LEVER ACTION SWITCHES

Excellent for test equip-
ment and communica-
tions systems, these
switches use the same
high quality parts as
the SS-14 series. Bracket
mounting holes 1 5/8"
apart; single deck types
may be mounted in
groups 3/4" between
centers; two-deck types, 1 1/8" between centers.



Model SS-14-114

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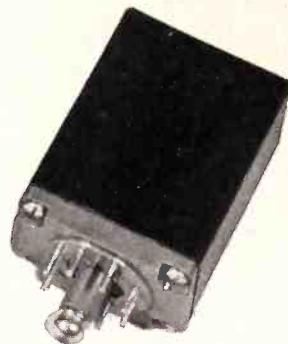
Complete Line of Ovens for Housing any Type of Crystal or Component

—Featuring—

- Stability less than 1°C
- Wide range of operating temperatures and voltages
- Low power consumption
- Fast stabilization
- Hermetic sealing

Specifications

Operating temperatures 50°C to 120°C
 Stability ±1°C to ±3°C
 Input voltages 6 to 110 VAC or DC
 Power consumption 1 to 30 watts
 Stabilization time 5 to 30 minutes



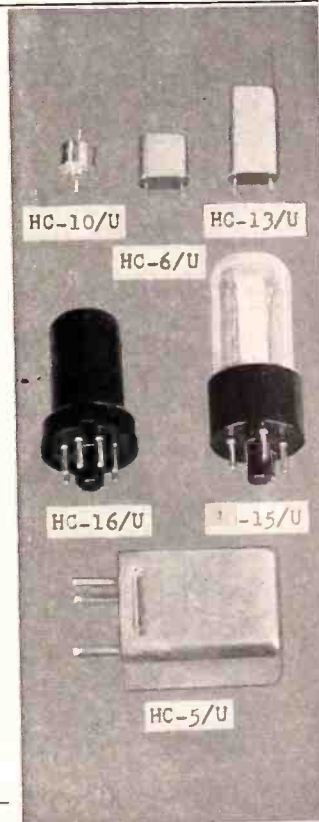
Type CO-10
 For crystals in
 HC-6/U holders

Specify CO-14 for crystals in HC-13/U holders
 CO-15 for crystals in HC-5/U holders
 CO-16 for crystals in HC-15/U holders
 CO-16 for crystals in HC-16/U holders

Quartz Crystals

MADE TO JAN OR COMMERCIAL SPECIFICATIONS

| FREQUENCY TOLERANCE (%) | TEMPERATURE RANGE (°C) | CIRCUIT RESONANCE | CIR. CAP. (mmf) | MILITARY SPECIFICATION | CRYSTAL UNIT | CRYSTAL HOLDER | CLARK TYPE NO. |
|-------------------------|------------------------|-------------------|-----------------|------------------------|--------------|----------------|----------------|
| ±.005 | -55 to +90 | series | --- | --- | --- | HC-6/U | HSM-2UH |
| ±.005 | -55 to +90 | series | --- | MIL-C-3098A | CR-51/U | HC-6/U | HSM-2UH |
| ±.005 | -55 to +90 | series | --- | MIL-C-3098A | CR-23/U | HC-6/U | HSM-2H |
| ±.005 | -55 to +90 | series | --- | MIL-C-3098A | CR-32/U* | HC-6/U | HSM-2HO |
| ±.002 | 75 ± 5* | series | --- | MIL-C-3098A | CR-24/U | HC-10/U | HSM-3H |
| ±.005 | -55 to +90 | series | --- | MIL-C-3098A | CR-33/U | HC-6/U | HSM-3HP |
| ±.005 | -55 to +90 | parallel | 32 | MIL-C-3098A | CR-19/U | HC-6/U | HSM-2MS |
| ±.005 | -55 to +90 | series | --- | MIL-C-3098A | CR-28/U* | HC-6/U | HSM-2MSO |
| ±.002 | 75 ± 5* | series | --- | MIL-C-3098A | CR-18/U | HC-6/U | HSM-2M |
| ±.005 | -55 to +90 | parallel | 32 | MIL-C-3098A | CR-27/U* | HC-6/U | HSM-2MO |
| ±.002 | 75 ± 5* | parallel | 32 | MIL-C-3098A | CR-35/U* | HC-6/U | HSM-2MSO |
| ±.002 | 85 ± 5* | series | --- | MIL-C-3098A | CR-36/U* | HC-6/U | HSM-2MO |
| ±.002 | 85 ± 5* | parallel | 32 | MIL-C-3098A | CR-44/U* | HC-6/U | HSM-2MO |
| ±.002 | 85 ± 5* | parallel | 32 | MIL-C-16B | CR-1A/AR | CR-1 | PM-5M |
| ±.02 | -55 to +90 | parallel | 25 | MIL-C-239B | CR-5/U | FT-243 | PM-2P |
| ±.02 | -55 to +90 | parallel | 12 | MIL-C-10405 | CR-6/U | FT-243 | PM-2 |
| ±.02 | -40 to +70 | parallel | 12 | MIL-C-10405 | CR-10/U | FT-243 | PM-2P |
| ±.005 | -40 to +70 | parallel | 25 | MIL-C-10405 | CR-13/U | FT-243 | PM-2F |
| ±.02 | -40 to +70 | series | --- | MIL-C-10405 | CR-8/U | FT-243 | PM-2S |
| ±.02 | -40 to +70 | series | --- | SC-Data Sheet | HC-1/U | HC-1/U | PM-4P |
| ±.01 | -40 to +70 | parallel | 32 | MIL-C-3098A | CR-48/U | HC-6/U | HSM-2M |
| ±.01 | -55 to +90 | parallel | --- | 71-3021 | CR-4/U | FT-241-A | WM-2H |
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| ±.002 | 75 ± 5* | parallel | 20 | MIL-C-3098A | CR-25/U | HC-6/U | HSM-2LS |
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| ±.003 | 70 ± 5* | series | --- | MIL-C-3098A | CR-37/U | HC-13/U | HSM-13 |
| ±.02 | -40 to +70 | parallel | 20 | MIL-C-3098A | CR-42/U* | HC-13/U | HSM-13O |
| ±.002 | 75 ± 5* | parallel | 20 | MIL-C-3098A | CR-15/U | HC-5/U | WM-6P |
| ±.01 | -40 to +70 | parallel | 32 | MIL-C-3098A | CR-16/U | HC-5/U | WM-6S |
| ±.01 | -40 to +70 | series | --- | MIL-C-3098A | CR-29/U* | HC-5/U | WM-6PO |
| ±.002 | 75 ± 5* | parallel | 32 | MIL-C-3098A | CR-30/U* | HC-5/U | WM-6SO |
| ±.002 | 75 ± 5* | series | --- | MIL-C-3098A | CR-43/U | HC-16/U | HSM-9LP |
| ±.01 | -30 to +75 | parallel | 45 | MIL-C-3098A | CR-38/U | HC-13/U | HSM-13L |
| ±.012 | -40 to +70 | parallel | 20 | MIL-C-3098A | --- | --- | --- |



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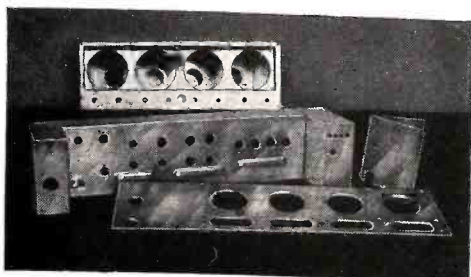
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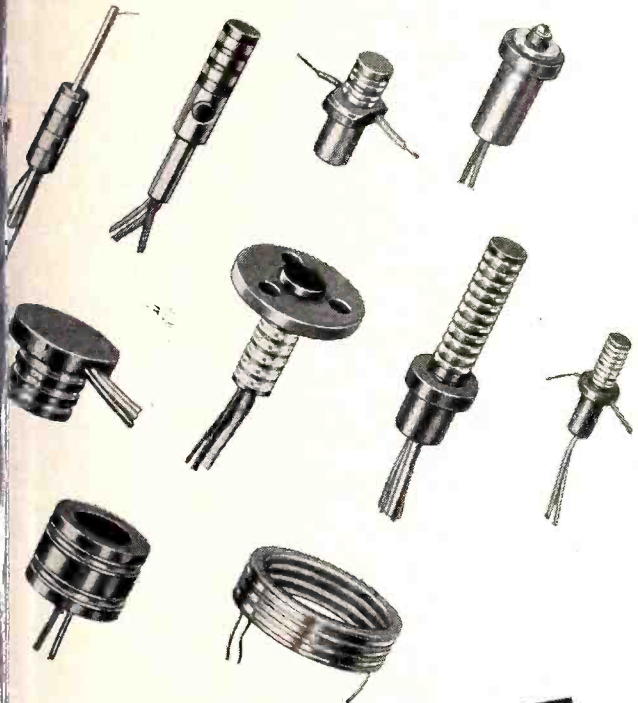
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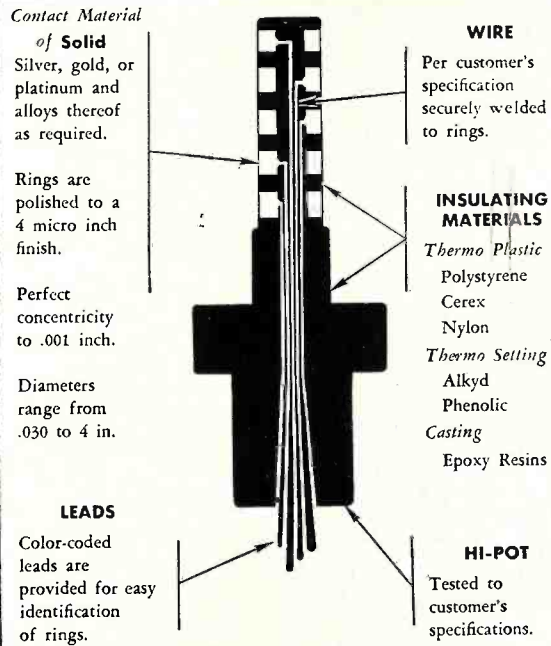
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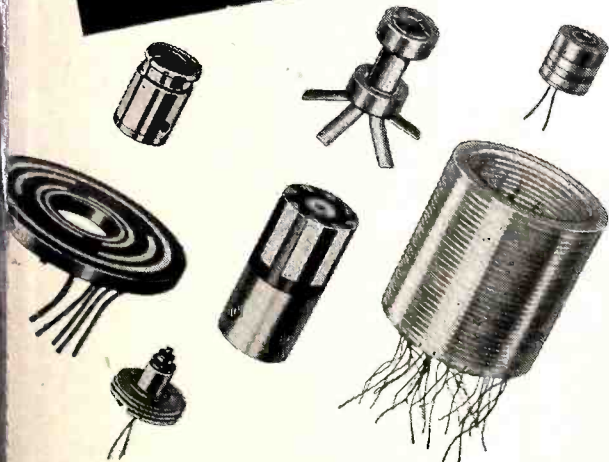
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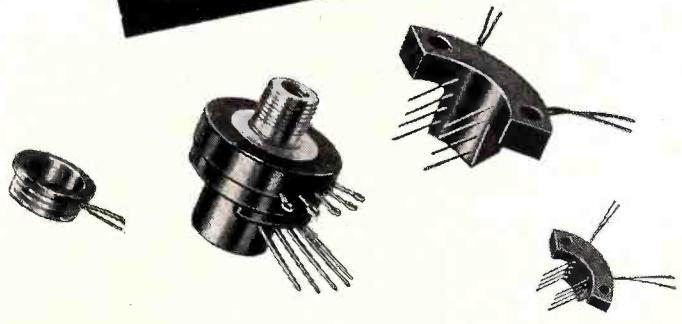
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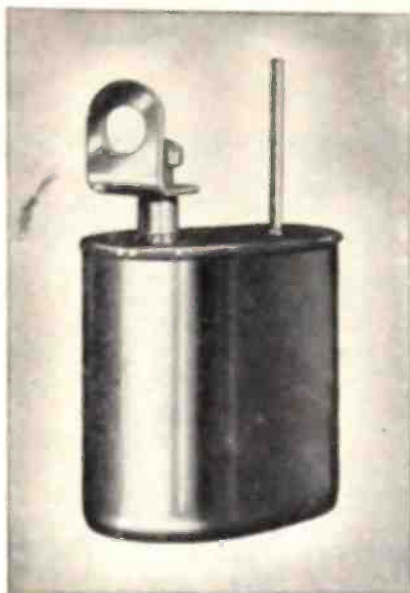
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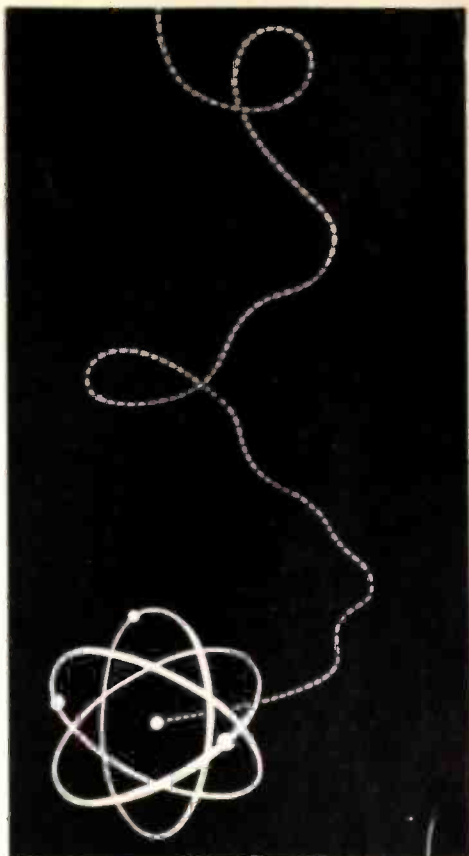
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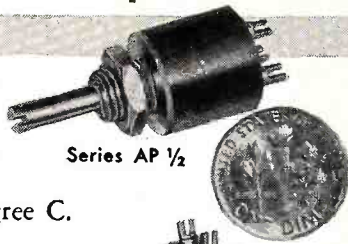
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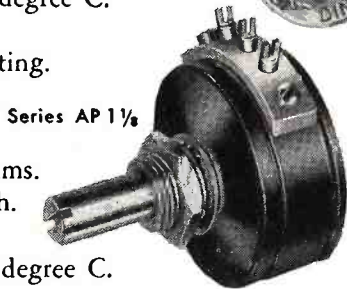
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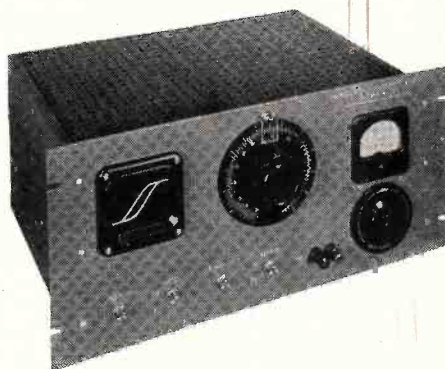
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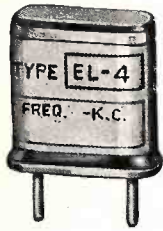
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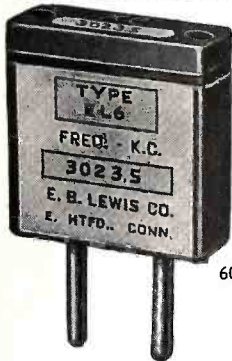
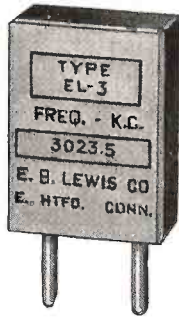


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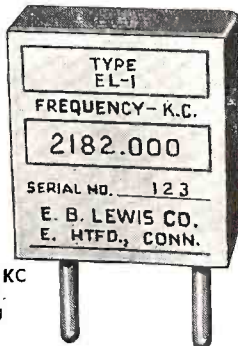
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- ① (1) Self-wiping action insures contact resistance of less than 0.001 ohm
- ② (2) Spring-loaded pressure bar provides contact pressure without wear on spring element and compensates for wide variation in hole diameter found in commercial terminals
- ③ (3) Instant unlimited multiple connections at any plug body
- ④ (4) Four standard lengths—(others to specifications) in red or black

Reduces equipment setup time

Outlasts homemade leads 4 or 5 times and therefore costs less than homemade leads; tough polyvinyl insulation on highly flexible stranded wire; integrally molded in high voltage plastic—resists failure due to flexing at junction of wire and plug body; fits standard terminal posts, jacks, alligator clips and spade lugs. Needs no special adapters for most connections.

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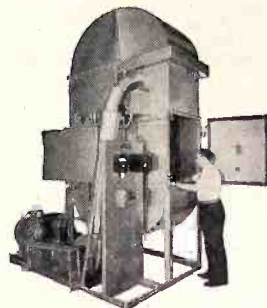
Saves die makers time on layout. Drawing is reproduced
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BROTHERS

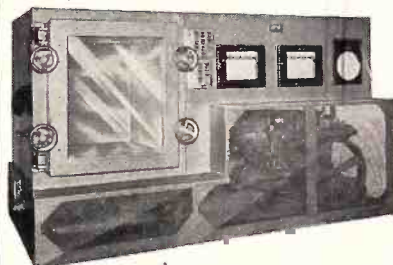
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SAND & DUST test chambers with completely automatic dust density control.



ALTITUDE chambers for testing from sea level to 100,000 ft. or higher with temperatures from -100° F to $+200^{\circ}$ F.



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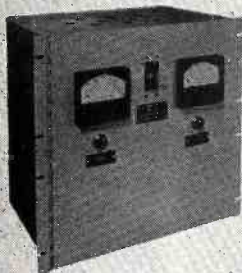


REGULATED POWER SUPPLIES include the versatile "600" series featuring multiple combinations of output voltages from single package. Regulation accuracy $\frac{1}{2}\%$ with provision for adjusting to $\frac{1}{10}\%$ for many conditions. The line includes several models each covering wide range of laboratory requirements. Also available the "400" series unitized supplies ideal for systems development and ruggedized for operation from 400 cycles power in airborne operation.

MODEL 101 ELECTRONIC LOAD is a device designed for laboratory or production testing of regulated power supplies. It provides a fast, convenient means of measuring impedance, transient response or life testing regulated power supplies under actual operating conditions. Power handling capability, 20-700 volts at currents up to 500 MA.



AUTOMATIC SOUND LEVEL RECORDER Model 6754 is a completely automatic instrument designed for airborne measurements of sound pressure levels. It will record in sequence sound levels in each of several octave wide frequency bands. Range is from 40 to 200 db over a frequency range of 30 to 10,000 cycles.



REACTOR REGULATED POWER SUPPLIES (High current) are available to customer specification. Low output impedance and low internal operating temperatures make these supplies particularly suitable for pulse and computer applications. Up to seven output voltages, regulation to 1% and ratings up to 400 VDC at 1 ampere can be furnished.



PRECISION TIME BASE CALIBRATOR Model 531 is an extremely accurate stable self-calibrating dc generator. Designed for base measurements involving linearity, pulse width, delay and as a generator of accurately timed pulses the calibrator is calibrated either microseconds or years. Accuracy as good as 0.01%.

HARMONIC SIGNAL SOURCE Model 5953 is a precise crystal controlled source of VHF power designed for X-band frequency measurements when used with a suitable harmonic generator. Power output adjustable to approximately 2 watts into 50 ohms at 245 mc. Frequency range from 200 to 250 mc. Provision is made for amplitude modulation of the RF signal by means of internal 1 mc sine wave oscillator.



GUN GAS DETECTOR Model GG/101 is designed primarily for the detection of explosive gun gases in aircraft but is adaptable for other combustible gases. Outstanding features include lightweight airborne package, extremely fast reaction time, high sensitivity, and complete alarm and control circuitry.



FOR FURTHER INFORMATION CONCERNING ANY OF THE ABOVE PRODUCTS CONTACT

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PYROFERRIC INSERT CORES

Diam: .245 to .250 • Insert: 4-40 x 1" Extending
Slot in Core: 1/32 x 1/32

| Part No. | Material | Length |
|-----------|-------------------------|--------|
| EE 5001-P | PY 12A (IRN-8) | 3/8" |
| EE 5002-P | PY 1A (Carbonyl E) | 3/8" |
| EE 5003-P | PY 1A (Carbonyl E) | 1/2" |
| EE 5004-P | PY 14A (Carbonyl TH) | 3/8" |
| EE 5005-P | PY 14A (Carbonyl TH) | 1/2" |



PYROFERRIC THREADED CORES

Material: PY 1A (Carbonyl E)

| Part No. | Diameter | Length | Thread | Adjusting Slot |
|-----------|-----------|--------|----------------------|-----------------------------------|
| EE 5101-P | .248-.250 | 3/8" | 28 T.P.I. Shallow | Hex Hole .103-.105 |
| EE 5102-P | .237-.239 | 3/8" | 32 T.P.I. Shallow | Hex Hole .103-.105 |
| EE 5103-P | .180-.182 | 5/16" | 32 T.P.I. Shallow | Screwdriver slots both ends |

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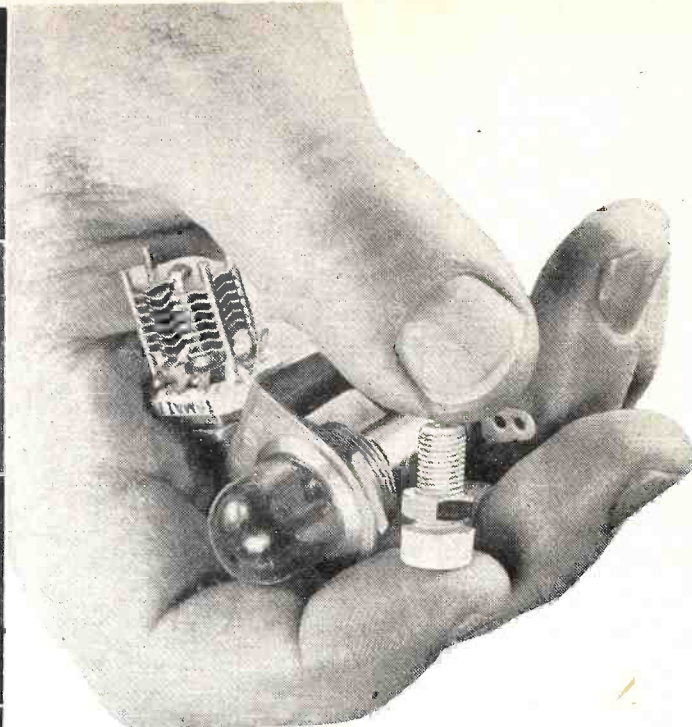
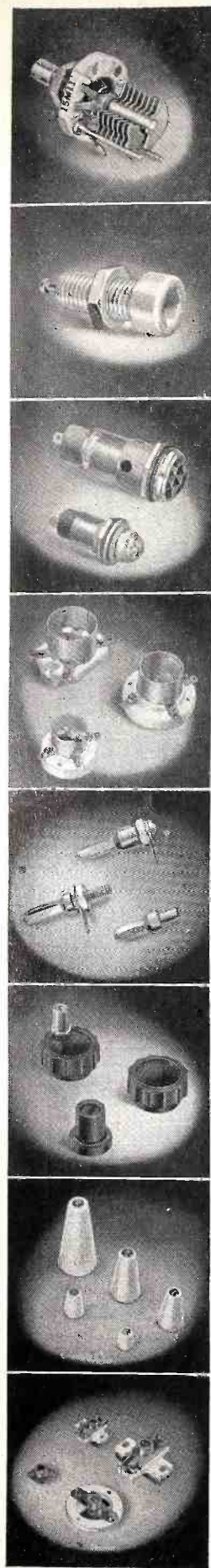
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Products may seem similar, but results often differ. Designed for performance and engineered for dependability, quality JOHNSON components are often the answer where other products fall short.

Examples of popular JOHNSON components are shown in the accompanying illustrations.

Miniature Capacitors—An original Johnson development, these miniature air variables are the smallest made. Rugged and dependable, they represent just one of the many types of quality variable capacitors designed by Johnson for virtually every electronic need.

Nylon Tip Jack—The finest insulated tip jack on the market today. Injection molded of tough, low loss nylon—silver plated contacts. Suited to coded application—available in 11 colors.

Pilot Lights—Shown here, the 1" and 1/2" enclosed types are just two samples from Johnson's complete line of Pilot Lights and Jewel Assemblies. Other types: Open, Variable Intensity, and UL Approved.

Tube Sockets—(4 pin Bayonets illustrated) A quality line of heavy duty steatite and porcelain sockets. Miniatures and Shields, Wafers, Bayonet, and Special Purpose types available.

Banana Plugs and Jacks—Skillfully machined and heavily plated, Johnson plugs and matching jacks are highly corrosion resistant. Studs extend full length for added strength—an industry favorite for years.

Knobs and Dials—A distinctive line of knobs and dials with that "custom look." 12 flutes instead of the usual quantity — provide comfortable touch, dial markings readily seen even under adverse lighting conditions. Made of tough, scratch resistant black phenolic.

Insulators—Strength when you need it—a line of low loss, high quality steatite and porcelain insulators. Standoff and feed-thru types as well as antenna strain insulators, feeder insulators and bushings.

Shaft Couplings—Designed for the most exacting application, no fatigue failure here. These flexible and fixed shaft couplings are capable of many thousands of operating cycles.

For complete information on all quality Johnson Products, write for your copy of the NEW General Products Catalog #975.



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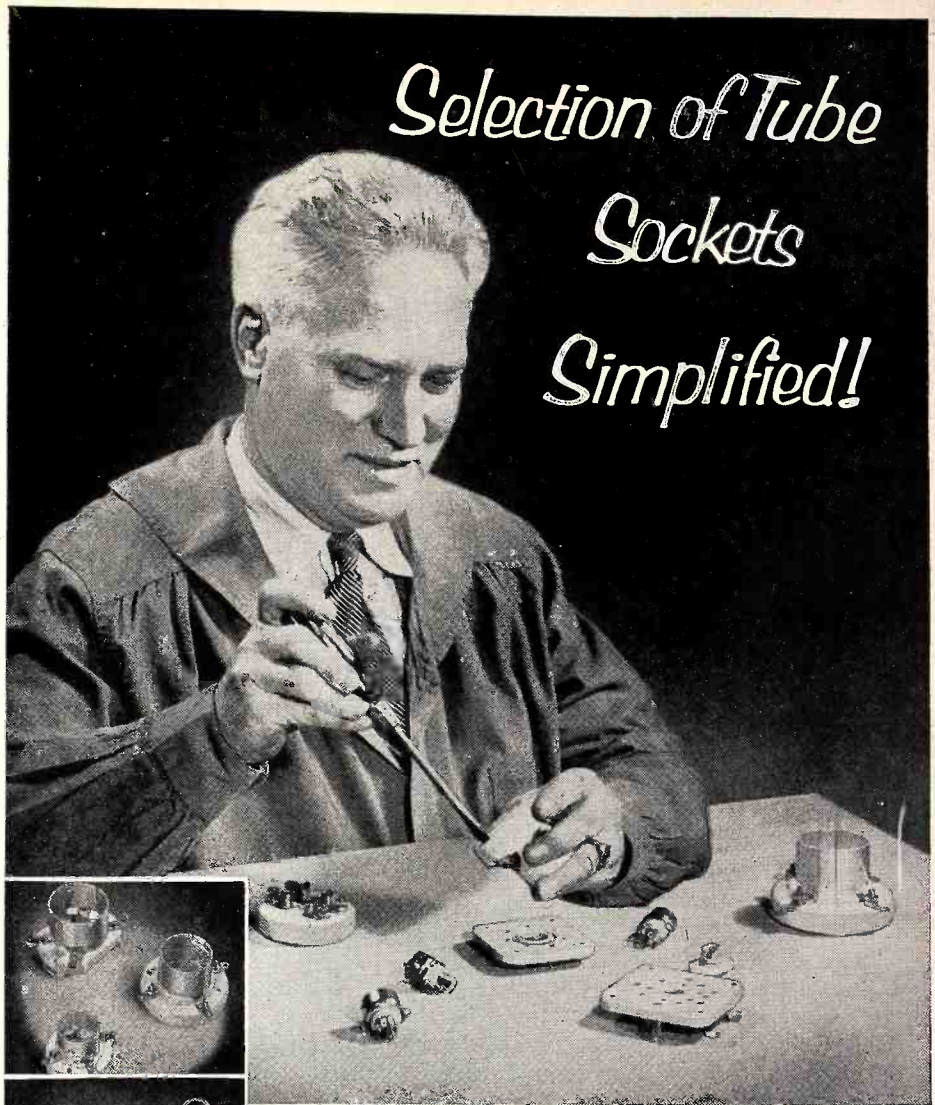
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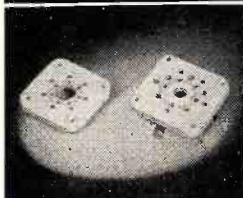
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Standardization saves time and extra expense!

These Johnson tube sockets do triple duty! Duty as Standard, Industrial, or Military models. Johnson's new tube socket standardization program now makes it possible to order special industrial and military sockets as well as standard commercial types from stock. Also, through standardization, small run set-up charges are avoided, and sockets ordered to special specifications can in many cases be furnished at lower cost by substituting an equal or higher quality socket from the standardized specifications listed below:

Standard: Commercial grade for general requirements. Bases, glazed porcelain or L4 steatite. Cushion washers, fungus resistant glass base melamine.

Industrial: Higher quality with glazed steatite bases, DC200 treated, phosphor bronze or beryllium copper contacts .0005 silver plated. Aluminum retaining shells or shields are Iridite #14 treated. Glass base melamine cushion washers, fungus resistant.

Military: Top quality to meet all military requirements. Bases L4 or better glazed steatite, DC200 treated. Phosphor bronze or beryllium copper contacts, heavy silver plated. Fungus resistant glass base melamine cushion washers. Solder terminal ends hot tin dipped. Retaining shell brass .0003 nickel plated. Aluminum shields or shield bases Iridite #14 treated. Threaded hardware .0002 nickel plated, unthreaded hardware .0003 nickel plated. Entire socket protected for 200 hour salt spray.

For further information on Johnson Tube Sockets, write for the new Johnson General Products Catalog #975.

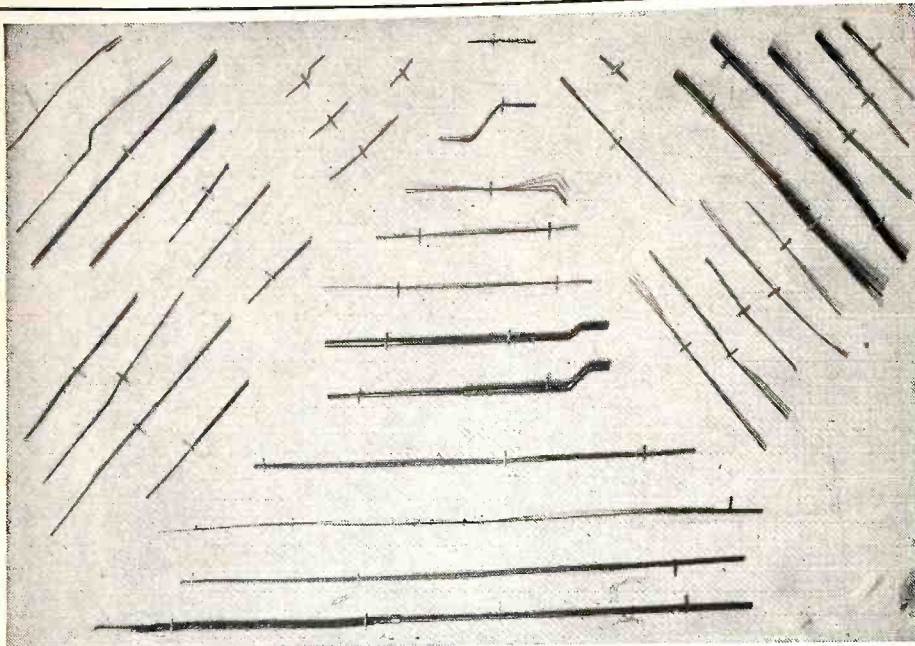


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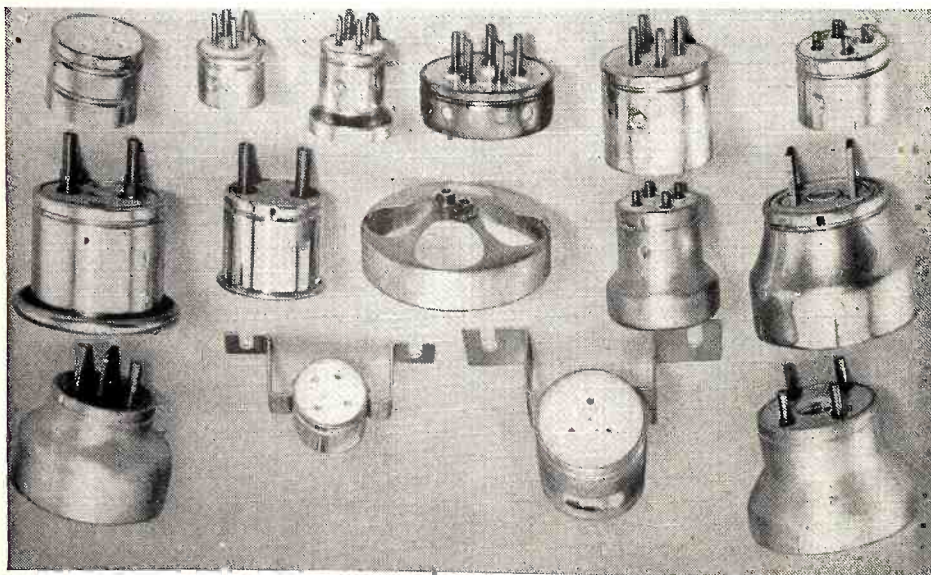
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Quality leads make quality tubes . . . and for over 30 years The Engineering Co., under personal supervision of Daniel Kondakjian, has been making quality precision lead-in wires for vacuum tight seals, for lamps, radio tubes, electronic devices and other special applications. Precision machines, capable of holding these fine wires so that they are accurately located and carefully spaced, assure high operating efficiency and uniformity in the finished product.

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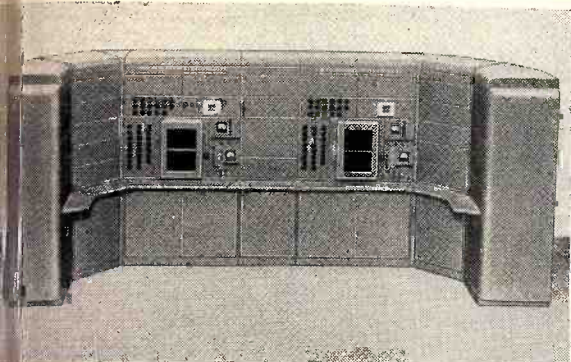
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NEON

REEVES INSTRUMENT CORPORATION • 215 EAST 91st ST., NEW YORK 28, N. Y.

NEW ANALOG COMPUTER PACKAGING CONCEPT PERMITS MAXIMUM COMPONENT SELECTION



400 Series REAC® Expansion Consoles Combine Adaptability with Economy

Diode Function Generator, Diode Multiplier Recorder, Servo Voltmeter added to REAC Line

The Reeves Instrument Corporation assures its position of leadership in the field of analog computing equipment with the introduction of a new packaging concept, the Expansion Console of the Series 400 REAC. This year, Reeves also announces the addition of an all-electronic diode function generator, a square-law diode multiplier, a desk-mounted recorder and a servo voltmeter to its line of quality computing equipment. These units exemplify the high standards of accuracy, flexibility and adaptability which have already earned REAC equipment such a fine reputation.

The modular construction of the 400 Series REAC allows the types and quantities of components to be chosen so as to satisfy individual requirements. Not only is the initial size of the console variable but later expansion may be effected with great economy.

The new 400 Series REAC, shown above, represents an entirely new analog computer packaging concept which allows greater freedom in the choice of components and makes expansion economical.

MINIATURE FLOATED GYROS CONTROL, MEASURE MOTION

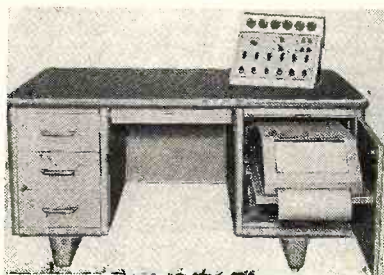
Reeves Instrument Corporation, long a quantity manufacturer of quality HIGU floated gyros, is now offering three new floated sensing devices of great accuracy, the 20 IG Floating Gyro, the 20 RG Rate Gyro and the 20 A Pendulum Accelerometer. Because the output gimbal of each of these devices is supported by the buoyancy of a fluid of its own density, friction is negligible. Thus accuracy is comparable to that of much larger units.

Though rugged enough to withstand government high-shock and vibration tests, each of the units weighs about one pound and is only two inches in diameter. The floating gyro is used to cause a structure to move at a commanded rate with respect to inertial space or in a system in which varying rates of rotation about a given axis must be mechanically integrated. It may also be used to stabilize the structure on which it is mounted with respect to inertial space and about a given input axis.

The rate gyro may be used in any system where the rate about a given axis must be measured.

The accelerometer may be used in any system where the acceleration in inertial space along a given axis must be measured.

Reeves also produces a variety of precision floated gyros in many sizes.



Six Channel Recorder

PRECISION INDUCTION RESOLVERS USEFUL FOR MANY APPLICATIONS

Reeves precision induction resolvers are employed as basic elements in analog computers, automatic control systems, angle data transmission systems and plan position indicating radars.

Miniature resolvers (equivalent to Navy frame size 15) are available for applications where compactness is essential. Standard resolvers (equivalent to Navy frame size 23) may also be ordered.

Standard production models of Reeves resolvers compute the sine of an angle with an accuracy of better than five parts in ten thousand and with an angular error of less than two minutes.

Reeves resolvers are described in detail in RICO Bulletin #57.

DIODE AUXILIARY UNITS

Among the nonlinear computing components which may be housed in the 400 Series REAC are the new diode function generator and diode multiplier. Both of these units are capable of high speed real time operation and neither employs any complicated circuit configurations requiring servicing by specialized personnel or involving high replacement costs. The function generator is capable of generating a function of two variables.

Both the multiplier and the function generator are available as separate four channel units with built-in power supplies.

SERVO VOLTMETER

A convenient accurate readout device which may be ordered either as a part of a 400 Series Console or as a separate unit is the Servo Voltmeter. The standard unit is provided with 100-volt and 200-volt scales. Accuracy is 0.025% while the dial reads directly to 0.01 volt.

SIX CHANNEL RECORDER

A new six channel recorder featuring automatic cycling may be ordered desk mounted, caster mounted or installed in a 400 Series Console. The automatic cycling provides sensitivity and offset traces prior to a run. From them, personnel studying the recording later will know immediately at what deflection sensitivity each of the channels was operated and what offset voltage, if any, was introduced to each channel.

OTHER REAC MODELS

In addition to the 400 Series, Reeves offers a wide variety of computer models. The desk-top 300 Series is ideal for small laboratories and for "on location" work. The 200 Series features single cabinets housing built-in power supplies, computing amplifiers and servos.

PROJECT CYCLONE

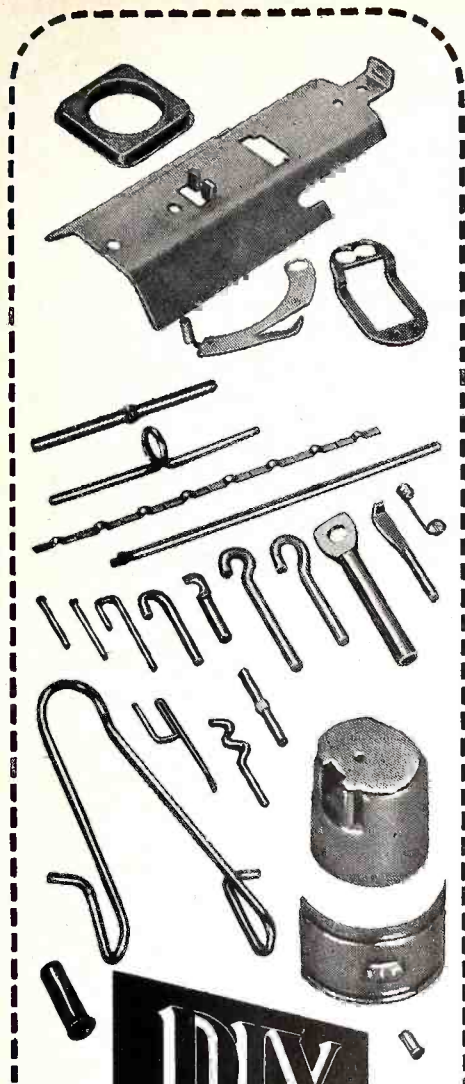
The REAC line of commercial computing equipment is the outgrowth of simulator development work done under contract to the Navy. Reeves is currently operating Project Cyclone, under the cognizance of the Bureau of Aeronautics. This activity, which is one of the largest analog computer installations in the world, uses essentially commercial REAC

STANDARD, MINIATURE BREADBOARD INSTRUMENTATION PARTS ECONOMICAL FOR BUILDING EXPERIMENTAL SERVOS, COMPUTERS

Reeves manufactures a complete line of precision breadboard parts for economical construction of experimental servos and computers. The line includes precision gears, mounting hangers, slotted mounting plates, etc. The use of this technique precision mechanical systems for building experimental models completely eliminates drafting and ma-

chine shop time and permits models to be modified quickly and inexpensively. Catalog RICO #10 gives a complete listing of standard (1/4" shaft) and miniature (1/8" shaft) sizes. The latter are ideal for applications where small size and light weight are important factors.

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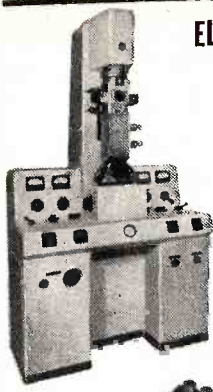
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CATHODE RAY OSCILLOGRAPH: Single, double and quadruple beam.

ELECTRON DIFFRACTOGRAPH: Frequency to 50 mc.

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Galvanometers: Pointer, Mirror, Vibration.
Bridges: Thompson-Wheatstone, Wheatstone, Schering, Fault Detecting. Transformer measuring apparatus. High and medium frequency measuring instruments.

POWER SUPPLIES: Model PS-22 500-1500 volts at 1 m.a. Output voltage changes less than 0.05% from zero to full load. 0.10% change in input causes less than 0.03% output voltage change. Price \$195-\$215.



MODEL PS-22

Model PS-71 1000-5000 volts at 1 m.a. Price \$595-\$610.

VACUUM TUBE VOLTMETER: 50 millivolts full scale to 500 volts. All ranges. Input resistance 50 megohms all ranges. Accuracy: 3% of scale on all ranges.

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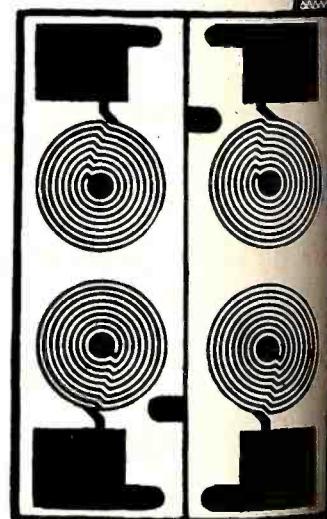
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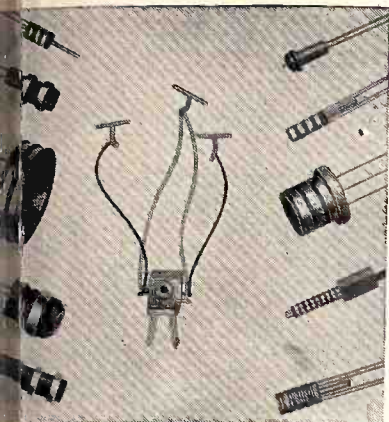
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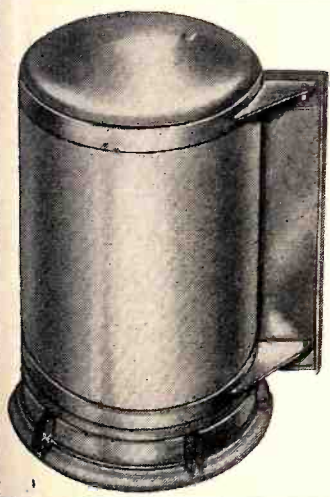
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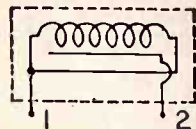
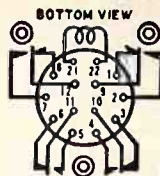
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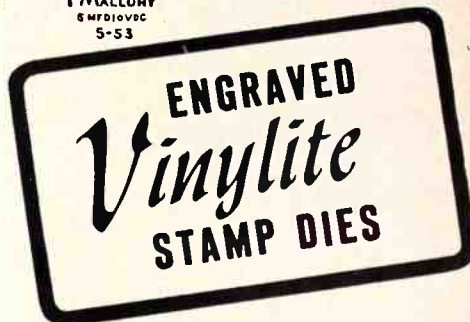


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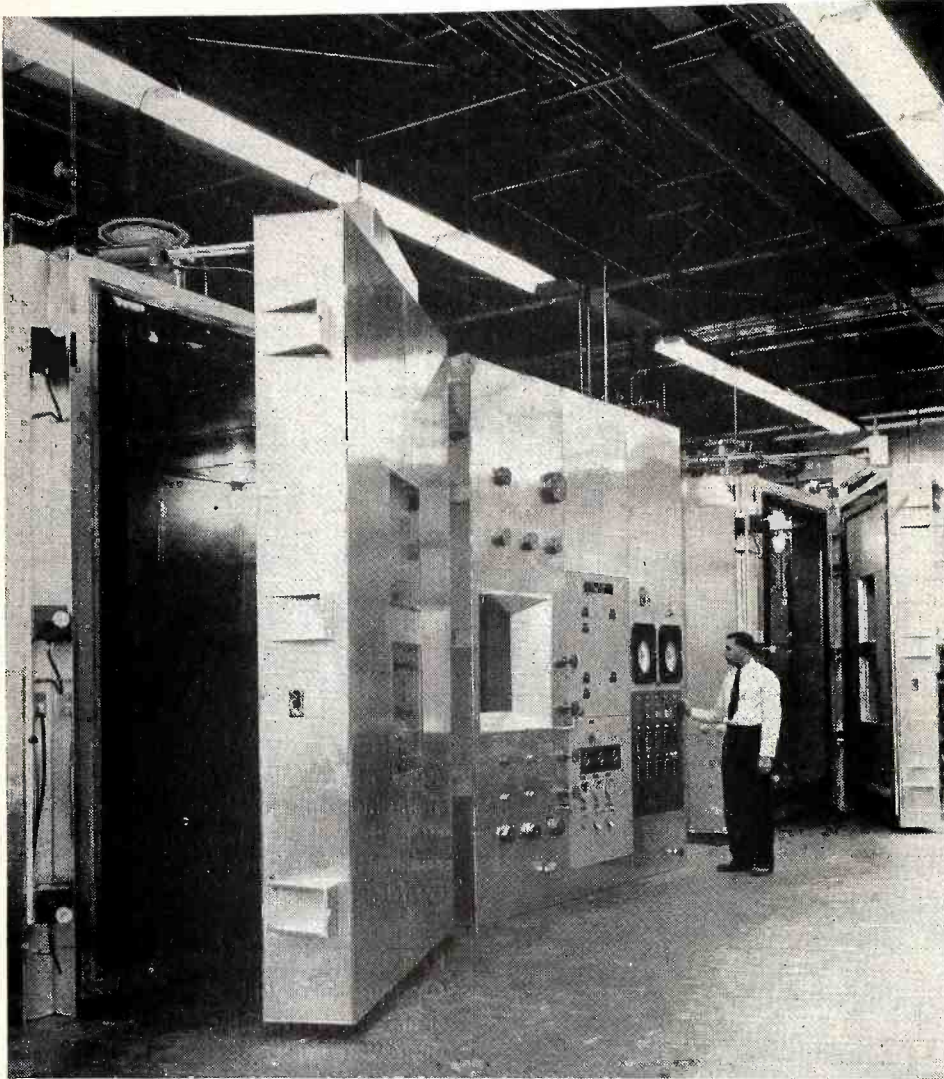
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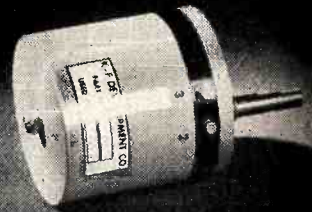


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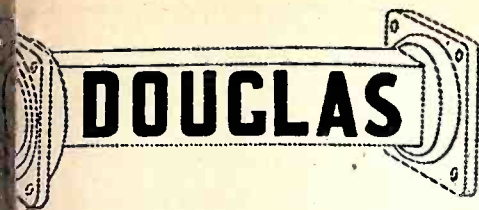
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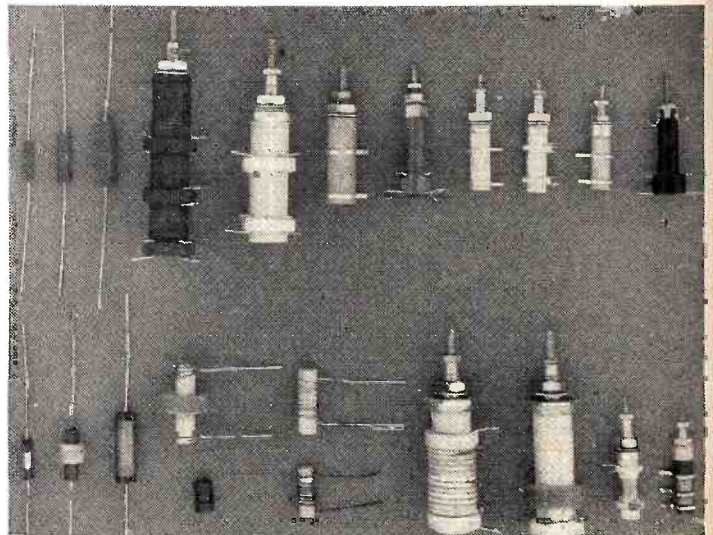
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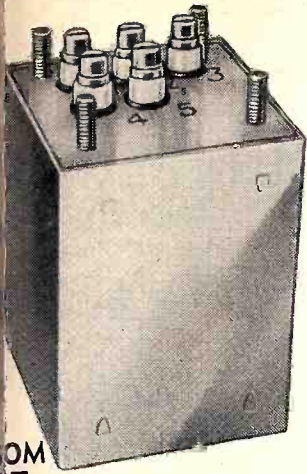


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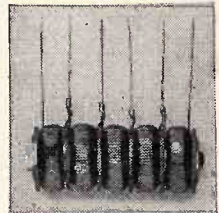
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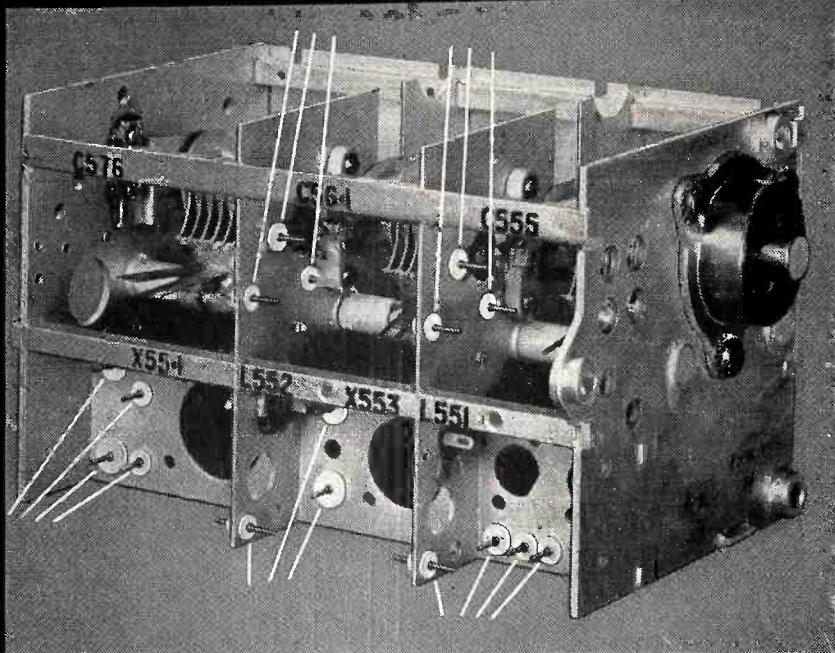
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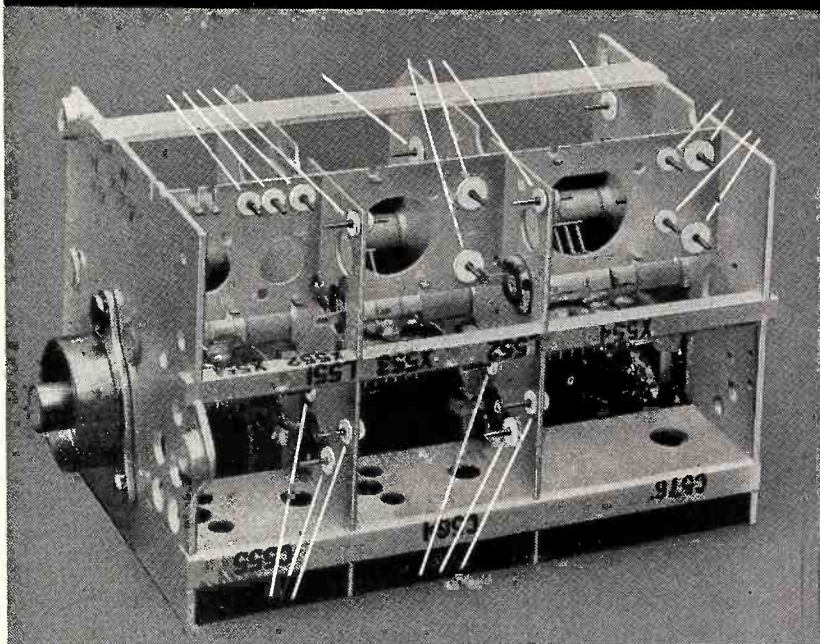
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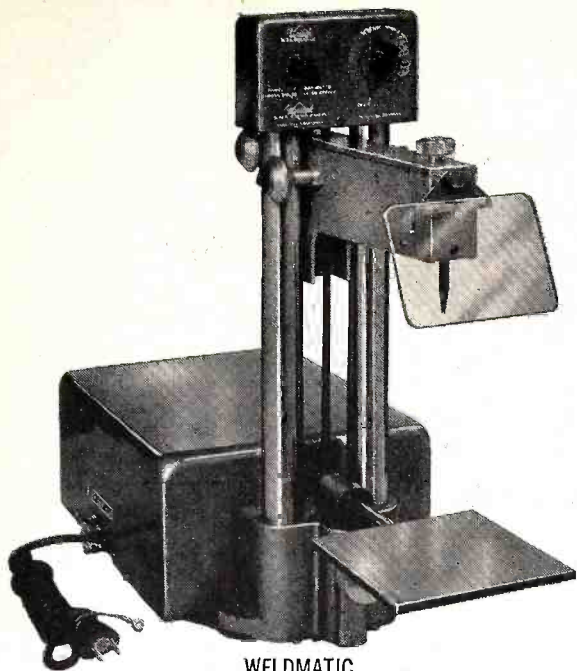
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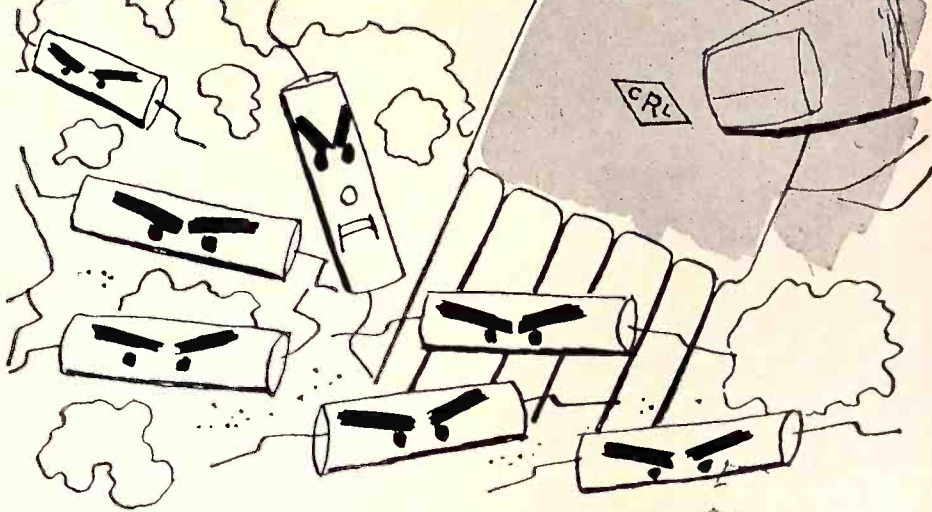
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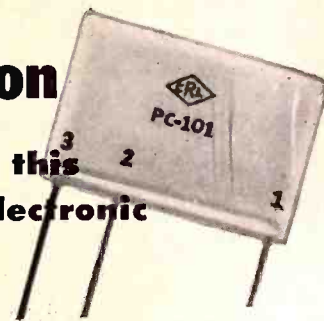
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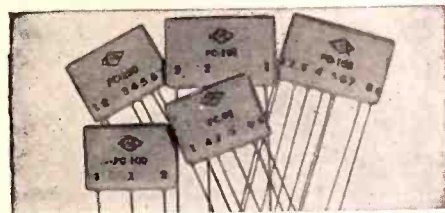
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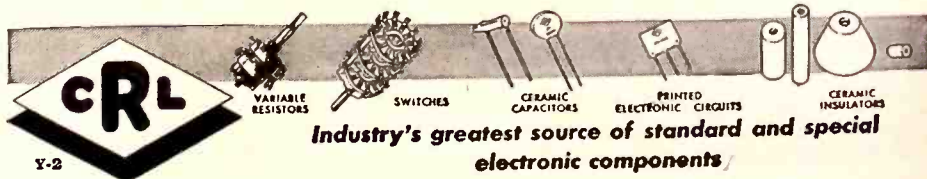


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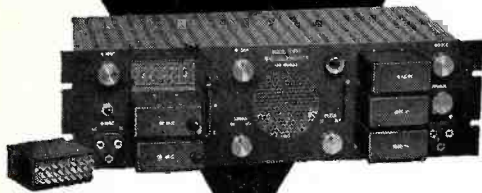
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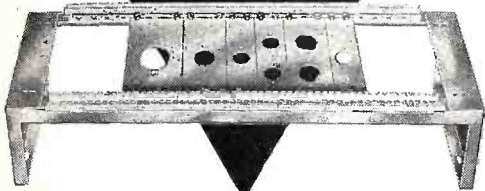
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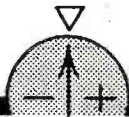


SPEED-CHASSIS

The Speed-Chassis is a flexible breadboard assembly with interchangeable socket arrangements which can be mounted on a relay rack. A shield can and panel are available to make successful breadboard assemblies both permanent and neat.

Two insulated tie-point strips and one grounded tie-point strip are provided, each 14" long. Individual plates are available, with holes already punched, to fit most all needs. In addition, three sizes of blank plates are cataloged.

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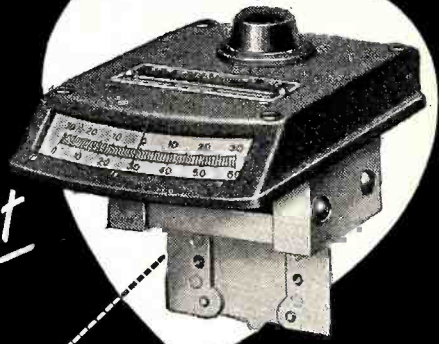
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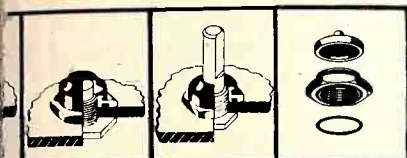
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268 for rotary shafts fits $\frac{3}{8}$ -32 thd. Also 20 and $\frac{1}{2}$ -32 thd w/large shafts.

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Illustrated data sheet and samples.

at 2462023

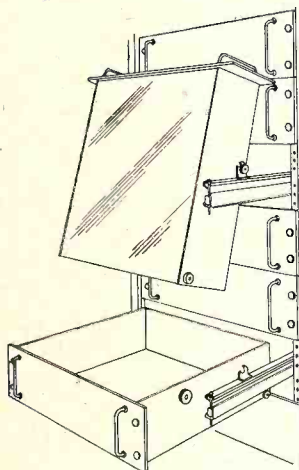
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371 Handle with mounting plate is designed for portable electronic equipment and control panel. Hinged grip of black anodized aluminum coated with black vinyl and swings 180° when not in use. Will lift 125 lbs. without distorted grip is comfortable to carry.

SLIDE ASSEMBLIES

ensive Chassis designed for relay rack Navy and Air Corps equip- ment available in. Materials comply with MIL-STD-130 (Ships). Mounting chassis to control panel for easy removal are easily attached, cad-plated, iridized with bronze stainless steel on bushings. Detailed



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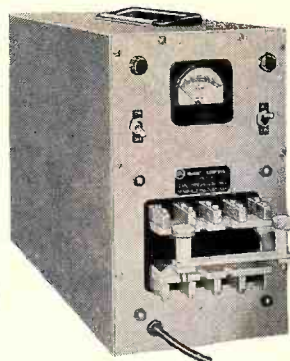
MODEL 459 (TS-330/TSM) C. I. Meter tests crystals in the frequency range of 1 to 15 mc. Three resistance ranges are available: 0-99, 0-990 and 0-9,900 ohms. Load capacitance is calibrated from 12 to 110 mmf., using calibration chart. Net \$560.

MODEL 531 (TS-683/TSM) C. I. Meter is used for crystals in the frequency range of 10 to 140 mc. Twelve calibrating resistors of 10, 22, 30, 40, 51, 60, 68, 82, 91, 100, 120 and 150 ohms, plus a 100-ohm variable resistor are used for resistance calibration. An adapter for measurement of anti-resonance resistance is provided. Net \$550.

MODEL 541 (TS-710/TSM) C. I. Meter tests crystals from 10 to 1100 kcs. Resonance and anti-resonance resistances from 10 ohms to 0.5 megohms are calibrated. Load capacitance calibrated from 15 to 105 mmf. Built-in voltmeter measures power dissipated in crystal. Internal ohmmeter measures crystal resistance using one of three variable resistance adapters supplied. Also supplied are two adapters for octal base and HC-5/U crystal holders, fourteen fixed calibrating resistors, and one RF cable. Net \$750.



HOW TO CHARGE MAGNETS Safely and Quickly—



New MODEL 107-A Magnet Charger has dual range charging current output—12,000 amperes for small magnets and 22,000 amperes for larger, Alnico V magnets. Any shape or kind of magnet can be charged, including core type mechanisms, using charging bar or special adapters. Booster Unit available for increasing output to 28,000 amperes. Carrying handle added for easier portability.

Unit is self-contained, simple to operate, all exterior parts can be handled during complete charging cycle without danger to operator. Rugged and designed for production charging, its average magnetizing cycle is under 5 sec. Net price \$490.

Weight: 75 lbs.-Size: 12 x 7 x 17-Operates on 110 volts, 15 watts.

INSTRUMENT CALIBRATION STANDARDS

MODEL 262B Dual Potentiometer Standards for calibrating meters to 0.1% through a range of 1 millivolt to 1500 volts and 1 microampere to 150 amperes. Uses L & N Brooks Mod. 7 pot. and Weston Mod. 4 standard cells. Voltage and current ranges separate for calibration of watt meters. Operates on 105/125 volts, 50/1600 cycles, 350 watts, with internal voltage regulator. Interlocks and hood protect instrument under test and operator from accidental overloads. Price \$14,300.

Also available are MODELS 261B and 454 Standards for calibrating AC meters to 0.5% through ranges of 10 millivolts to 1500 volts and 1 microampere to 200 amperes; MODEL 260B Standards for DC meters to 0.5% over ranges of 1 millivolt to 1500 volts and 1 microampere to 150 amperes. Detailed data and prices on request.



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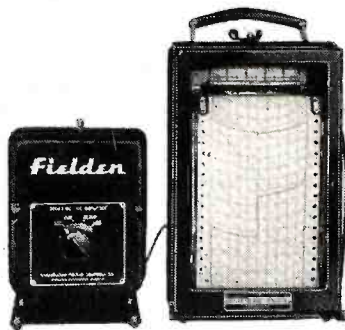
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Fielden INSTRUMENTS — UNUSUALLY VERSATILE AND ADAPTABLE



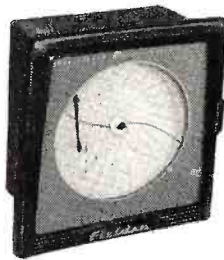
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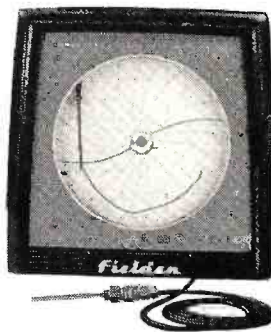
FIELDEN SERIES 80 D.C. AMPLIFIERS

This instrument is a null balance amplifier which provides an output current proportional to input current or voltage. The unit combines simplicity and low cost with good sensitivity and an extremely high order of stability. Eight ranges are available, and for thermocouple use—each of the four ranges includes automatic cold junction compensation. Available in either Class I Group C & D or Class II, E, F, & G housings. This instrument is unique in laboratory and industrial instrumentation, and provides the imaginative engineer with a tool for many new applications where low cost, precision measurement of small d.c. currents or voltages is required.



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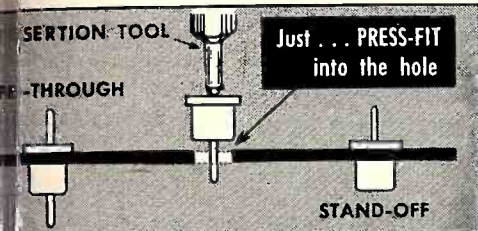
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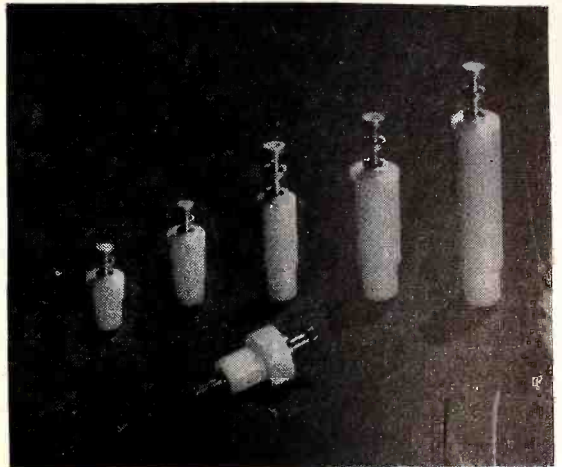
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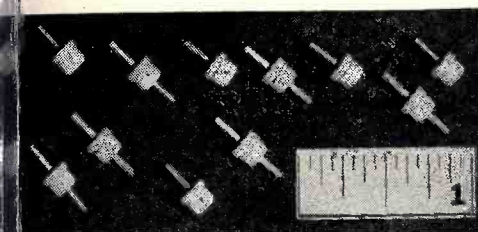
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**No soldering, no nuts
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"PRESS-FIT"
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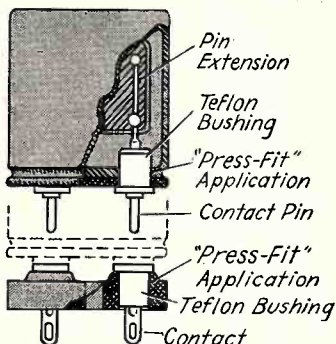
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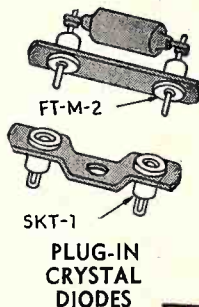
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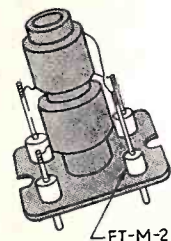
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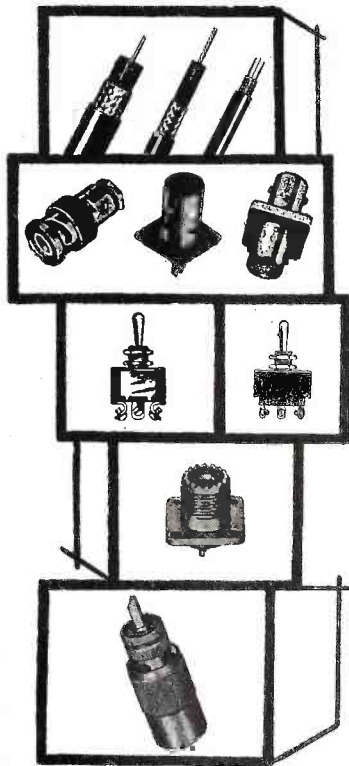
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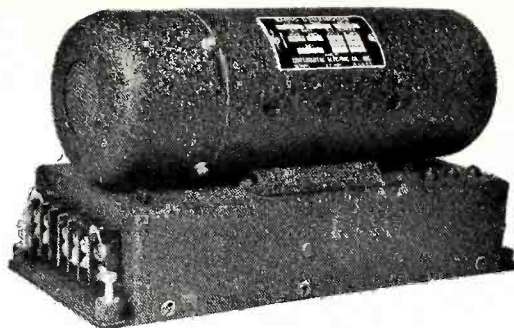
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is a partial listing.
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SILICON DIODES



| | CENTER FREQUENCY (mc) | MAX CONVER LOSS (db) | MAX NOISE RATIO (1-max) | VSWR (max) | IF IMPEDANCE (OHMS) |
|--------|-----------------------|----------------------|-------------------------|------------------------|---------------------|
| *IN21B | 3060 | 6.5 | 2.0 | - | 200-800 |
| *IN21C | 3060 | 5.5 | 1.5 | - | 200-800 |
| *IN150 | 6750 | 6.0 | 2.0 | 1.5 | 250-500 |
| *IN160 | 6750 | 6.5 | 2.7 | - | 200-800 |
| *IN23B | 9375 | 6.5 | 2.7 | - | 200-800 |
| *IN23C | 9375 | 6.0 | 2.0 | 1.5 | 325-475 |
| *IN149 | 9375 | 5.5 | 1.5 | 1.5 | 325-475 |
| IN78 | 16000 | 7.5 | 2.5 | - | 325-625 |
| IN26 | 23984 | 8.5 | 2.5 | - | 300-600 |
| IN53 | >30000 | 8.5 | 2.5 | - | 400-800 |
| IN32 | 3295 | Fig. Merit > 85 | | Video Impedance 4K-22K | |

* Also available with reversed polarity

MAGNETRONS

| TUBE TYPE | FREQUENCY Mc | NOMINAL PEAK OUTPUT KW | PEAK VOLTAGE ANODE KV | VOLTAGE RATE OF RISE KV/μs | AV. ANODE CURRENT MA | PEAK ANODE CURRENT A | PULSE DURATION μs | DUTY CYCLE | PULLING FACTOR (max) Mc | INITIAL HEATER | |
|---------------|--------------|------------------------|-----------------------|----------------------------|----------------------|----------------------|-------------------|------------|-------------------------|----------------|-----------|
| | | | | | | | | | | VOLTAGE V | CURRENT A |
| 5789 | 34512-35208 | 40 | 10.0-13.0 | 110-120 | 5.0 | 20.0 | 0.25 | .00025 | 40 | 6.0 | 2.0-2.4 |
| | 34512-35208 | 30 | 10.0-13.0 | 110-120 | 6.5 | 15.0 | 0.5 | .0004 | 40 | 6.0 | 2.0-2.4 |
| | 34512-35208 | 20 | 10.0-13.0 | 110-120 | 6.0 | 10.0 | 1.0 | .0006 | 40 | 6.0 | 2.0-2.4 |
| 2142 | 9345-9405 | 8 | 5.3-5.7 | 60 | 9.0 | 4.5 | 1.0 | .002 | 15 | 6.3 | 0.43-0.60 |
| | 9345-9405 | 8 | 5.3-5.7 | 60 | 4.0 | 4.5 | 2.2 | .0009 | 15 | 6.3 | 0.43-0.60 |
| | 9345-9405 | 8 | 5.3-5.7 | 60 | 2.9 | 4.5 | 0.8 | .00065 | 15 | 6.3 | 0.43-0.60 |
| 6027 (2142A) | 9345-9405 | 20 | 6.4-7.4 | 60 | 7.5 | 7.5 | 1.0 | .001 | 15 | 6.3 | 0.43-0.53 |
| | 9345-9405 | 10 | 6.0-7.0 | 60 | 7.0 | 3.5 | 1.0 | .002 | 15 | 6.3 | 0.43-0.53 |
| 4152 | 9345-9405 | 80 | 14.0-16.0 | 100 | 15.0 | 15.0 | 1.0 | .001 | 15 | 12.6 | 1.8-2.4 |
| | 9345-9405 | 80 | 14.0-16.0 | 100 | 15.0 | 15.0 | 5.0 | .001 | 15 | 12.6 | 1.8-2.4 |
| 6444 (ESM-48) | 9800-10000 | 0.001 CW | 0.45-0.50 | - | 15.0 | .015 | CW | 1.0 | 15 | 6.0 | 0.4-0.5 |

TUBES

| TUBE TYPE | FREQUENCY RANGE Mc | LOW LEVEL UNFIRED RATINGS | | | | HIGH LEVEL FIRED RATINGS | | | | | |
|-----------|--------------------|---------------------------|-------------------|-------------------------|-----------------------|--------------------------|-----------------|--------------------|-------------------------|-------------|----------|
| | | VSWR max | INSERTION LOSS db | IGNITOR INTER-ACTION db | IGNITOR DROP 100μA -V | PEAK POWER KW | FLAT LEAKAGE MW | SPIKE LEAKAGE ergs | RECOVERY TIME μs @ -3db | ARC LOSS db | VSWR max |
| 1B63A | 8490-9578 | 1.9 | .3-7 | 0-2 | 200-375 | 4-200 | 10-40 | .05-2 | 1-10 | 8-1 | - |
| 633A | 8490-9578 | 1.4 | - | 0-2 | 200-375 | 4-200 | 0-20 | 0-1 | 1-10 | 8-2 | 1.2 |
| 5863 | 8490-9578 | 1.9 | .3-7 | 0-3 | 250-400 | 4-1000 | 5-30 | .05-15 | 1-8 | 8-1 | - |
| 6164 | 8490-9560 | 2.0 | .3-7 | 0-3 | 250-400 | 4-1000 | 5-30 | .05-15 | 1-8 | 8-1 | - |
| 1B58 | 2659-2969 | 1.65 | .3-5 | 0-3 | 250-400 | 10-750 | 10-40 | .05-3 | 3-15 | 7-1 | 1.15 |
| 5927 | 3070-3530 | 1.9 | .3-7 | 0-3 | 275-425 | 10-750 | 10-50 | .05-3 | 3-15 | 7-1 | 1.15 |

TUBES

| TUBE TYPE | FREQUENCY RANGE Mc (VSWR 10:1) | LOW LEVEL UNFIRED RATINGS | | | | HIGH LEVEL FIRED RATINGS | | | | MECHANICAL MOUNT |
|-----------|--------------------------------|---------------------------|--------------|--------------------|----------------------------|--------------------------|------------------|-------------|----------|----------------------------|
| | | MIN. ISOLATION db | LOADED Q max | TUNING SUSCEPTANCE | EQUIVALENT CONDUCTANCE max | PEAK POWER KW | RECOVERY TIME μs | ARC LOSS db | VSWR max | |
| 1B35A | 9000-9600 | 12 | 6.5 | ±.06 | 0.1 | 4-250 | 2-20 | 8-1 | 1.1 | Choke Socket |
| 6163 † | 8800-9300 | 12 | 6.5 | ±.06 | 0.06 | 4-250 | 2-20 | 8-1 | 1.1 | Choke Socket |
| 1B37A | 8500-9000 | 12 | 6.5 | ±.06 | 0.1 | 4-250 | 2-20 | 8-1 | 1.1 | Choke Socket |
| 5864 | 9000-9600 | 12 | 8.0 | ±.06 | 0.1 | 4-500 | 2-20 | 8-1 | 1.1 | Choke Socket |
| 6276 | 9000-9600 | 12 | 6.5 | ±.06 | 0.1 | 4-250 | 2-20 | 8-1 | 1.1 | Woven Braid Gasket |
| 6284 | 8500-9000 | 12 | 6.5 | ±.06 | 0.1 | 4-250 | 2-20 | 8-1 | 1.1 | Woven Braid Gasket |
| 6393 | 9000-9600 | 12 | 6.5 | ±.06 | 0.1 | 4-250 | 2-20 | 8-1 | 1.1 | Molded Rubber-Metal Gasket |
| 6369 | 8500-9000 | 12 | 6.5 | ±.06 | 0.1 | 4-250 | 2-20 | 8-1 | 1.1 | Molded Rubber-Metal Gasket |
| 6396 † | 8700-9700 | 10 | 6.5 | ±.06 | 0.1 | 4-250 | 2-20 | 8-1 | 1.1 | Molded Rubber-Metal Gasket |
| 1B56 | 2750-2950 | 10 | 5.5 | ±.05 | 0.05 | 20-1000 | 2-25 | 8-1 | 1.15 | Woven Braid Gasket |
| 6024 | 2700-2900 | 10 | 5.5 | ±.05 | 0.05 | 20-750 | 2-20 | 8-1 | 1.15 | Woven Braid Gasket |
| 5921 | 3100-3300 | 10 | 5.5 | ±.05 | 0.05 | 20-1000 | 2-25 | 8-1 | 1.15 | Woven Braid Gasket |
| 5922 | 3300-3500 | 10 | 5.5 | ±.05 | 0.05 | 20-1000 | 2-25 | 8-1 | 1.15 | Woven Braid Gasket |

† 2 tubes series-mounted back-to-back.

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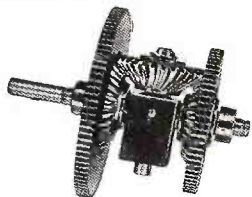
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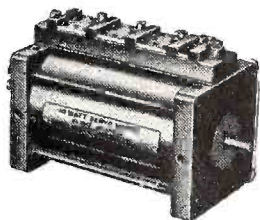
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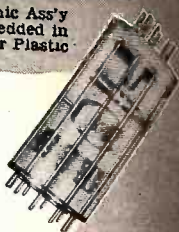
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CHARACTERISTICS

| | HH-1500 | HH-2000 | HH-2500 |
|-----------------------------|---------|---------|---------|
| Delay (μ sec/ft) | 0.075 | 0.11 | 0.6 |
| Impedance (ohms) | 1600 | 2200 | 2800 |
| Attenuation (db/ μ sec) | | | |
| 1 mc | 1.0 | 0.2 | 0.5 |
| 4 mc | 2.3 | 0.5 | 1.3 |
| 10 mc | 7.0 | 1.7 | 4.0 |
| Cable O.D. (inch) | 0.405 | 0.405 | 0.28 |

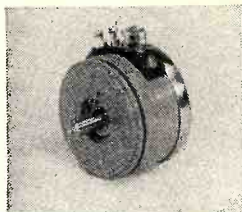
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precision potentiometers have a wide scope and cover many types and sizes, in the field of wire-wound units of high accuracy, long life and stability. Rattray's potentiometers are compact, having mechanical and electrical capabilities of the highest order. The two basic lines include: single and multiple turn linear and non-linear models. Rattray has the facilities for quantity production orders; fast deliveries and special requirements in sample and special requirement quantities.



GENERAL SPECIFICATIONS

| Models | 106 | 162 | 200 | 300 | 181-3 | 181-10 |
|----------------------------------|--------|---------|---------|---------|---------|----------|
| Outer diameter, in. | 1.060 | 1.620 | 1.985 | 2.985 | 1.820 | 1.820 |
| Inner diameter, single unit, in. | 0.656 | 0.838 | 0.838 | 0.838 | 1.200 | 2.080 |
| Outer diameter, section, in. | 0.500 | 0.615 | 0.615 | 0.615 | 0.880 | 1.560 |
| Resistance Range, ohms: | | | | | | |
| max. | 50,000 | 140,000 | 178,000 | 283,000 | 100,000 | 350,000 |
| near | A | A | A | A | A | A |
| Contact Angle | 350° | 350° | 350° | 350° | 1080° | 3600° |
| Tolerances: | | | | | | |
| near | ±0.35% | ±0.15% | ±0.10% | ±0.075% | ±0.1% | ±0.075% |
| to | ±0.5% | ±0.5% | ±0.4% | ±0.3% | ±0.5% | ±0.3% |
| Outer Section, oz. in. | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 1.0 |
| Operating Rating at 40°C | 1 | 2.5 | 4.0 | 5.0 | 3 | 5 |
| Temperature Range | B | B | B | B | B | B |
| Life, Max. | 1/1500 | 1/2500 | 1/3300 | 1/5300 | 1/6000 | 1/20,000 |

Dimensional tolerances indicated are typical and vary with resolution. In some cases, extra taps can be provided as required. Springs available if required, and will increase length slightly. Leads on function involved.

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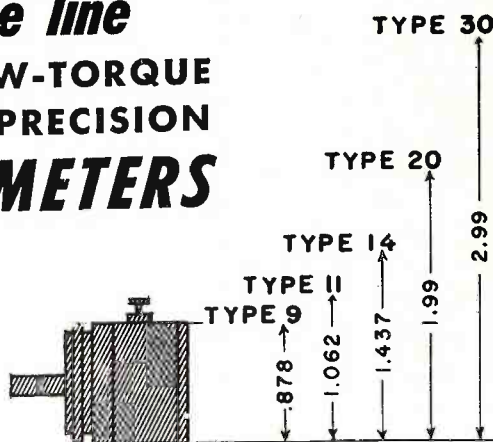
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ELECTRO-MEC



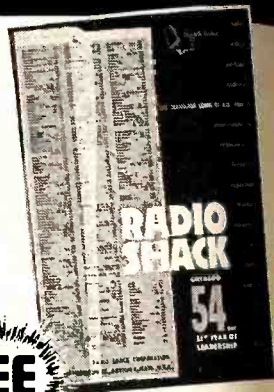
- Proven by designers and manufacturers of high performance computers.
- Available in many sizes for all applications of ultra-low-torque potentiometers.
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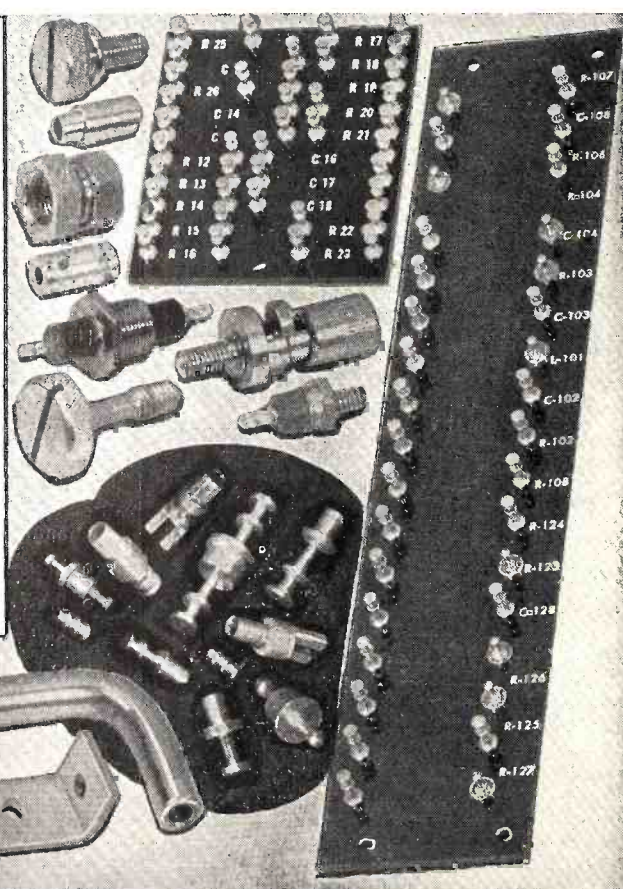
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Terminal Lugs, Insulated Terminals, and Electronic Hardware — Handles, Captive Screws, Spacers, Brackets, Dial Locks, Shaft Locks, Binding Posts.

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ASCOP



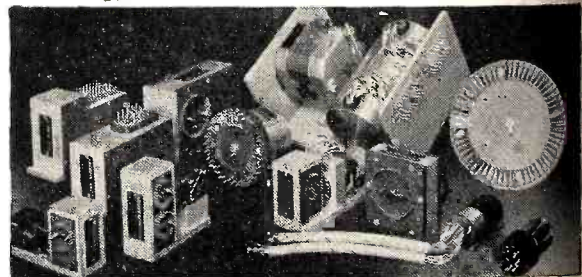
Now Available! Complete Time Division Multiplex Data Systems

Standardized equipment is now available for complete systems for multichannel data transmission over a single radio link or recording on a single magnetic tape track, using time-division multiplexing and pulse width coding.

ASCOP systems engineers can now choose from a complete line of units for sampling, coding, transmitting, receiving, monitoring, separating, reducing, and recording to assemble systems to meet your data transmission or recording problems.

Pulse width data systems provide, through time division multiplexing, a large number of identical data channels of moderate frequency response. The handling of information in the form of time rather than amplitude allows accurate operation independent of the characteristics of the transmitting or recording medium. Utilization of zero and sensitivity reference channels affords continuous automatic system calibration and avoids the need for frequent manual adjustment.

A typical standard ASCOP PW system handles 20 separate data channels with 5 CPS response per channel with overall system accuracy, from original data source to final reduced output record, of better than 1%. Real time output of each channel is available as a meter reading and as continuous record from a direct-writing recorder.



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Over 40 models, single and multi-pole, with up to 180 contacts per pole and speeds up to 100 RPS. For all applications requiring high quality switching of low level signals. Bulletin 521-R.

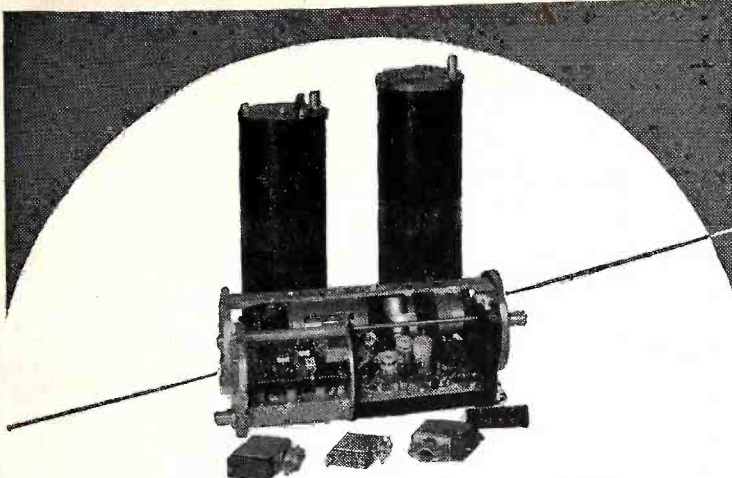


Your inquiries are invited. Phone, wire or write to the nearest office, advising us of your requirements

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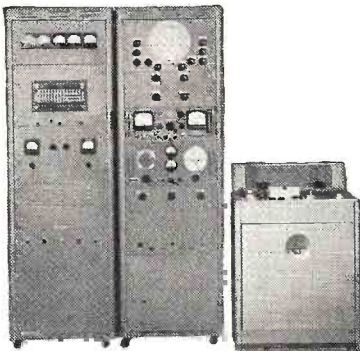
1641 S. LaCienega Boulevard, Los Angeles 35, Calif.
Crestview 1-8870



MODEL TK-M4/DC-M4 PW/FM AIRBORNE SET

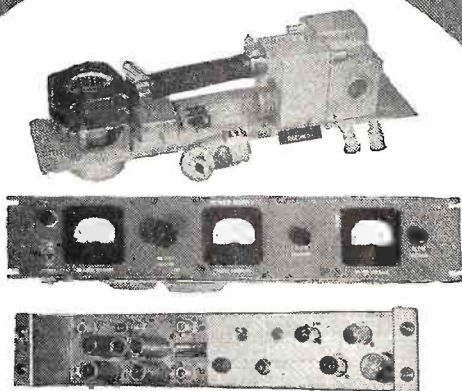
Uses a 30 RPS commutator to sample 28 data sources in the 0 to +5 volt range. 4 to 5 watt crystal-controlled RF transmitter is frequency modulated. Equipment is sealed and pressurized for high altitude operation, and withstands ambient temperatures from -40°F to +140°F, 100g shock, and 12g vibration.

Transmitting equipment is also available with other sampling rates and numbers of channels and in different packages for separate applications. Bulletin FBA-1.



M SERIES PW GROUND STATION

Separates and reduces all data channels in real time. Operates on signals from standard airborne sets, from FM/FM sub-carrier, or from magnetic tape recorder. Bulletin M-4



MODELS APA-1 RF PREAMPLIFIER AND AMC-1 MULTICOUPLER

Increase receiving gain and reduce noise figure for longer range RF link operation without increasing transmitter power. Permit connection of up to 4 receivers, tuned to different frequencies, to the same antenna. Bulletin APA-1.

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Our technical and manufacturing background provides the development of the finest electrical insulation to meet the most rigid requirements. Quality control, main-

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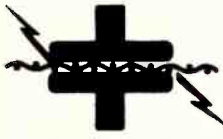
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All electrical insulation products made by Electro-Technical Products are available from our authorized distributors' stock, or from our own plant. For complete data and samples send your request to our Department E2-633.

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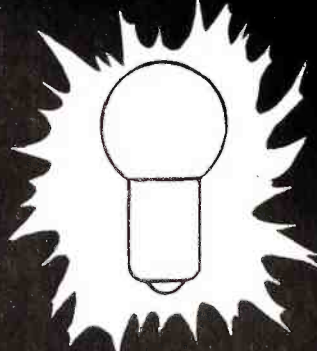
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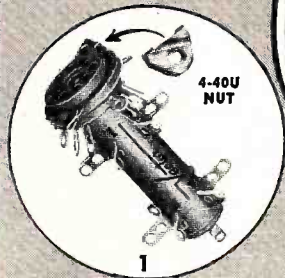
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LAMP WORKS**
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CHICAGO 10, ILL.

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Socket-Turrets for most tube types will carry a wide variety of circuit elements.

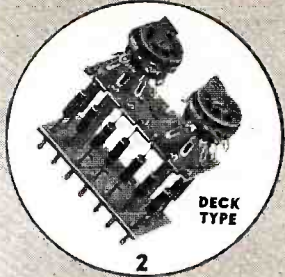


Plug-Ins of many sizes with sockets and plugs as desired provide great flexibility in circuitry.



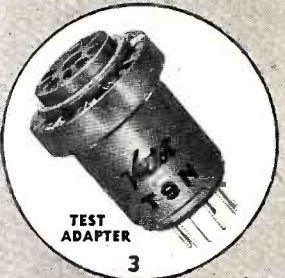
4-40U NUT

1



DECK TYPE

2



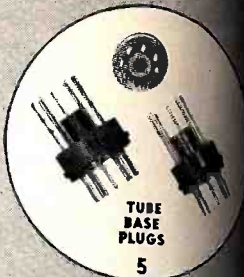
TEST ADAPTER

3



"C" PLUG-IN

4



TUBE BASE PLUGS

5



"B" PLUG-IN

6

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Unitize those tricky circuits for quick change or repair, compactness, ease of wiring. New snap-on 4-40 U nuts for socket saddles enable easy mounting (1). New pre-punched, eye-letted strip construction provides many variations (2). New Socket Test Adapters for most tubes enable quick tests on tube side (3). New miniature tube base plugs (5). Write for new catalog.

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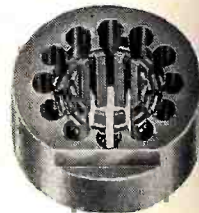
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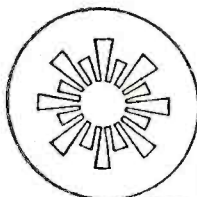
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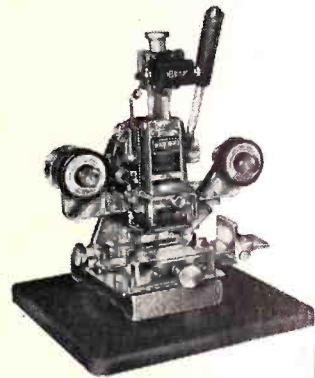
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Sanders Associates are the design adaptation engineers for "PROJECT TINKERTOY". Our background enables us to offer to industry modular electronics in a new form which is simple and economical.



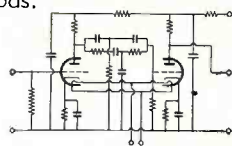
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RELIACUBE — a complete electronic circuit, with all its components, in a standard unit. Can replace any circuit produced by conventional methods.

One RELIACUBE can contain this entire circuit:



RELIAPAK — an assembly of RELIACUBES inter-connected by printed circuits to form a compact, rugged, and complete electronic package.

RELIAPLATES — small printed circuits bearing electronic components. Connected onto etched panels, they form a 3-dimensional printed circuit. With RELIAPLATES bearing either standard or modular components, assembly is simplified for either hand or mechanical production, lowering costs drastically.

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ENGINEER the conversion of your existing electronic equipment to these techniques. **DESIGN** new equipment to maximize the benefits possible. **PRODUCE** Reliacubes, Reliapaks and Reliaplates to your specifications in production quantities. Or: **TRAIN** your own personnel to set up and operate a module production line. **TOOL** a semi-mechanized production line at your plant.

components...

engineered for reliability



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Characteristics

Size — 1" x 1" x 1"

Weight — 1 oz.

Output — 3 cu. ft. air/min.

Input — 400 cps, 2 phase, 4 watts

— Readily adapted to single-phase operation —

Temp. Range — -55°C to +125°C

Acceleration — 100g

Vibration — (0-500 cps) 25g

Tested Life — over 1000 hrs.



HYDRAULIC SERVO VALVE — JAM-PROOF. Two stage, with INTERNAL MECHANICAL FEED-BACK. SELF-CLEARING; any sludge, dirt or metal particles tending to impair hydraulic system operation sheared by a force of up to 150 lbs. RESPONSIVE to high frequencies, Linear in output. Compact. Light. Reliable.

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PHASE COMPARATOR — full wave bridge comparator for use as MODULATOR, or SWITCH. Packaged bridge assembly consists of 2 complete bridges with appropriate switching resistors. Hermetically sealed in an inert gas.

Characteristics

Frequency resp. — 0-5000 cps

Max. Ref. Volt. — 120V rms

Max. Output Volt. — 50V DC

Dynamic Range — 46 db

Conversion Eff. — 85%

Max. Ambient Temp. — +125°C

Humidity — Hermetically sealed

Mounting — Octal Socket

Size — 1" diam.; 3" high

Weight — 2 ozs.



TAPE RESISTORS — ready-to-use, fixed precured and solderless — connecting. Reliohms are the electrical equivalent of conventional carbon resistors. Designed for printed circuits and modular construction. Suitable for use under conditions of extreme humidity and chemical contamination. Small size; low cost.

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Size — 1/2" x 1/8" x 1/100"

Rating — 1/2 watt at 70°C ambient

Tolerances — 10%, other tolerances to order

Range — 100 ohms to 5 megohms

General — U.L. approved and within

JAN-R-11 requirements

Special form factor tape resistances to order.

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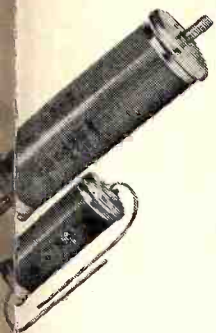
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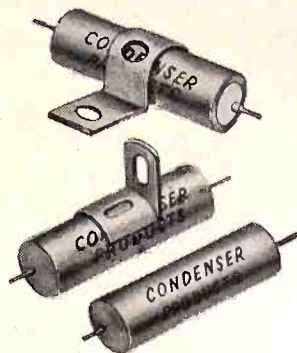
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GLASSMIKE
CAPACITORS**

glass housing, plastic dielectric, temperatures to 125° C. Resistance 10,000 megohms min. ASG type for DC applications; LSG for RF use; PAG where stability and temperature co-efficient is required. TAG and MAG for over 125° C.



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"M" miniature
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with new Mylar Film*. Resistance 125,000 megohms minimum. Temperatures to 140° C., small size—light weight. Voltage ranges from 100 to 600 V DC. Available with either or both ends insulated and with any selection of brackets.



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(CP70 style), voltage ranges from 600 V DC to 100 KV DC or higher. Designed for audio filter, coupling and by-pass service in electronic, control, and other similar equipment. Temperature characteristics to suit individual application.



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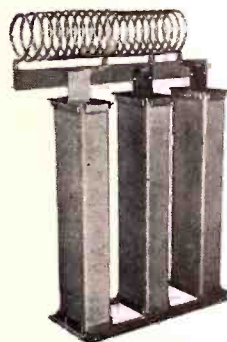
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POWER SUPPLIES**

in the following ranges: 2,000 V, 5,000 V, 12,000 V, 15,000 V, 30,000 V, and 50,000 V, at frequencies at 60 cycles and 400 to 1,000 cycles. Small size, light weight, engineered for various applications.



**SPECIALLY
DESIGNED
CAPACITORS**

for unusual applications where plastic film dielectric is essential. Examples: ultra high resistance (1014) capacitors for radiation counters (Nuclear), and RF power capacitors for transmitters, dielectric and induction heaters.



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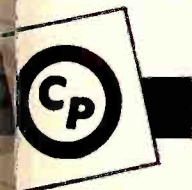
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regular and silvered

DIMENSIONS
1 1/2" x 13/16" x 11/32"

CAPACITY RANGES
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THE CM-42 MOLDED MICA CAPACITOR CAN BE WIRED DIRECTLY INTO CIRCUIT WITHOUT NEED OF ADDITIONAL MOUNTING FACILITIES

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- ★ All sizes and styles
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Gripmaster Strain Reliefs are "tremendous trifles" that make good products better!

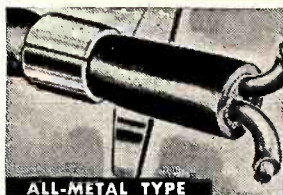
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4 WAYS TO END ALL CORD AND CABLE SERVICE FAILURES

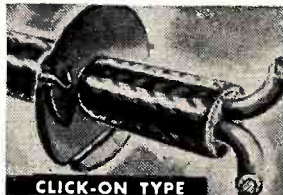
Economical

GRIPMASTER STRAIN RELIEFS

Interruptions due to cable and cord connection failures are eliminated because they anchor the cord to the product at the point of strain. GRIPMASTER Strain Reliefs can withstand pulls up to 100 lbs., and are acceptable to Underwriters Laboratories. All types Reg. U. S. Pat. Off.



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WIRE BINDING SLEEVES—Preventing fraying of cord ends, these specially-treated rubber tubes are available in five sizes to fit wires to .790

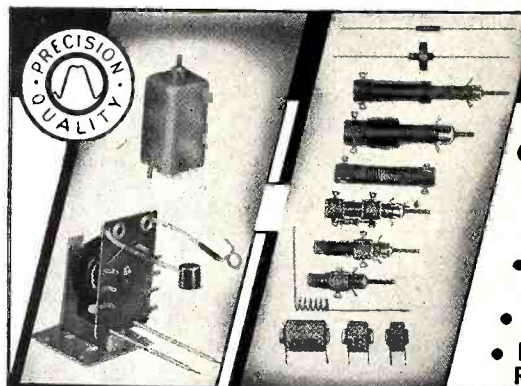


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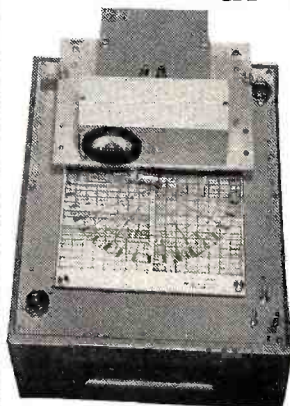
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Specialists in the manufacture of
COILS and TRANSFORMERS
including —

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Polar Recorder Model PR and POLINEAR RECORDER Model PFR



ruggedly built, portable, self-contained instruments for laboratory and field use.

for BEAM PATTERN PLOTTING of antennas, microphones, loudspeakers, ultrasonic devices.

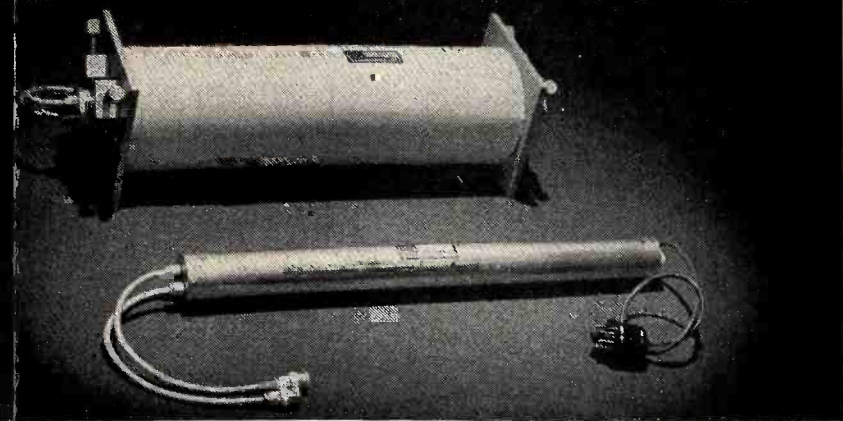
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Descriptive literature available.

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Designers and Manufacturers of Graphic Recorders
STIRLING, N. J.

TRAVELING-WAVE TUBES



Two types of S-Band Traveling-Wave Tubes for instrumentation and other applications as well as general laboratory use.

| | HA-1 | HA-2 |
|-----------|---------|---------|
| Frequency | 2-4 kmc | 2-4 kmc |
| Power | 15 mw | 1 watt |
| Gain | 40 db | 30 db |

Similar Huggins Tubes in other frequency ranges are presently in various stages of development, as well as other types about which details cannot be published.

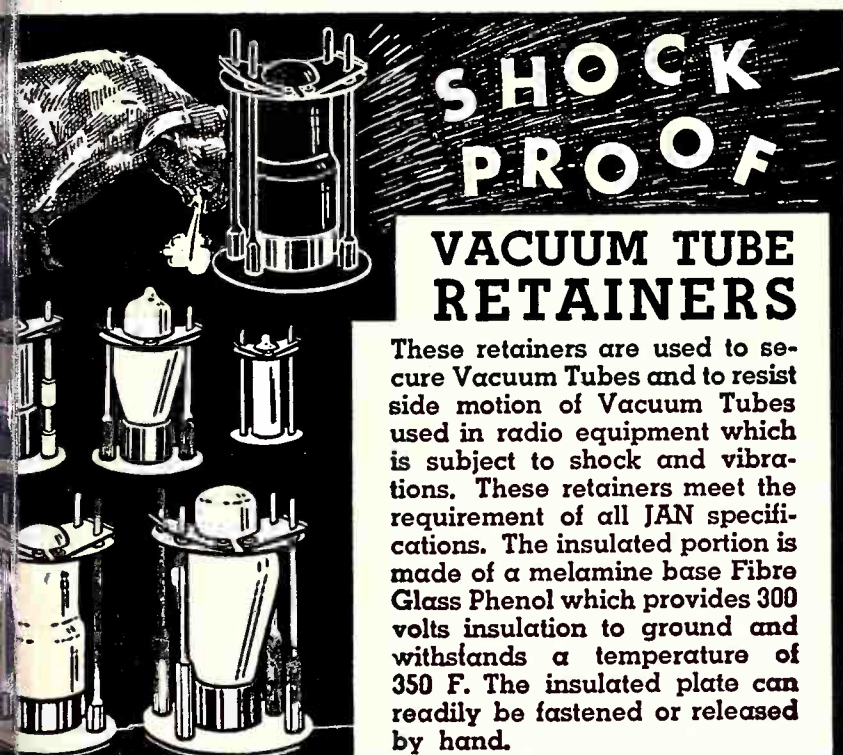
Write for further information on these tubes or concerning your individual requirements. Huggins engineers are prepared to undertake special research and development projects on traveling-wave tubes.



HUGGINS LABORATORIES

MENLO PARK 1

CALIFORNIA



VACUUM TUBE RETAINERS

These retainers are used to secure Vacuum Tubes and to resist side motion of Vacuum Tubes used in radio equipment which is subject to shock and vibrations. These retainers meet the requirement of all JAN specifications. The insulated portion is made of a melamine base Fibre Glass Phenol which provides 300 volts insulation to ground and withstands a temperature of 350 F. The insulated plate can readily be fastened or released by hand.

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Electronic Components

for envelope types T7, T8, MT8, ST12, T12ZDL, ST14, S14, S116, 1/2, MT-1C, ST19, T14, ST128CT-9.

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Electronic type—HIGH Voltage:

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Three plug-in electronic regulators available

REGULATOR TYPE 1—Standard cell reference

Impedance: Less than 0.01 ohm for wide range of frequencies
Ripple: Less than 5 parts per million (peak-to-peak) of output voltage
Drift: Less than 100 parts per million of output voltage

REGULATOR TYPE 2—Battery reference

Impedance: Less than 0.01 ohm for wide range of frequencies
Ripple: Less than 5 parts per million (peak-to-peak) of output voltage
Drift: Same as that of battery used for reference

REGULATOR TYPE 3—Glow-tube reference

Impedance: Less than 0.5 ohm
Ripple: Less than 0.01 per cent. (peak-to-peak)
Drift: Less than 1 per cent.

Voltages adjustable plus or minus 25 volts available from 100 to 500 volts at 500 ma., 1000 ma. and 1500 ma.

Electro-magnetic type—HIGH Current

Basic power unit has magnetic amplifier control, choke input filter and selenium rectifier. Two regulators available.

REGULATOR TYPE 4—Glow-tube reference

D.C. Regulation: Better than 0.1 per cent.
Recovery time: Less than 0.2 seconds.
Ripple: Less than 0.5 per cent.
Stability: Better than 0.2 per cent. (24 hour period)

REGULATOR TYPE 5—Standard cell reference

D.C. Regulation: Better than 0.01 per cent.
Recovery time: Less than 0.2 seconds
Ripple: Less than 0.5 per cent
Stability: Better than 0.05 per cent. (24 hour period)

Voltage range for electro-magnetic supplies: variable to 32 volts at 20 amperes

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RPC resistors are designed for use in test instruments, meters, electronic computers, and scientific equipment. These units are made to meet Government Specifications and rigid industrial requirements. The high standard of these units is maintained by using *only* the finest materials and quality control methods. All test equipment and standards used for checking and calibrating are of a type equalled by only a few of the leading laboratories.

| STYLE | RPC Type | Watts Max. (Commercial) | Volts Max. | Dimensions (Inches) | | Resistance | |
|--|-------------------------------|-------------------------|------------|---------------------|-------|------------|--------------|
| | | | | Length | Diam. | Min. | Max. Megohms |
| HIGH VOLTAGE RESISTORS TYPE B % Tolerances 15, 10, 5, 3, Matched Pairs 2% | BBF* | 1 | 3,500 | 1 | 5/16 | .050 Meg. | 100,000 |
| | BBM* | 2 | 7,500 | 1-3/4 | 5/16 | .100 Meg. | 250,000 |
| | BBR* | 3 | 15,000 | 3 | 5/16 | .200 Meg. | 500,000 |
| | BBV* | 5 | 30,000 | 5-1/2 | 5/16 | .400 Meg. | 1,000,000 |
| | BFQ | 4 | 15,000 | 2-1/2 | 9/16 | .200 Meg. | 500,000 |
| | BFT | 6 | 25,000 | 4 | 9/16 | .400 Meg. | 1,000,000 |
| | BFW | 10 | 40,000 | 6-1/2 | 9/16 | .700 Meg. | 1,000,000 |
| Type D— Bands and Ferrules | DPW | 20 | 35 KV | 6-1/2 | 1-1/8 | 1.0 Meg. | 100,000 |
| | DPX | 30 | 65 KV | 10-1/2 | 1-1/8 | 2.0 Meg. | 100,000 |
| | DVY | 50 | 90 KV | 14-1/2 | 1-1/2 | 4.0 Meg. | 100,000 |
| | DZW | 30 | 40 KV | 6-1/2 | 2 | 2.5 Meg. | 100,000 |
| | DZZ | 90 | 125 KV | 18-1/2 | 2 | 7.5 Meg. | 100,000 |
| HIGH MEGOHM RESISTORS % Tolerance 10, 5 | HBF* | 1 | 3,500 | 1 | 11/32 | 5 Meg. | 25 Million |
| | HBM* | 2 | 7,500 | 1-3/4 | 11/32 | 10 Meg. | 50 Million |
| | HBR* | 3 | 15,000 | 3 | 11/32 | 20 Meg. | 100 Million |
| HIGH FREQUENCY RESISTORS TYPE F % Tolerances 20, 15, 10, 5 | FAC□ | 1/4 | 250 | 9/16 | .10 | 30 Ohms | 10 |
| | FBF* | 1 | 375 | 1 | 5/16 | 20 Ohms | 25 |
| | FBM* | 2 | 750 | 1-3/4 | 5/16 | 35 Ohms | 50 |
| | FBR* | 3 | 1,400 | 3 | 5/16 | 65 Ohms | 100 |
| | FBV | 5 | 2,600 | 5-1/2 | 5/16 | 120 Ohms | 100 |
| | FFQ | 4 | 1,100 | 2-1/2 | 9/16 | 30 Ohms | 50 |
| | FFT | 6 | 1,900 | 4 | 9/16 | 50 Ohms | 75 |
| | FFW | 10 | 3,100 | 6-1/2 | 9/16 | 80 Ohms | 100 |
| | Type G— Bands and Ferrules | GPW | 20 | 2,750 | 6-1/2 | 1-1/8 | 35 Ohms | 50 |
| GPX | | 30 | 4,750 | 10-1/2 | 1-1/8 | 60 Ohms | 100 |
| GVY | | 50 | 6,750 | 14-1/2 | 1-1/2 | 65 Ohms | 100 |
| GZW | | 30 | 3,000 | 6-1/2 | 2 | 25 Ohms | 100 |
| GZZ | | 90 | 8,500 | 18-1/2 | 2 | 60 Ohms | 100 |

* Normally supplied with lug terminals; can be supplied with wire leads if specified.

□ Axial wire leads only.

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| WIRE WOUND PRECISION RESISTORS | RPC Type | Spec. Mil-R-93A | Dimensions (Inches) | | Resistance | | Watts | |
|---|---|-----------------|---------------------|-------|-------------|-------------|---------|--------|
| | | | Length | Diam. | Min. (Ohms) | Max. (Meg.) | Jan Mil | Comml. |
| TYPE A Lug Terminals | AFB* | RB15 | 15/32 | 1/2 | .1 | .650 | .25 | .5 |
| | AGB* | RB15 | 15/32 | 5/8 | .1 | 1.00 | .25 | .5 |
| | AFC* | RB16 | 5/8 | 1/2 | .1 | 1.00 | .33 | .75 |
| | AGC* | RB16 | 5/8 | 5/8 | .1 | 1.50 | .33 | .75 |
| | AFF* | RB17 | 1 | 1/2 | .1 | 2.00 | .5 | 1. |
| | AGF* | RB17 | 1 | 5/8 | .1 | 3.00 | .5 | 1. |
| | AJS | RB18 | 1-9/32 | 11/16 | .1 | 5.00 | .5 | 1.25 |
| | ALP | RB19 | 2-1/16 | 13/16 | .1 | 10. | 1. | 2. |
| | Encapsulated TYPE L Lug Terminals | LFB* | RB15 | 15/32 | 9/16 | .1 | .650 | .25 | .5 |
| LFC* | | RB16 | 5/8 | 9/16 | .1 | 1.00 | .33 | .75 |
| LFF* | | RB17 | 1 | 9/16 | .1 | 2.00 | .5 | 1. |
| LJS | | RB18 | 1-9/32 | 3/4 | .1 | 5.00 | .5 | 1.25 |
| LLP | | RB19 | 2-1/16 | 7/8 | .1 | 10. | 1. | 2. |
| LCB |  | ..... | 7/16 | 7/16 | 1. | .300 | .20 | .40 |
| LCC |  | ..... | 5/8 | 7/16 | 1. | .550 | .25 | .50 |
| WIRE LEADS | LAB | ..... | 9/16 | 5/16 | 1. | .150 | ..... | .35 |
| | LAF | RB52** | 13/16 | 5/16 | 1. | .400 | .25 | .5 |
| | LCD | RB52** | 13/16 | 15/32 | .5 | 1.00 | .25 | .5 |
| | LA | ..... | 1/4 | 5/16 | 1. | .100 | ..... | .25 |
| | LC | ..... | 3/8 | 5/16 | 1. | .200 | ..... | .3 |
| | LF | ..... | 5/8 | 5/16 | 1. | .400 | ..... | .25 |
| | LEB | ..... | 1/2 | 1/2 | 1. | .500 | ..... | .5 |
| | LED | ..... | 5/8 | 1/2 | 1. | 1.00 | ..... | .65 |
| | LEF | ..... | 1.00 | 1/2 | .5 | 2.00 | ..... | 1.0 |
| | Midgets TYPE C Axial Wire Leads | CAB | | 9/16 | 9/32 | 1. | .150 | ..... | .35 |
| CAF | | RB52** | 13/16 | 9/32 | 1. | .400 | .25 | .5 |
| CCD | | RB52** | 13/16 | 13/32 | .5 | 1.00 | .25 | .5 |
| TYPE S Hermetically Sealed Axial Wire Leads | SCB | ..... | 9/16 | 11/32 | 1. | .150 | ..... | .35 |
| | SCF | RB52** | 13/16 | 11/32 | 1. | .400 | .25 | .5 |
| | SED | RB52** | 13/16 | 15/32 | .5 | 1.00 | .25 | .5 |
| TYPE K Lug Terminals | KCB | ..... | 7/16 | 3/8 | 1.0 | .300 | ..... | .4 |
| | KCC | ..... | 5/8 | 3/8 | 1.0 | .550 | ..... | .5 |
| Sub-Miniature Type J Wire Leads | JA | ..... | 1/4 | 1/4 | 1. | .100 | ..... | .25 |
| | JC | ..... | 3/8 | 1/4 | 1. | .200 | ..... | .3 |
| | JF | ..... | 5/8 | 1/4 | 1. | .400 | ..... | .35 |

Resistance tolerance 1% standard. 0.5%, 0.25%, 0.1%, 0.05%, 0.02% available.

* Normally furnished with lug terminals. Add W to RPC type where wire leads are required.

** Proposed MIL type.

Note: Low TC alloy wire used for all resistors except when otherwise specified. Wattage rating can be substantially increased by use of glass or silicone covered wire. WRITE FOR DETAILS.

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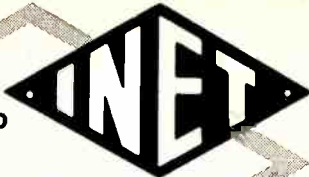
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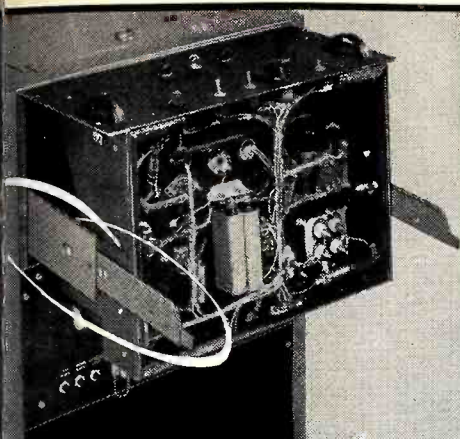
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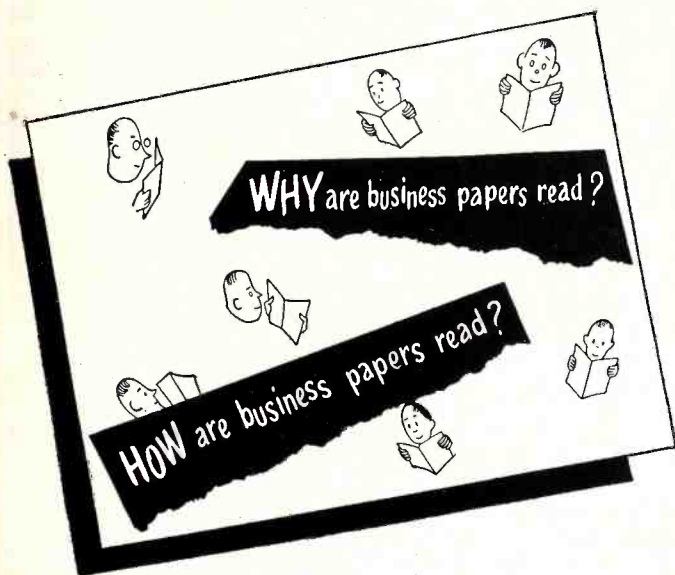
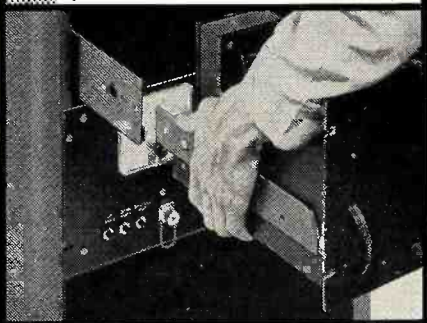
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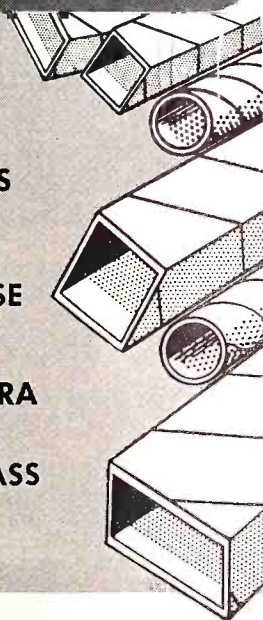
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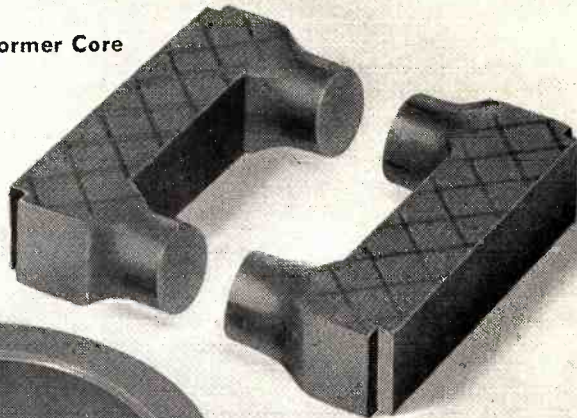
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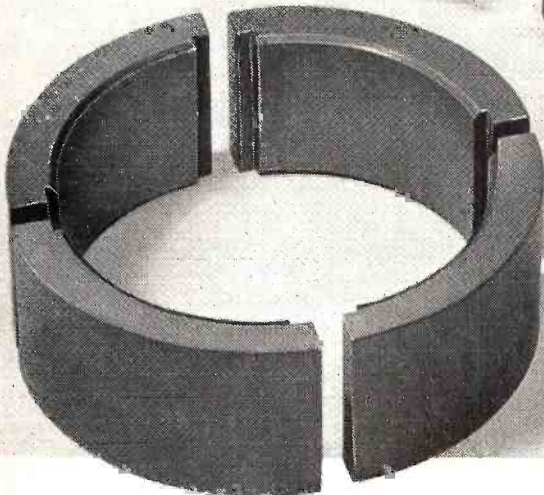
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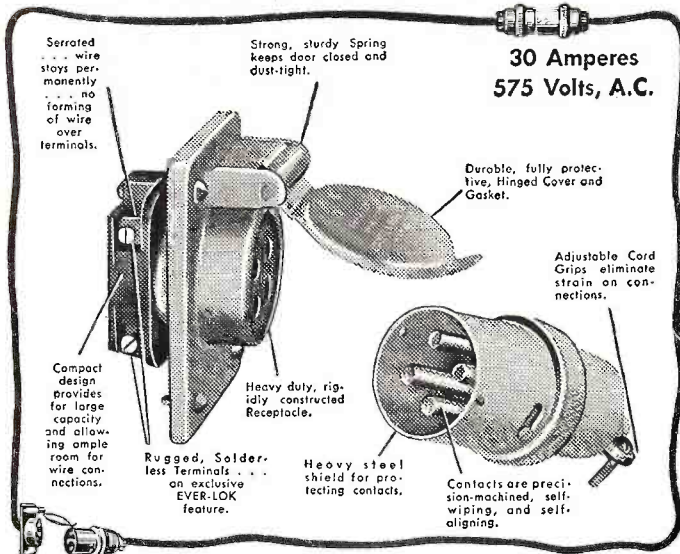
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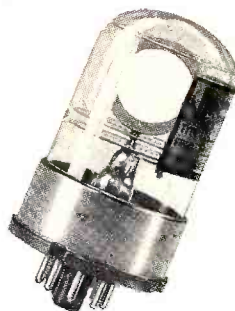
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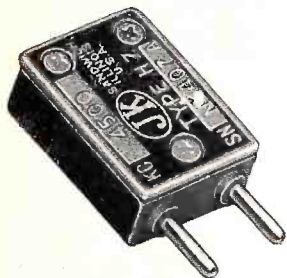
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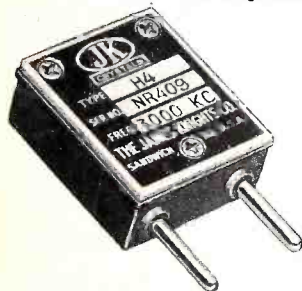
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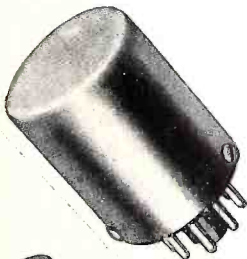
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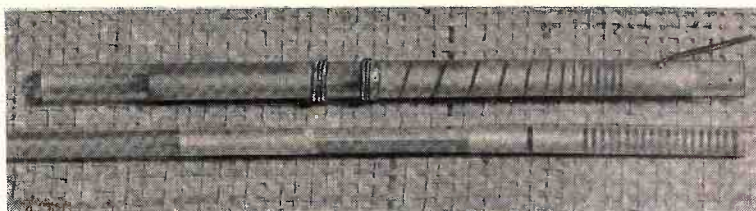
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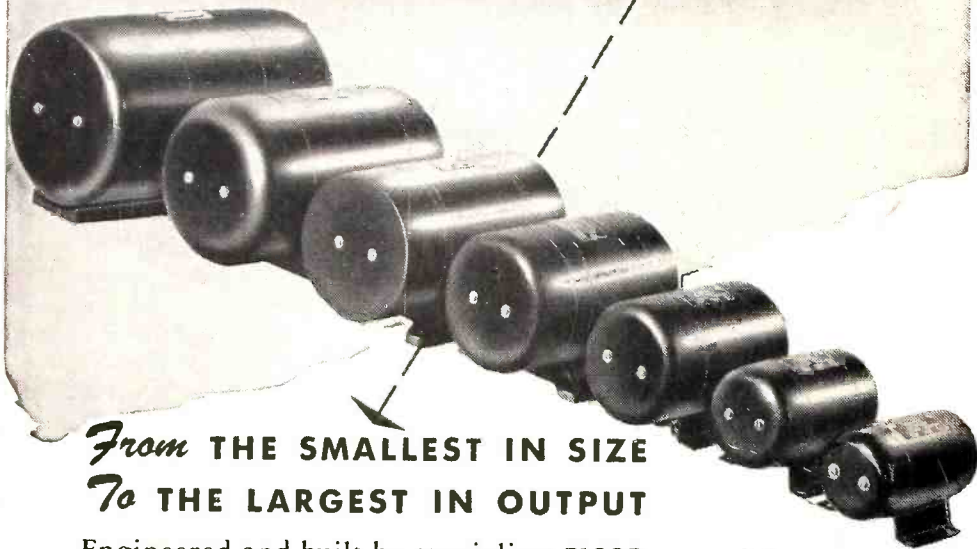
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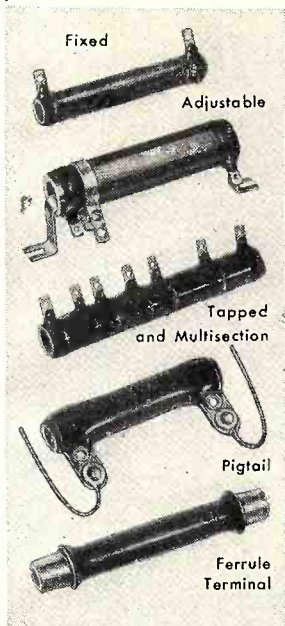
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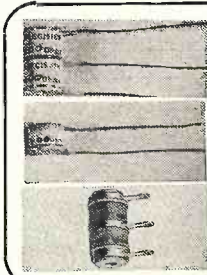
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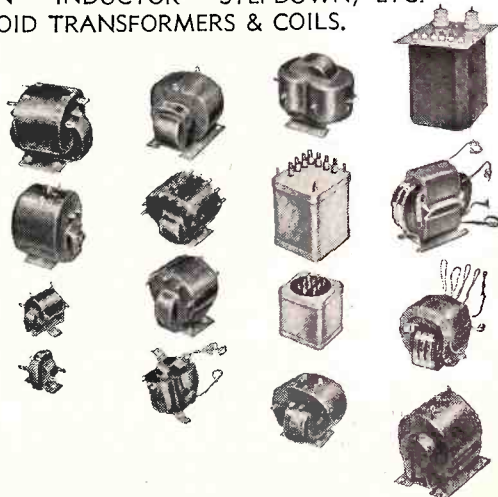
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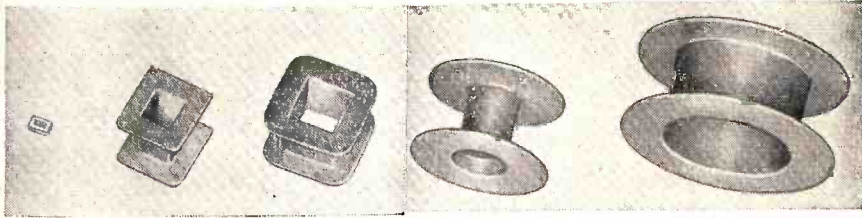


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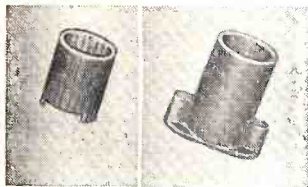
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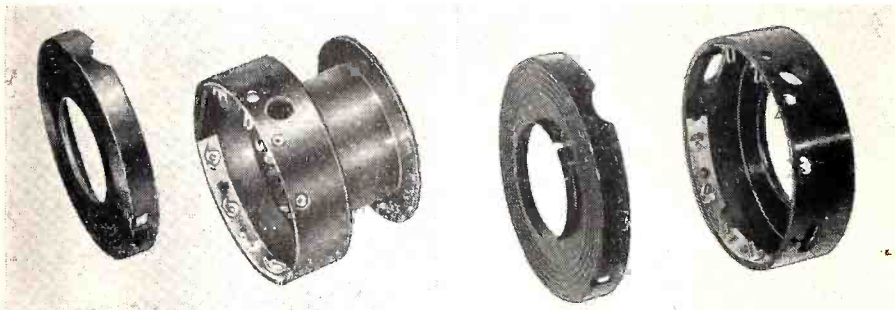


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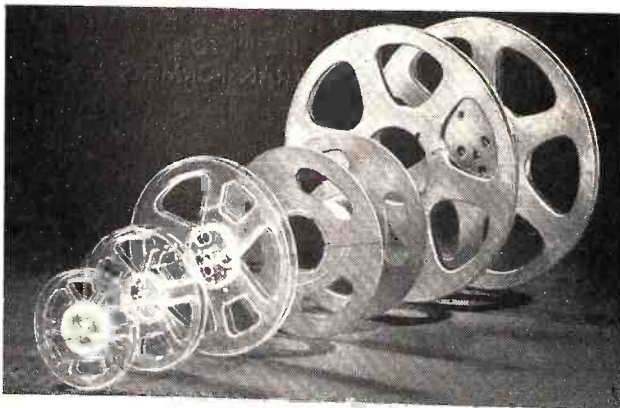


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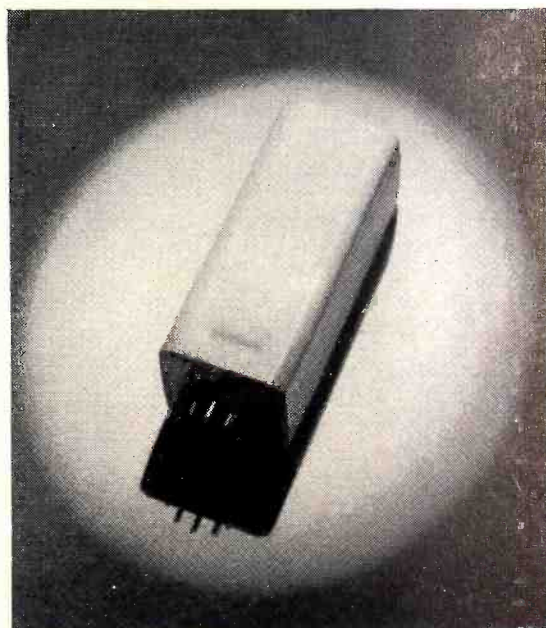
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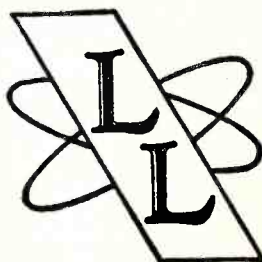
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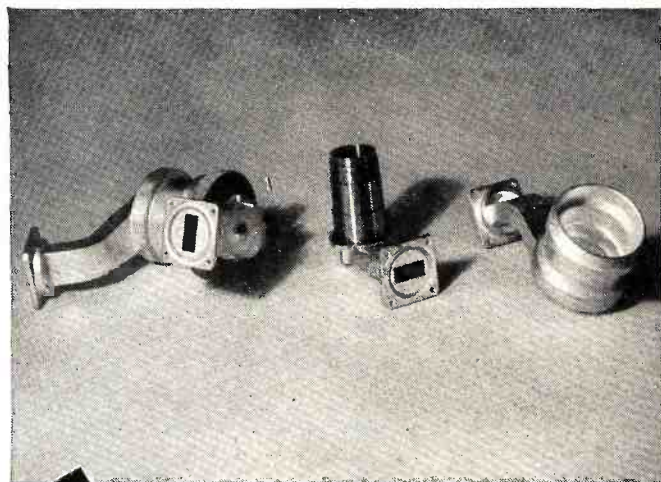
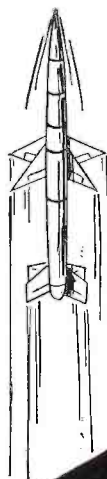
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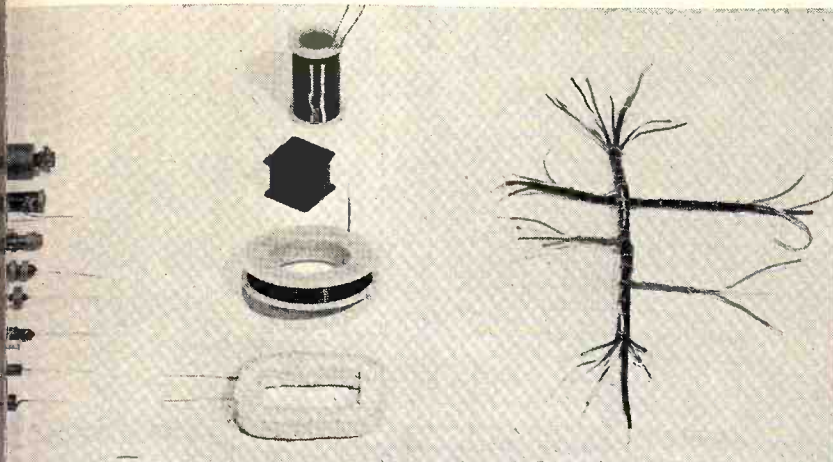


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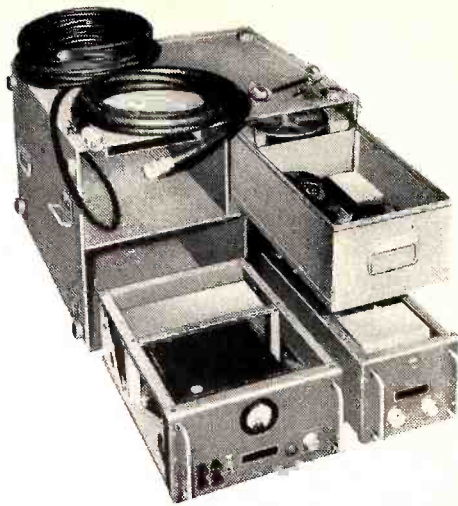
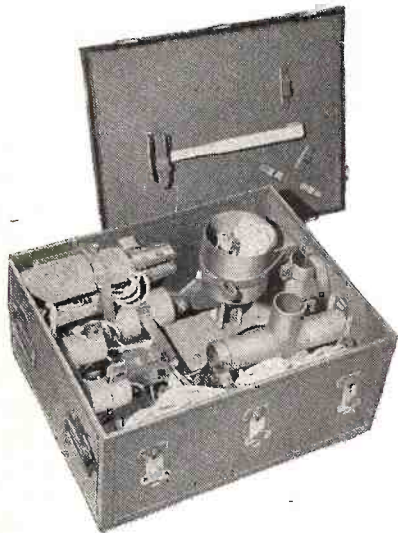
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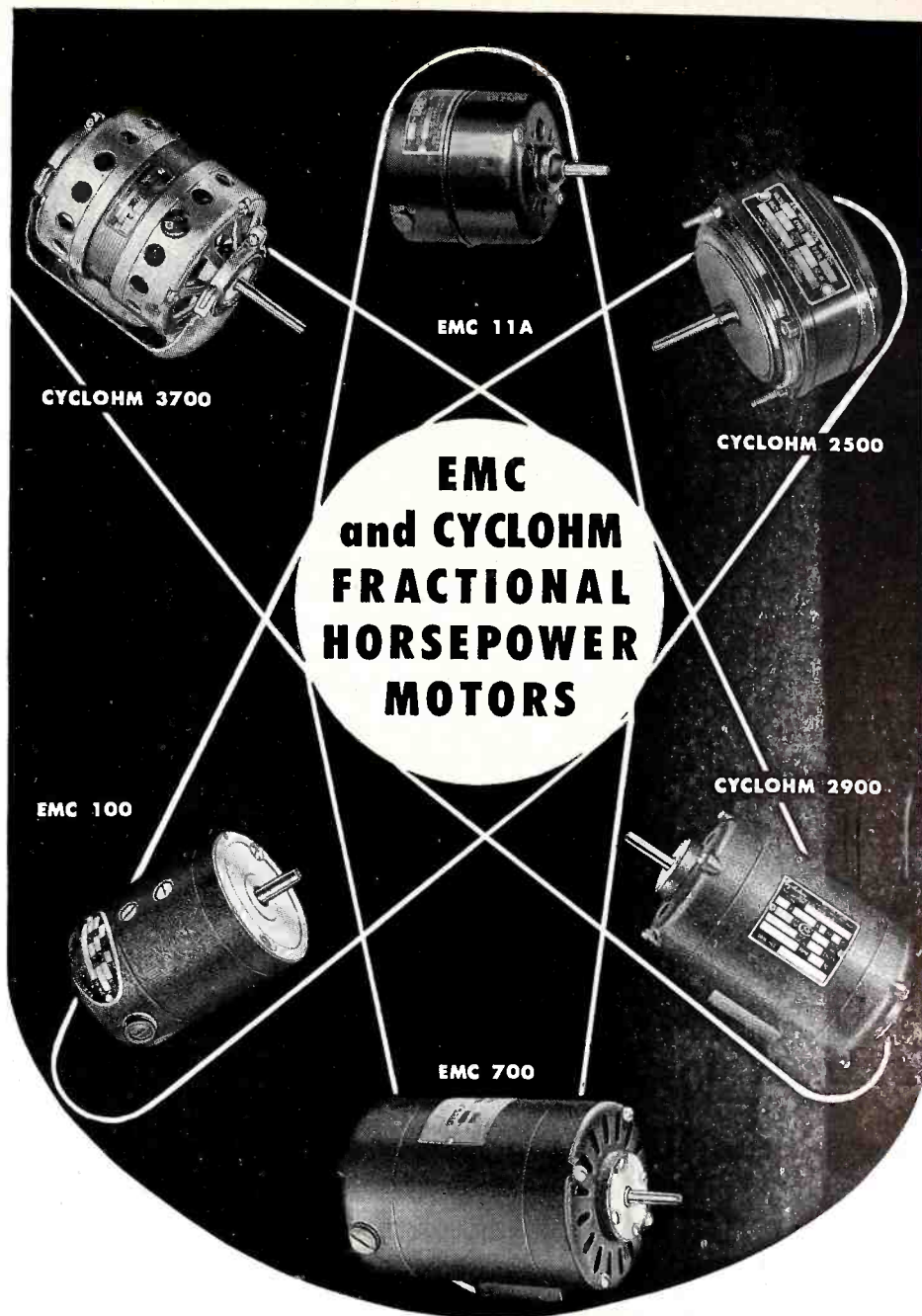
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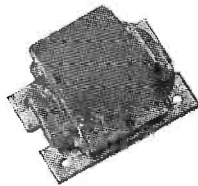
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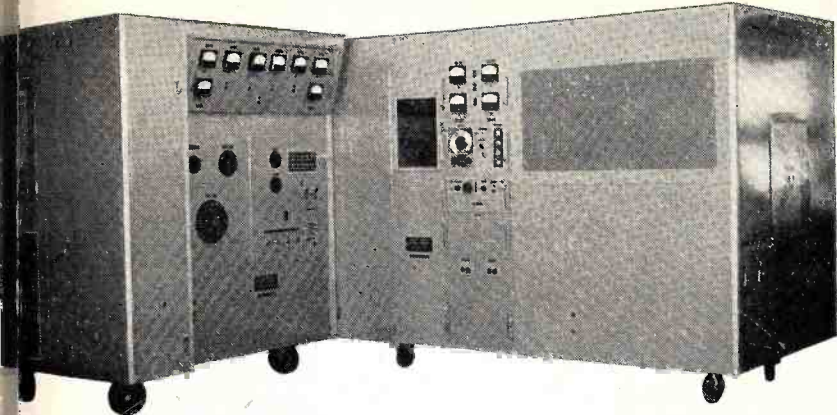
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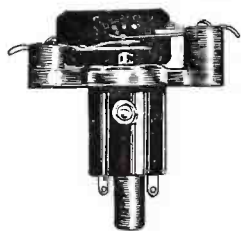
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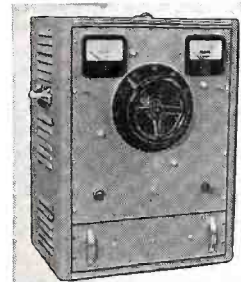
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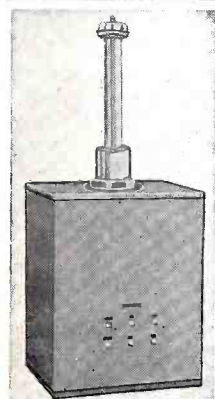
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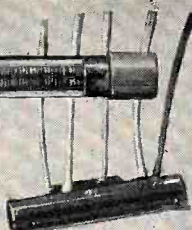
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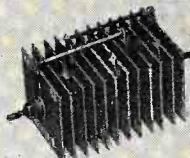
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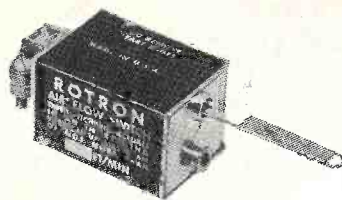
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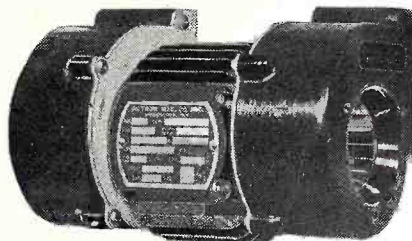
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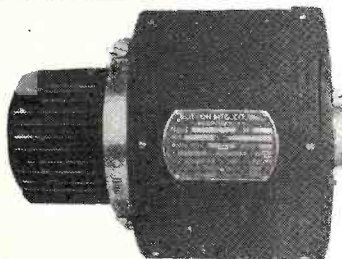
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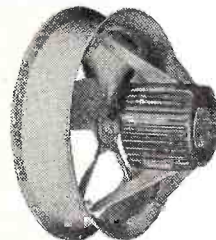
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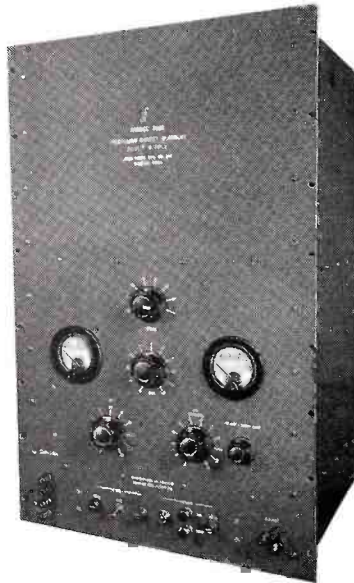
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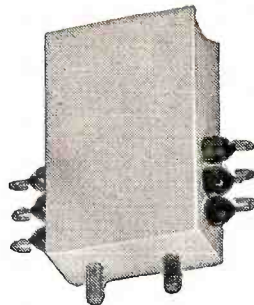
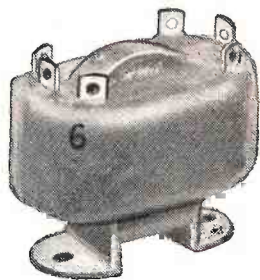
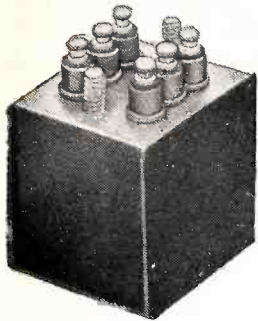
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|------------------|--|-----------------------------|-----------------|----------------------------|------------------------------|-----------------------|------------------|--------------|------------|
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| X154H | 2.0/1.0/1.0 | 4 to 12 | 0.002 | 1500 | 2000 | 1300 | 27.5 | 13.5 | 14 |
| X166H | 1.0/1.0/1.0/1.0 | 4 to 12 | 0.002 | 1500 | 2000 | 1000 | 13.5 14.0 | 13.5 14.0 | |
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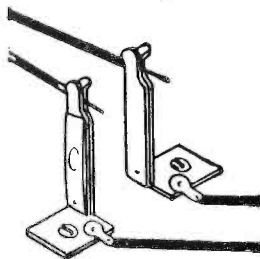
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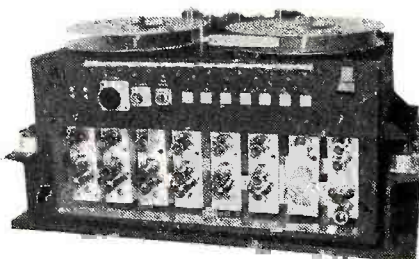
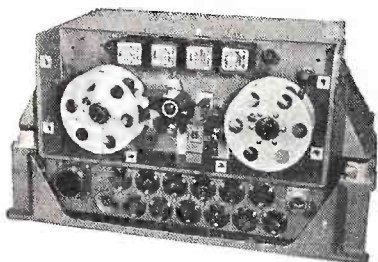


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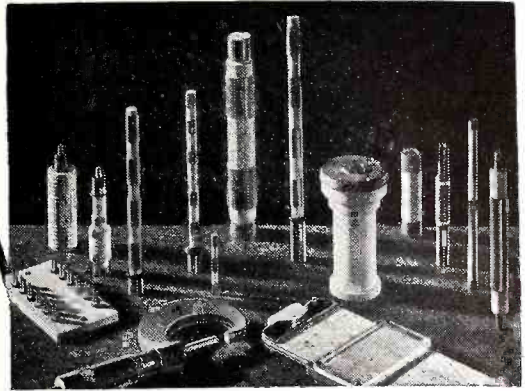
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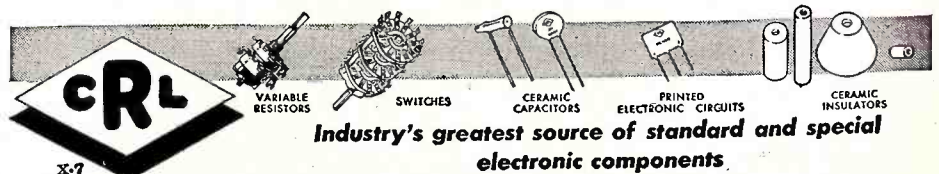
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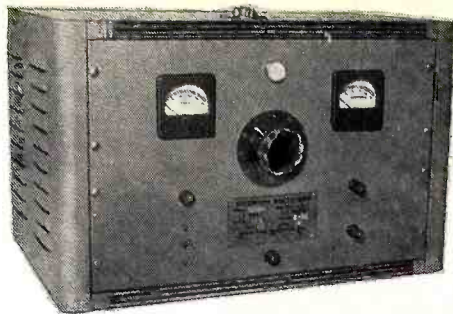
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| 1028 | 0-28 | 10 | Unfiltered |
| 1028F5 | 0-28 | 10 | 5% |
| 1028F1 | 0-28 | 10 | 1% |
| 1028F1/4 | 0-28 | 10 | 1/4% |
| 2028 | 0-28 | 20 | Unfiltered |
| 2028F5 | 0-28 | 20 | 5% |
| 2028F1 | 0-28 | 20 | 1% |
| 2028F1/4 | 0-28 | 20 | 1/4% |
| 3028 | 0-28 | 30 | Unfiltered |
| 3028F5 | 0-28 | 30 | 5% |
| 3028F1 | 0-28 | 30 | 1% |
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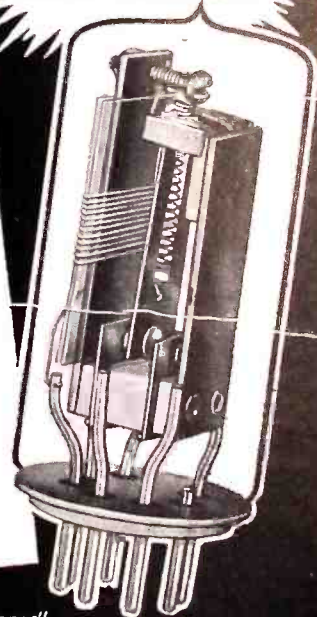
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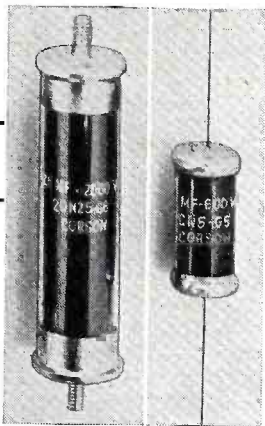
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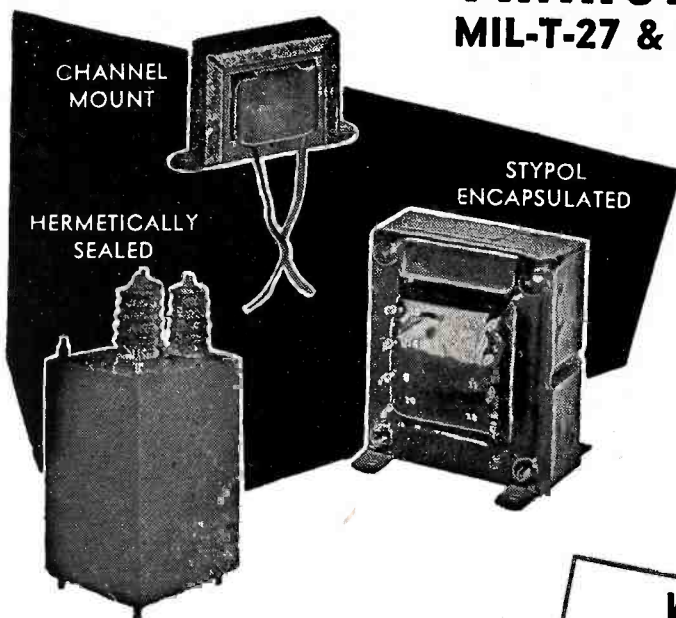
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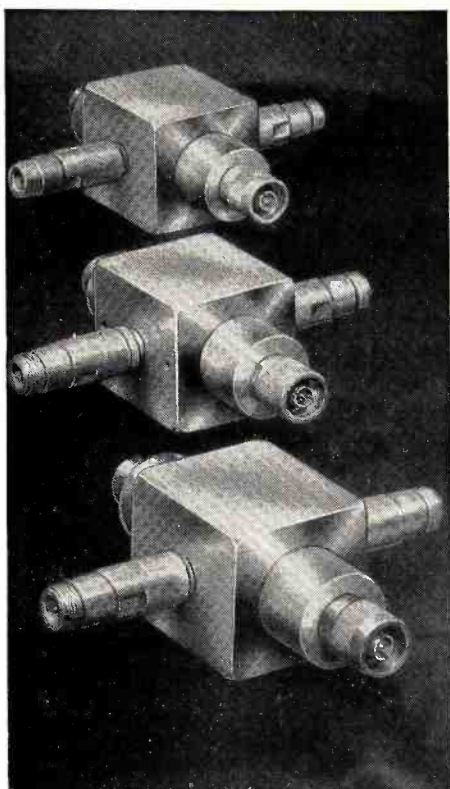
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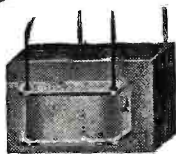
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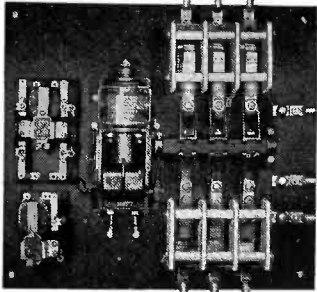
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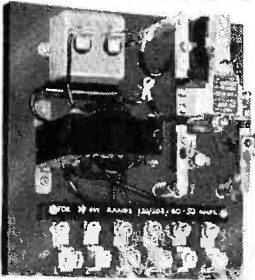
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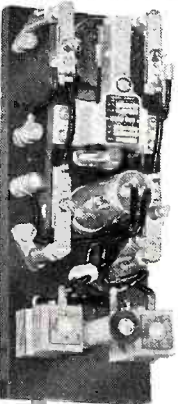
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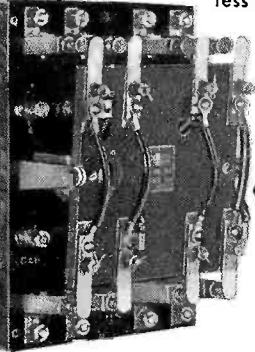


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Standard Ratings: A-C — 25 Amperes, Up to 600 Volts; Coils on Current Types, 60 Amperes; higher with current transformer.

These Relays operate on voltage or current differentials of 2% — less if required. Adjustable drop-out is standard; adjustable pick-up is available.

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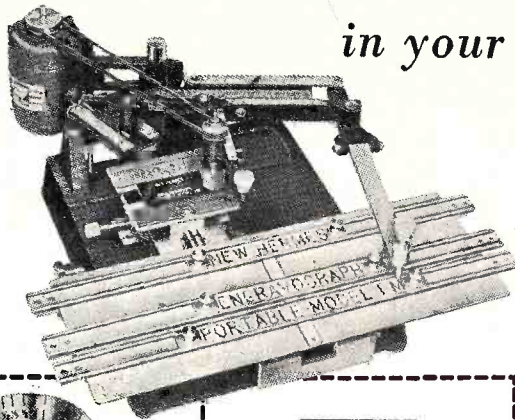
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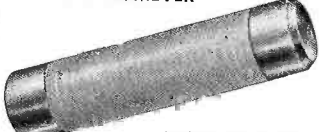
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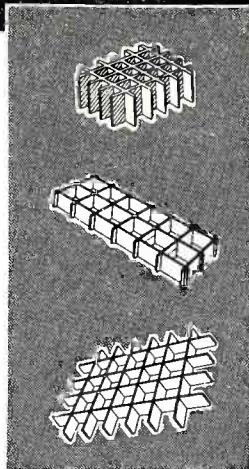
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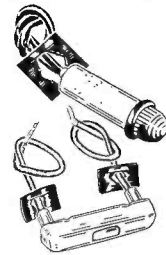


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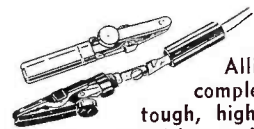
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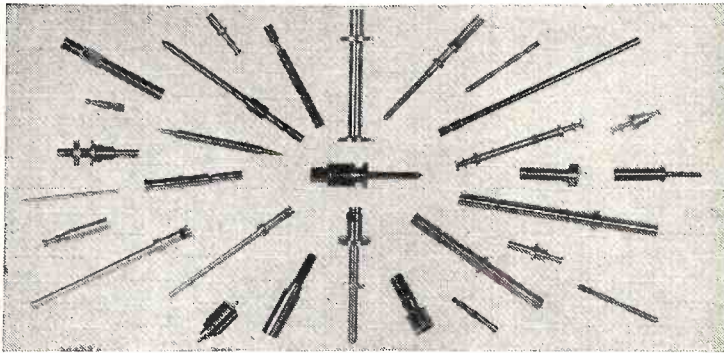
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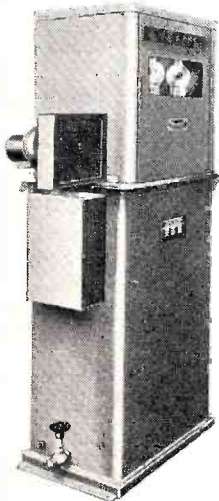


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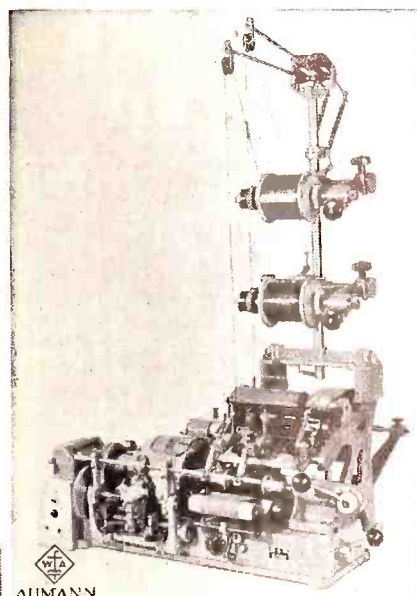
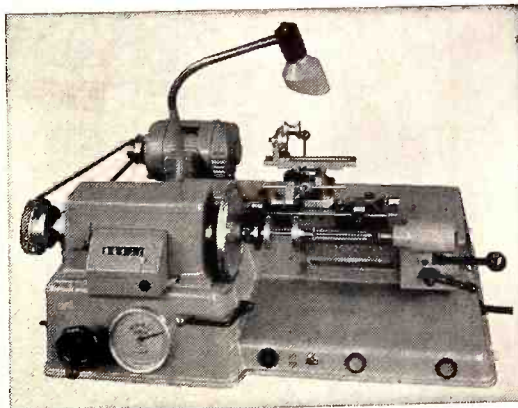
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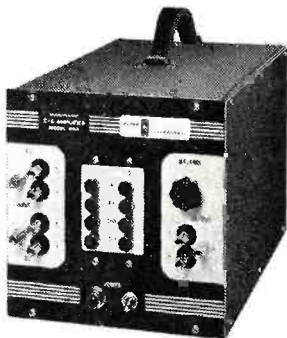
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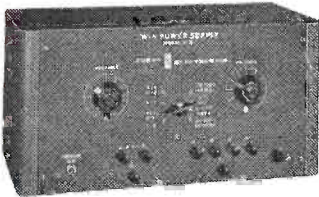
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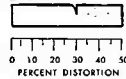


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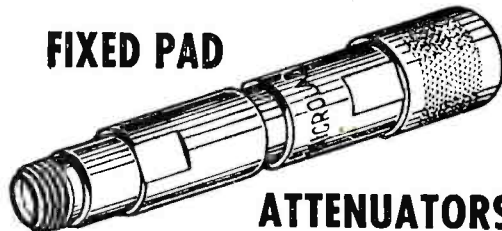
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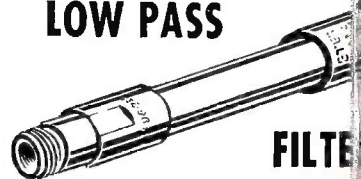


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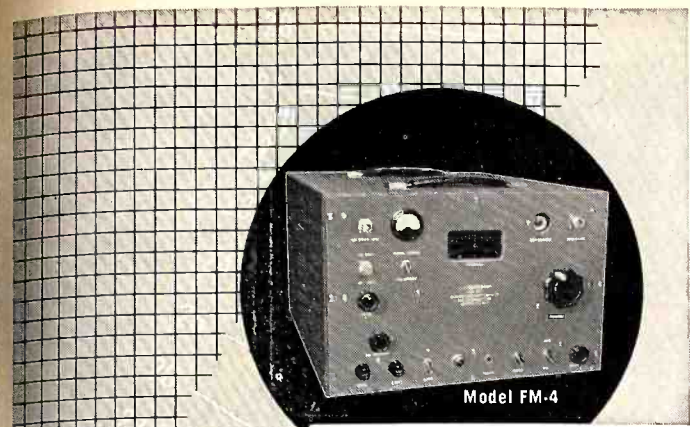
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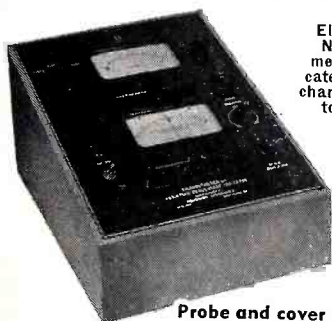
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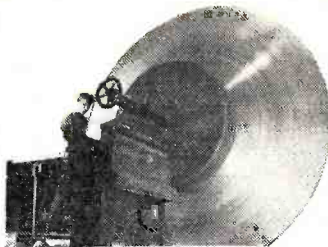


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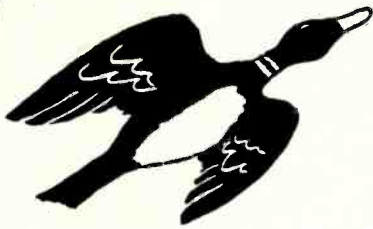
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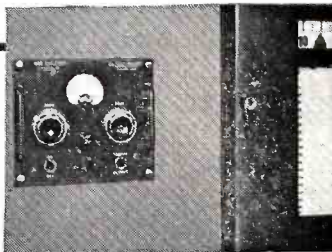
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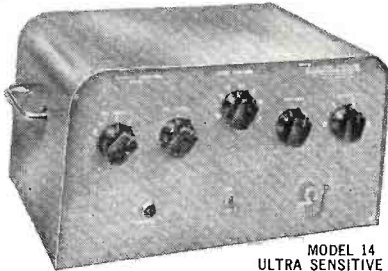


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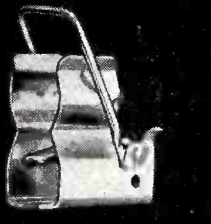
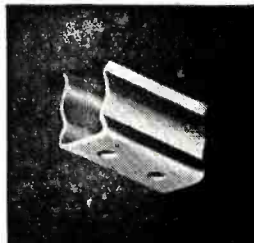
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| 1000I... 30.00 | 836... 4.25 | 955... .66 | 5544... 24.00 | 5702... 4.20 | 6097... 2.00 | 3CP1... 3.60 | 1N23C... 8.00 |
| 1000J... 6.20 | 837... 2.85 | 956... .82 | 5545... 30.00 | 5702WA... 5.80 | 6099... 3.80 | 3CP1-S1... 7.50 | 1N25... 5.50 |
| 1000K... 6.26 | 838... 4.85 | 957... .53 | 5550... 45.00 | 5703... 1.80 | 6101... 4.32 | 3DP1... 9.50 | 1N26... 9.00 |
| 1000L... 12.00 | 841... 1.32 | 958A... .93 | 5551... 70.00 | 5704... 2.85 | 6111... 12.00 | 3DP1A... 14.70 | 1N27... 8.50 |
| 1000M... 27.00 | 843... 1.20 | 959... 2.55 | 5552... 110.00 | 5718... 4.95 | 6112... 8.50 | 3DP1-S2... 5.90 | 1N28... 5.05 |
| 1000N... 1.99 | 845... 9.50 | 991... .48 | 5553... 70.00 | 5719... 4.95 | 6130... 13.90 | 3EP1... 4.25 | 1N31... 6.85 |
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| 1000R... 4.73 | 851... 75.00 | NL1005... 70.00 | 5558... 12.60 | 5726... 1.20 | | 3HP14... 14.00 | 1N35... 2.20 |
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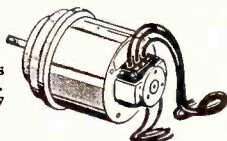
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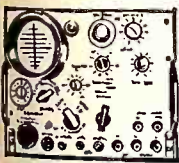
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Input: 24 V. DC. 52 amps. Output: 115 volts - 400 cycles, 3-phase, 750 VA. and 26 Volt - 400 cycle, 250 VA. Voltage and frequency regulated.\$95.00 ea.

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12116-2-A PIONEER

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10285 LELAND ELECTRIC

Output: 115 Volts AC, 750 V.A., 3 phase, 400 cycle, .90 PF, and 26 volts, 50 amps, single phase, 400 cycle, .40 PF. Input: 27.5 VDC, 60 amps, cont. duty, 6000 RPM. Voltage and Frequency regulated.\$95.00

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94-32270-A LELAND ELECTRIC

Output: 115 Volts; 190 VA; Single Phase; 400 Cycle; .90 PF, and 26 Volts; 60 VA; 400 Cycle, .40 PF. Input: 27.5 Volts DC 18 amps cont. duty, voltage and freq. regulated\$95.00

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OUTPUT: 115 VAC 400 cycle; Single phase. INPUT: 24-30 VDC; 8 amps.\$79.50

MG 149F HOLTZER CABOT

OUTPUT: 26 VAC @ 250 VA; 115V @ 500VA; Single Phase; 400 cycle. INPUT: 24 VDC @ 36 amps.\$49.50

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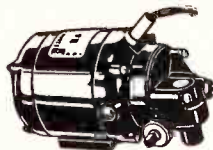
HAZELTINE PULSE GENERATOR
MODEL 1017

Electrical Characteristics: Pulse Freq: Initiating and sliding pulse-external. Pulse Width: Initiating and sliding pulses, 10 microseconds. Pulse Amplitude: Initiating and sliding pulses, plus 150 volts. Sliding Pulse Delay: variable over full trace length. Sweep Duration: 50, 200, and 1000 microseconds. TUBES: 16-6SJ7; 3-6AG7; 3-6L6; 2-6J5 gt; 2-6SN7 gt; 1-5U4 G; 1-6SK7; 1-6Y6G; 1-991; 1-9002. Power Input: 110-125 volts, 60 cyc. single phase; batteries none. Dimensions: 13 1/2" x 20 1/2" x 23". Weight 85 lbs. PRICE\$79.50



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PM Motors Delco Type #5069371; 27.5 volts; DC Alnico Field; 10,000 R.P.M.; dimensions 1" x 1" x 2" long; shaft extension 1/2" diameter 0.125".\$8.00



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AIRESEARCH: 115V; 400 CPS; Single phase 6500 RPM; 1.4 amp; Torque 4.6 in. oz.; IIP. .03.\$10.00 ea.

EASTERN AIR DEVICES TYPE JM8B: 200 VAC; 1 amp; 3 phase; 400 cycles, 6000 RPM.\$12.50 ea.
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Electric Motor: PNT-1400-A1-1A Serial No. 207, 208 V., 400 Cycles, 3 Phase Kearfott Co., Inc.\$17.50 ea.

SERVO MOTOR 10047-2-A; 2 Phase; 400 Cycle, with 40-1 Reduction Gear \$17.50

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DELCO #5069625 . . . 27 VDC; 120 RPM; Governor controlled\$22.50
EMERSON 175; 12 Volt DC; 1/6th HP; 10 amp; 3800 RPM; Approx. size: 2 1/2" x 5".\$9.95 ea.
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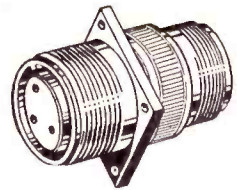
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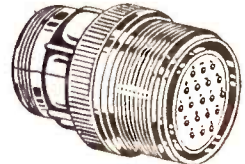
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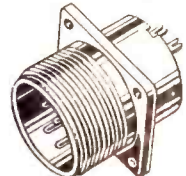
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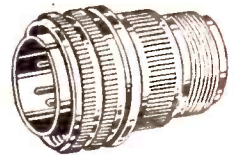
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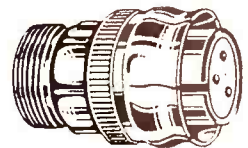
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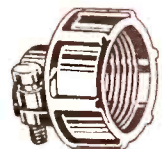
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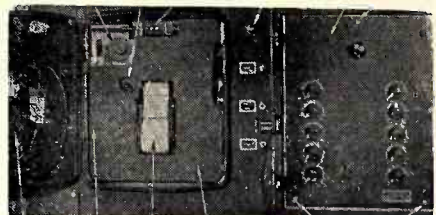
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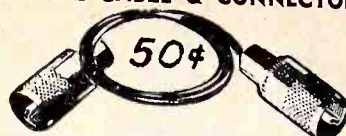
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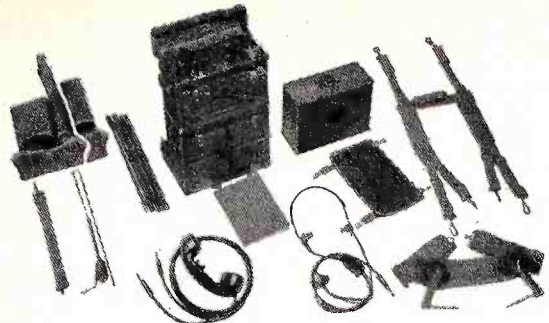
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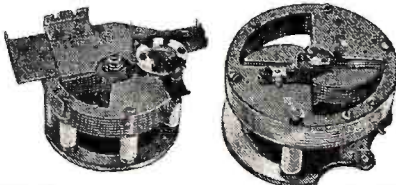
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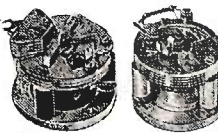


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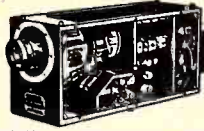
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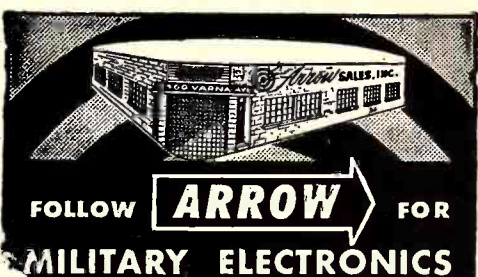
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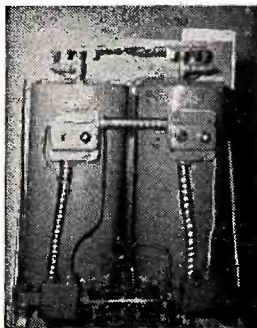
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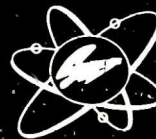
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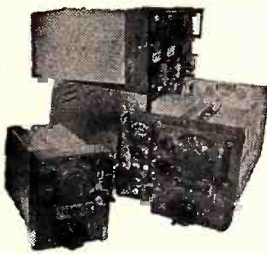
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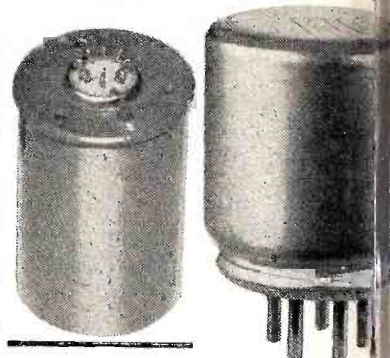
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(Continued from page 677)

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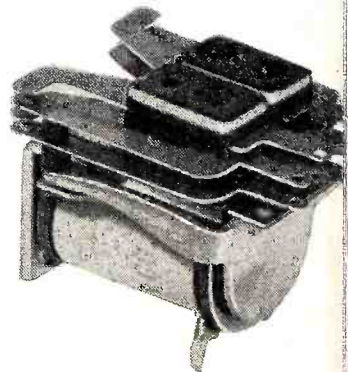
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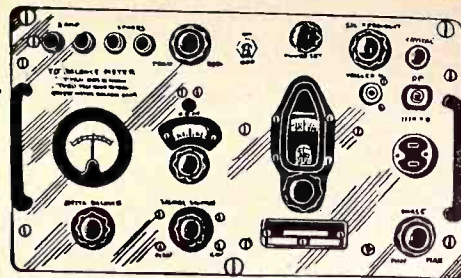
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| 1N26 | 6.75 | C6J | 7.50 | 810 | 10.50 |
| 1N27 | 3.50 | 7BP7 | 5.00 | 811A | 3.75 |
| 1N34A | .79 | 7DP4 | 9.00 | 812A | 3.95 |
| 1N43 | 2.25 | 12AP4 | 50.00 | 813 | 13.75 |
| 1P25 | 75.00 | 12DP7 | 24.00 | 814 | 3.75 |
| 2B4 | 1.25 | LM15 | 225.00 | 815 | 6.25 |
| 2B22 | 1.75 | 15E | 1.75 | 816 | 1.45 |
| 2C34 | .15 | 15R | .75 | 829 | 11.00 |
| 2C40 | 9.00 | NE16 | .59 | 829A | 12.00 |
| 2C42 | 12.00 | 20-4 | 4.75 | 829B | 15.00 |
| 2C43 | 14.50 | KY21A | 3.25 | 830B | 2.00 |
| 2C44 | 7.50 | RX21 | 8.00 | 832A | 9.95 |
| 2C46 | 7.50 | HK24G | 1.50 | 833A | 45.00 |
| 2E22 | 2.25 | 25T | 2.95 | 834 | 7.50 |
| 2J21A | 12.00 | 45 Special | .35 | 836 | 3.95 |
| 2J22 | 9.00 | RK39 | 2.75 | 837 | 2.75 |
| 2J26 | 15.00 | HF50 | 1.75 | 838 | 5.95 |
| 2J27 | 15.00 | VT52 | .35 | 849 | 35.00 |
| 2J31 | 24.00 | HK54 | 4.50 | 860 | 3.50 |
| 2J32 | 29.00 | RR72 | 1.00 | 861 | 25.00 |
| 2J33 | 32.00 | RR73 | 1.00 | 866A | 1.50 |
| 2J34 | 36.00 | CG95 | 19.95 | 869B | 67.50 |
| 2J38 | 90.00 | 100TH | 7.95 | 869BX | 50.00 |
| 2J39 | 8.95 | FG105 | 20.00 | 872A | 1.50 |
| 2J40 | 29.00 | 122A | 1.75 | 878 | 1.50 |
| 2J42 | 135.00 | 203A | 7.50 | 879 | .50 |
| 2J49 | 60.00 | 211 | .95 | 880 | 250.00 |
| 2J50 | 55.00 | 217C | 12.00 | 884 | 1.50 |
| 2J56 | 150.00 | 242C | 10.00 | 885 | 1.50 |
| 2J57 | 110.00 | 244A | 9.50 | 911A | 75.00 |
| 2J61 | 35.00 | 249C | 4.25 | 931A | 5.00 |
| 2K22 | 15.00 | 250TH | 12.00 | 954 | .35 |
| 2K23 | 15.00 | 205TL | 12.00 | 955 | .50 |
| 2K25 | 27.50 | 274B | 2.75 | 957 | .25 |
| 2K26 | 68.00 | 304TH | 10.00 | 958A | .60 |
| 2K28 | 35.00 | 304TL | 10.00 | 959 | 2.25 |
| 2K29 | 35.00 | 307A | 3.50 | E114A | .25 |
| 2K33A | 75.00 | 310A | 4.50 | 1280 | .95 |
| 2K39 | 140.00 | 310B | 4.95 | 1500T | 135.00 |
| 2K41 | 135.00 | 311A | 6.50 | HK1554 | 75.00 |
| 2K45 | 80.00 | 312A | 3.50 | 1603 | 5.00 |
| 2K50 | 275.00 | 323A | 15.00 | 1612 | 1.50 |
| 2K54 | 125.00 | 323A | 3.75 | 1613 | 1.25 |
| 2K55 | 125.00 | 350A | 10.00 | 1616 | 1.25 |
| 2K56 | 72.00 | 350B | 5.95 | 1619 | .45 |
| 3AP1A | 10.00 | 352A | 3.00 | 1622 | 1.50 |
| 3BP1 | 7.20 | HK354C | 15.00 | 1624 | 1.75 |
| 3BP2 | 4.50 | 357A | 15.00 | 1625 | .35 |
| 3BP25 | 5.50 | 368AS | 4.95 | 1626 | .25 |
| 3BP26 | 5.00 | 371B | 1.50 | 1851 | 1.80 |
| 3BP28 | 8.00 | 385A | 4.50 | 2000T | 150.00 |
| EL3C | 5.50 | 385B | 1.50 | 2050 | 1.80 |
| 3C22 | 99.00 | 393A | 7.50 | 2051 | 1.00 |
| 3C24 | 1.50 | 394A | 3.95 | Various 5000 and 6000 series of new production | |
| 3C31 | 2.95 | MX408U | .50 | 8012 | 2.00 |
| 3DP1 | 7.50 | 417A | 15.00 | 8012A | 2.50 |
| 3DP1A | 10.00 | 434A | 15.00 | 8013 | 3.00 |
| 3DP1A-52 | 10.00 | 446A | 1.95 | 8013A | 3.50 |
| 3EP1 | 5.00 | 446B | 3.95 | 8019 | 1.75 |
| 3EP29 | 15.50 | 450TL | 45.00 | 8020 | 1.80 |
| 3FP7 | 5.00 | 450TH | 52.50 | 8025 | 3.75 |
| 3HP7 | 5.00 | 464A | 7.00 | PD8365 | 96.00 |
| 3GP1 | 5.00 | 527 | 13.00 | 9001 | 1.25 |
| 4B26 | 5.40 | WL530 | 23.00 | 9002 | .90 |
| 4C27 | 22.50 | WL531 | 22.50 | 9003 | 1.25 |
| 4C28 | 35.00 | WL532 | 1.75 | 9004 | .35 |
| 4E27 | 16.00 | WL533 | 15.00 | 9005 | 2.75 |
| 4J25 | 150.00 | HK654 | 35.00 | 9006 | .25 |
| 4J26 | 150.00 | 700A/D | 10.00 | | |
| 4J27 | 150.00 | 701A | 4.50 | | |
| 4J28 | 150.00 | 703A | 3.95 | | |
| 4J29 | 150.00 | 704A | 1.95 | | |
| 4J30 | 150.00 | 705A | 21.75 | | |
| 5J31 | 150.00 | 706AY/FY | 5.00 | | |
| | | 707A | 9.75 | | |

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NEW
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Hard-to-get X-Band SIGNAL GENERATOR
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Test Set TS 147 UP is a portable Microwave Signal Generator designed for testing and adjusting beacon equipment and radar systems which operate within the frequency range of 8500 MC to 9600 MC.

NEW UNUSED SURPLUS TS 259 K BAND
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 For IP25 Infrared Image Converter from 3 V. Battery Source. **\$990**
 NEW, Complete with RCA 1654 Tube.

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- | | |
|--|---|
| TSK1/SE K Band Spectrum Analyzer | TS110/AP S Band Echo Box |
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| RF4A/AP Phantom Target S Band | TS126/AP Synchroscope |
| TS12/AP VSWR Test Set for X Band | TS147 X Band Signal Generator |
| TS13/AP X Band Signal Generator | TS270 S Band Echo Box |
| TS14/AP Signal Generator | TS174/AP Signal Generator |
| TS33/AP X Band Power and Frequency Meter | TS175/AP Signal Generator |
| TS34/AP Western Electric Synchroscope | TS226 Power Meter |
| T35/AP X Band Signal Generator | TS239A-TS239C Synchroscope |
| TS36/AP X Band Power Meter | TF890/1 X Band Spectrum Analyzer |
| 1-96A Signal Generator | 834 General Radio Frequency Meter |
| TS45 X Band Signal Generator | |
| TS47/APR 40-400 MC Signal Generator | SURPLUS EQUIPMENT |
| TS69/AP Frequency Meter 400-1000MC | APA10 Oscilloscope and panoramic receiver |
| TS100 Scope | APA38 Panoramic Receiver |
| TS102A/AP Range Calibrator | APS 3 and APS 4 Radar |
| TS108 Power Load | APR4 Receiver and Tuning Units |
| | APR5A Microwave Receiver |
| | APT2-APT5 Radar Jamming Transmitter |

MINIMUM ORDER 25 Dollars

SPECIAL
 Wide Band S Band Signal Generator 2700/3400MC using 2K41 or PD 8365 Klystron, Internal Cavity Attenuator, Precision individually calibrated Frequency measuring Cavity. CW or Pulse Modulated, externally or internally.

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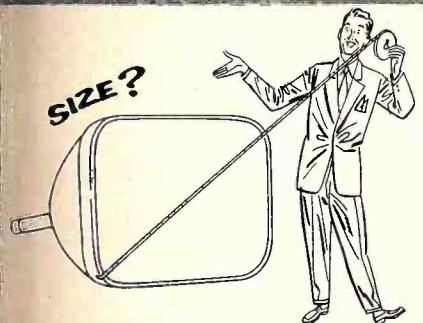
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SYLVANIA RADIO and TV TUBES



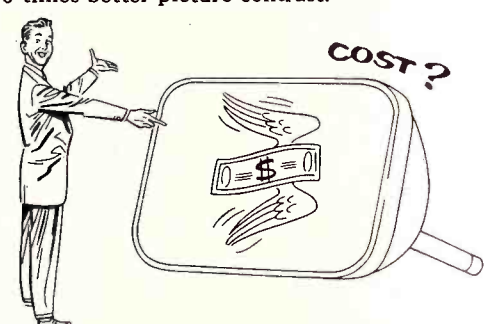
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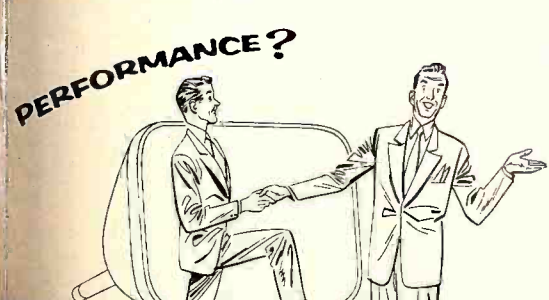
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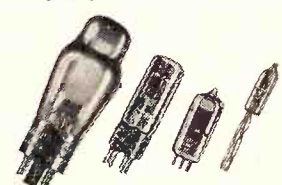


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LIGHTING • RADIO • ELECTRONICS • TELEVISION

CRYSTAL DIODES, DUO-DIODES & VARISTORS

SYLVANIA CRYSTAL DIODES

MAXIMUM RATINGS AT 25° C

CHARACTERISTICS A

| TYPE | DESCRIPTION | CONTINUOUS REVERSE WORKING VOLTAGE (VOLTS) | RECURRENT PEAK ANODE CURRENT (MA.) | AVERAGE ANODE CURRENT (MA.) | PEAK REVERSE VOLTAGE FOR ZERO DYNAMIC RESISTANCE (VOLTS MIN.) | FORWARD CURRENT AT +1 VOLT (MA. MIN.) | REVERSE CURRENT MA MAX |
|--------|-----------------------------------|--|------------------------------------|-----------------------------|---|---------------------------------------|------------------------|
| 1N34 | General Purpose Diode | 60 | 150 | 50 | 75 | 5 | 50 @ -10V, 800 @ 50 |
| 1N34A | General Purpose Diode | 60 | 150 | 50 | 75 | 5 | 30 @ -10V, 500 @ 50 |
| 1N35 | Matched Duo-Diode (Note 1) | 50 | 60 | 22.5 | 75 | 7.5 | 10 @ -10V |
| 1N38 | 100 Volt Diode | 100 | 150 | 50 | 120 | 3 | 6 @ -3V, 625 @ -0C |
| *1N38A | 100 Volt Diode | 100 | 150 | 50 | 120 | 4 | 6 @ -3V, 500 @ -0C |
| 1N39 | 200 Volt Diode | 200 | 150 | 50 | 225 | 3.0 | 200 @ -100V, 800 @ 2 |
| 1N40 | General Purpose Varistor (Note 2) | 25 | 60 | 22.5 | 75 | 12.75 @ 1.5V | 35 @ -10V |
| 1N41 | General Purpose Varistor (Note 2) | 25 | 40 | 22.5 | 75 | 12.75 @ 1.5V | 35 @ -10V |
| 1N42 | 100 Volt Varistor (Note 2) | 100 | 50 | 22.5 | 120 | 12.75 @ 1.5V | 800 @ -100V |
| 1N54 | High Back Resistance Diode | 50 | 150 | 50 | 75 | 5 | 10 @ -10V |
| 1N54A | High Back Resistance Diode | 50 | 150 | 50 | 75 | 5 | 7 @ -10V, 100 @ 50 |
| 1N55 | 150 Volt Diode | 150 | 150 | 50 | 170 | 3 | 300 @ -100V, 800 @ 2 |
| 1N55A | 150 Volt Diode | 150 | 150 | 50 | 170 | 4 | 500 @ -150V |
| 1N56 | High Conduction Diode | 40 | 200 | 60 | 50 | 15 | 300 @ -30V |
| 1N56A | High Conduction Diode | 40 | 200 | 60 | 50 | 15 | 300 @ -30V |
| 1N58 | 100 Volt Diode | 100 | 150 | 50 | 120 | 4 | 700 @ -100 |
| 1N58A | 100 Volt Diode | 100 | 150 | 50 | 120 | 4 | 600 @ -100 |
| 1N59 | 250 Volt Diode | 260 | 150 | 50 | 275 | 3.0 | 800 @ -250 |
| 1N60 | Video Detector Diode | 25 | 150 | 50 | 30 | Note 3 | Note 4 |
| 1N67 | High Back Resistance Diode | 80 | 100 | 35 | 100 | 5.0 | 5 @ -5V, 50 @ -10 |
| *1N69 | General Purpose Diode | 60 | 125 | 40 | 75 | 5 | 50 @ -10V, 850 @ 2 |
| 1N71 | Low Impedance Varistor (Note 5) | 40 | 200 | 60 | 50 | 15 | 300 @ -30V |
| *1N81 | High Back Resistance Diode | 40 | 90 | 30 | 50 | 3 | 10 @ -10V |
| 1N82 | UHF Mixer Diode { Note | — | — | — | Note 6 | — | — |
| 1N82A | UHF Mixer Diode { Note | — | — | — | Note 6 | — | — |
| 1N105 | Video Detector Diode | 25 | 150 | 50 | 30 | Note 3 | Note 4 |
| 1N109 | Harmonic Generator Diode | 15 | 150 | 50 | 75 | Note 7 | — |
| 1N111 | Computer Diode | 60 | 150 | 25 | 75 | 5 | Note 8 |
| 1N112 | Computer Diode | 60 | 150 | 25 | 75 | 5 | Note 8 |
| 1N113 | Computer Diode | 60 | 150 | 25 | 75 | 2.5 | Note 8 |
| 1N114 | Computer Diode | 60 | 150 | 25 | 75 | 2.5 | Note 8 |
| 1N115 | Computer Diode | 60 | 150 | 25 | 75 | 2.5 | Note 8 |
| 1N119 | Computer Diode | 60 | 150 | 25 | 75 | 5 | Note 8 |
| 1N120 | Computer Diode | 60 | 150 | 25 | 75 | 5 | Note 8 |
| 1N132 | Video Detector Diode | 25 | 150 | 50 | 30 | Note 10 | Note 4 |
| 1N172 | UHF Mixer Diode | — | — | — | Note 6 | — | — |

Note 1 - Units are matched in the forward direction at 1 volt so that the current flowing through the lower resistance unit is within 10% of that through the higher resistance unit. Ratings are shown for each diode.

Note 2 - Consists of four specially selected and matched diodes whose resistances are balanced within $\pm 2.50\%$ in the forward direction at 1.5 volts. For additional balance, the forward resistance of each varistor pair is matched to within three ohms. Ratings shown are for each diode.

Note 3 - Units are tested in a circuit employing an input of 1.6 volts rms at 40 MC, 75% modulated at 400 cycles. Demodulated output across a 4700 ohm resistor shunted by a $5\mu\text{mf}$ capacitor is a minimum of 1.55 volts peak to peak.

Note 4 - Minimum specified reverse resistance applies to all points between 0 and -10 volts with 60 cps sweep.

*Indicates JAN type

Note 5 - Consists of four specially selected diodes whose forward currents are matched within a range of 1 ma. with 1 volt applied. Ratings shown are for each diode.

Note 6 - The 1N82, 1N82A, and 1N172 are low noise and low conversion loss UHF television mixer crystals. The noise factor of the 1N82 is 15 db max., that of the 1N82A and the 1N172 is 14 db max. The noise factor is measured at 700 mc with a local oscillator drive (bias current) of 0.5 ma.

Note 7 - Units are tested in a circuit employing a fundamental frequency of 126 MC. The rectified 3rd harmonic output is 0.5 ma. minimum.

Note 8 - Minimum specified reverse resistance applies at 55°C for all points between -10V and -50V with 60 cps sweep.

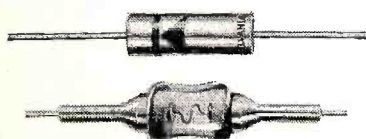
Note 9 - Reverse recovery time for these units is specified and defined as the time required for the diode to recover to a given reverse cur-

rent when the operating voltage negative 30 ma. forward conduction is switched to -35 volts.

| Type | Reverse Current μa max | Reverse Resistance ohms min. |
|-------|-----------------------------------|------------------------------|
| 1N119 | 700 | 50K |
| | 87.5 | 400K |
| 1N120 | 700 | 50K |
| | 175 | 200K |

Note 10 - Units are tested in a circuit employing an input of 0.1 volts rms at 140 MC. Rectified output is a minimum of 140 mV across a 3600 ohm load and 65 uH shunted capacitor.

Note 11 - Normally supplied with minimum leads but will be supplied with clip-in applications upon request. The polarity of all Sylvania crystal diodes is indicated by a graphic symbol on the body, the arrow of which indicates the direction of easier (conventional) current flow.



Sylvania Germanium Diodes are long-life, lightweight, heaterless components that have found hundreds of applications in clippers, limiters, discriminators and other circuits calling for low power rectification at frequencies up to several hundred megacycles. They have low shunt capacity and no contact potential. Convenient pigtail leads

eliminate the need for mounting hardware.

Sylvania Duo-Diodes consist of two matched diodes mounted in a single unit.

Sylvania Varistors, types 1N40, 1N41 and 1N42, consist of 4 specially selected and matched germanium diodes whose resistances are

balanced within $\pm 2.5\%$ in the forward direction at 1.5 volts. Varistor Type 1N71 consists of matched low impedance diodes whose forward currents are within a range of 1 ma. with +0.5 volt applied. Ratings shown are for each diode. Types 1N40, 1N42 and 1N71 are plug-in type; 1N41 is lug type.



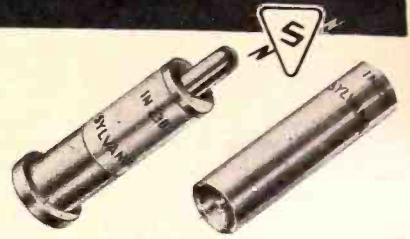
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MICROWAVE CRYSTALS, Transistors, Photodiodes and Glow Transfer Tubes

MICROWAVE CRYSTAL DIODES



Sylvania Silicon Diodes

1N21B, 1N21C, 1N23B, 1N23C, 1N25, 1N26, 1N53 and 1N78 are used chiefly as first detectors in radar and other microwave superheterodyne receivers.

Type 1N79 is designed for use in microwave test probes, power indicators and other instruments.

Types 1N31 and 1N32 are used as video detectors.

| Type | Design Freq. (mc) | Max. Conv. Loss (db) | Max. Output Noise Ratio | Burnout Test | I.F. Imp. (ohms) |
|--------|-------------------|---|-------------------------|-------------------|------------------|
| 1N21B | 3000 | 6.5 | 2.0 | $B_S = 2.0$ erg | 200-800 |
| 1N21C | 3000 | 5.5 | 1.5 | $B_S = 2.0$ erg | 200-800 |
| 1N23B | 10,000 | 6.5 | 2.7 | $B_S = 1.0$ erg | 150-600 |
| 1N23C† | 10,000 | 6.0 | 2.0 | $B_S = 1.0$ erg | 325-475 |
| 1N25 | 1000 | 8.0 | 2.5 | $B_P = 6.5$ watts | 100-400 |
| 1N26 | 24,000 | 8.5 | 2.5 | $B_S = 0.1$ erg | 300-600 |
| 1N53 | 35,000 | 8.5 | 2.5 | $B_S = 0.1$ erg | 400-800 |
| 1N78 | 16,000 | 7.5 | 2.5 | $B_S = 0.3$ erg | 325-625 |
| 1N79 | 3000 | Instrument Rectifier Rated in specified circuit | | | |
| 1N136 | 1300 | | | | |
| 1N149 | 10,000 | 5.0 | 1.5 | $B_S = 1.0$ erg | 350-450 |
| 1N150 | 6750 | 6.0 | 2.0 | $B_S = 2.0$ erg | 250-500 |
| 1N160 | 6750 | 6.5 | 2.7 | $B_S = 2.0$ erg | 200-500 |

REVERSE POLARITY TYPES

| | | |
|---------|------------------|-------|
| 1N155 | Reverse Polarity | 1N23B |
| 1N155A† | " " | 1N23C |
| 1N157 | " " | 1N21B |

MATCHED PAIRS

1N21B
1N21C
1N23B
1N23C
1N26
1N53
1N78
1N150

Maximum allowable unbalance for matched pair limits:
0.3 db conversion loss,
25 ohms I.F. Impedance.
Each individual unit in a matched pair has a maximum standing wave ratio of 1.6.
Matched pairs are also available with one reverse polarity type.

| Type | Min. Fig. of merit | Video Imp. (ohms) | Burnout Test | Carrier Freq. (mc) | Video Freq. |
|------|----------------------------|-------------------|-------------------|--------------------|--------------|
| 1N31 | 55 | 6,000-23,000 | $B_P = 0.02$ watt | 10,000 | 500 cps—5 mc |
| 1N32 | 100 | 5,000-20,000 | $B_P = 0.36$ watt | 3,000 | 500 cps—5 mc |
| 1N76 | Rated in specified circuit | | | 10,000 | 500 cps—5 mc |

Transistors

Hermetically sealed. Leads can be clipped for plug-in applications.

2N32—Point contact for pulse and switching circuits in large signal medium speed applications.

2N34—PNP Junction general purpose amplifier for high gain, low power, low frequency circuits.

2N35—NPN Junction designed for audio amplifier use.

2N68—PNP Junction medium gain, high power, output transistor. Provides 3 watts output in push pull Class B amplifier.

3N21—Point Contact tetrode for switching and small signal applications.



Glow Transfer Tubes

Cold cathode, bi-directional, direct reading decade counter tubes, 350 volt supply.

6476—Multiple output cathode—25 volts output across cathode resistor.

6482—Single output cathode—15 volts output across cathode resistor.



Photodiode 1N77A

Miniature highly sensitive junction photodiode for operation in visible and infra-red regions. Peak sensitivity at 15,000 Angstrom units.



Total energy in simulated spike of pulse TR box in radar service.

Peak power pulse under pulsed condi-

* Indicates JAN type.

† Overall noise figure 10 db max.



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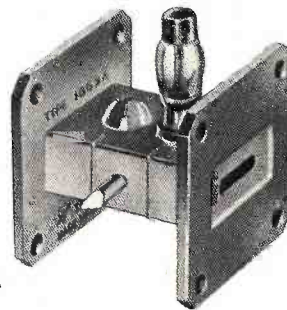


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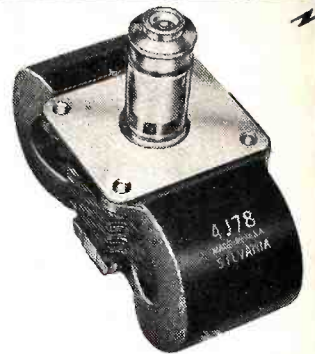
MICROWAVE COMPONENTS

TR's and ATR's

Sylvania TR and ATR Tubes are used chiefly as automatic electronic transmit-receive switches in radar equipment. Major characteristics of some of the more commonly used types are shown in tables. For full data on complete line call your nearest Sylvania Sales office.



1B63A



TR'S

| Type | Frequency Range (MC) | Insertion Loss @ Center (db max.) | Recovery Time (μ Sec. Max. @ -3db) | VSWR @ Center | Leakage Power (MW Max.) | Life (Min. Hrs.) |
|----------|--|-----------------------------------|---|---------------|-------------------------|------------------|
| *TR 1B40 | 1045-1155 | 1.0 | 50 | .. | .. | 500 |
| 6322 | 1215-1355 | 0.7 | 25 | .. | 60 | 500 |
| * 1B58 | 2659-2969 | 0.5 | 15 | 1.2 | 0.4 erg | 500 |
| 6117 | 2659-2969 | 0.5 | 15 | 1.65 | 40 | 500 |
| * 5853 | 2870-3230 | 0.7 | 15 | 1.4 | 0.4 erg | 500 |
| * 5927 | 3070-3530 | 0.7 | 15 | 1.4 | 50 | 500 |
| 1B55 | 3360-3740 | 0.7 | 15 | 1.4 | 40 | 500 |
| 5865 | 5395-5905 | 0.8 | 10 | 1.4 | 70 | 500 |
| 5790 | Classified Information - available to parties having proper government clearance | | | | | |
| * 5863 | | | | | | |
| 6232 | 8490-9578 | 0.7 | 4 | 1.4 | 40 | 500 |
| * 1B24A | 8490-9600 | 1.5 | 4 | .. | 30 | 500 |
| * 1B63A | 8490-9578 | 0.7 | 10 | 1.4 | 40 | 500 |
| 1B63B | 8490-9578 | 0.7 | 10 | 1.4 | 40 | 1000 |
| 6035 | 8490-9578 | 0.7 | 4 | 1.4 | 40 | 500 |
| 6164 | 8500-9600 | 0.7 | 4 | 2.0 | 30 | 500 |
| 6334 | 8500-9600 | Duplexer Loss = 1.2 db max. | | 1.2 | 10 | 1000 |
| | | Isolation = 20db min | | | | |
| 6501 | 8500-9600 | " | 8 | 1.2 | 10 | 500 |

MAGNETRONS

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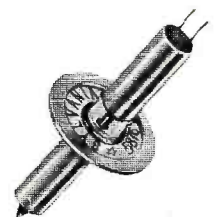
| Type | Frequency Range (mc) | Pulsed Power Out (kw) |
|------|----------------------|-----------------------|
| 2J42 | 9345-9405 | 7-14 |
| 2J55 | 9345-9405 | 40 |
| 6027 | 9345-9405 | 18-35 |
| 4J50 | 9345-9405 | 300 |
| 4J52 | 9345-9405 | 65-120 |
| 4J78 | 9003-9168 | 300 |
| 5789 | 34,512-35,208 | 40 |

*JAN Types

ATR'S

| Type | Tuning Susceptance (mhos) | Equivalent Conductance (max.) | Arc Loss (db max.) | *Recovery or Firing Time (max.) | Center Frequency (Mc) | Life (Min. Hrs.) |
|--------|---------------------------|-------------------------------|--------------------|---------------------------------|-----------------------|------------------|
| *1B44 | $\pm .05$ | .05 | .. | ... | 2750 | 1000 |
| 6024 | $\pm .05$ | .05 | .. | ... | 2800 | 1000 |
| *1B56 | $\pm .05$ | .05 | .. | ... | 2850 | 1000 |
| *5792 | $\pm .05$ | .05 | .. | ... | 2950 | 1000 |
| *5793 | $\pm .05$ | .05 | .. | ... | 3050 | 1000 |
| *5921 | $\pm .05$ | .05 | 0.8 | 10 sec. | 3200 | 1000 |
| *5922 | $\pm .05$ | .05 | 0.8 | 10 sec. | 3400 | 1000 |
| 6081 | $\pm .06$ | 0.1 | 0.8 | 10 sec. | 5640 | ... |
| *1B51 | $\pm .06$ | 0.1 | 0.5 | 10 sec. | 6425 | 500 |
| 1B37A | $\pm .06$ | 0.1 | 0.8 | *8.0 μ sec. | 8750 | 500 |
| 6034 | $\pm .06$ | 0.1 | 0.8 | *8.0 μ sec. | 8750 | 500 |
| 5883 | $\pm .06$ | .06 | 0.6 | 10 sec. | 8800 | 1000 |
| 6163 | $\pm .06$ | .06 | 0.8 | 10 sec. | 9050 | 500 |
| *1B35A | $\pm .06$ | 0.1 | 0.8 | *8.0 μ sec. | 9300 | 500 |
| 6033 | $\pm .06$ | 0.1 | 0.8 | *8.0 μ sec. | 9300 | 500 |
| 6214 | $\pm .06$ | 0.1 | 0.8 | ... | 9375 | ... |

*JAN Types



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5876 - is intended for use at 170 mc UHF triode for c.w. oscillator, amplifier and frequency multiplication.

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KLYSTRONS

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| Type | Mode | Frequency Range (mc) |
|------|-----------------|----------------------|
| 6BL6 | 1 $\frac{1}{2}$ | 1600-4000 |
| | 2 $\frac{3}{4}$ | 2100-4500 |
| | 3 $\frac{3}{4}$ | 4000-5500 |
| 6BM6 | 1 $\frac{1}{2}$ | 550-2300 |
| 6BMA | 2 $\frac{3}{4}$ | 1100-3000 |
| 5836 | 1 $\frac{1}{2}$ | 1600-4000 |
| | 2 $\frac{3}{4}$ | 2100-4500 |
| | 3 $\frac{3}{4}$ | 4000-5500 |
| 5837 | 1 $\frac{1}{2}$ | 550-2300 |
| | 2 $\frac{3}{4}$ | 1100-3000 |
| 6468 | 3 $\frac{3}{4}$ | 6125-6425 |
| 6469 | 3 $\frac{3}{4}$ | 6575-6875 |
| 6470 | 3 $\frac{3}{4}$ | 7125-7425 |



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- 22—is a pulse-modulated oscillator for use up to 3300 mc.
- 23—is for use as a c.w. oscillator without external feed-in the range from 900 to 3000 mc.
- 24—is a c.w. oscillator for use up to 3300 mc. Both discs folded.
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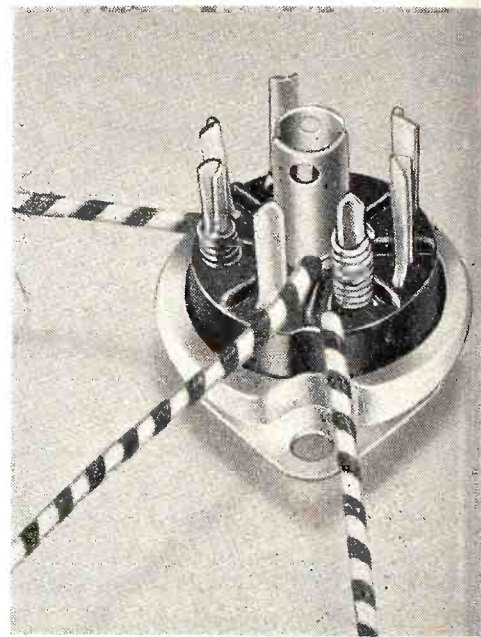


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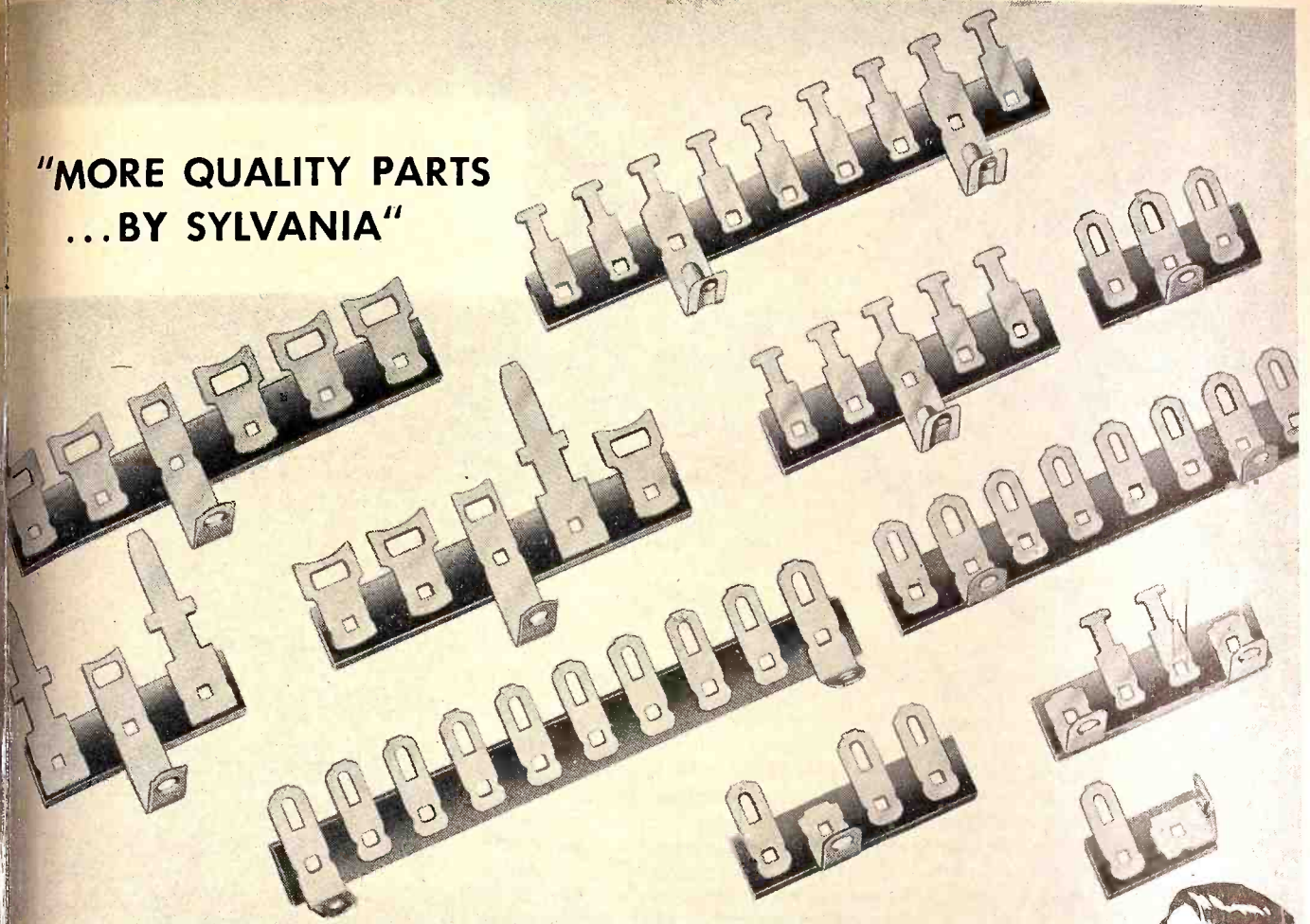
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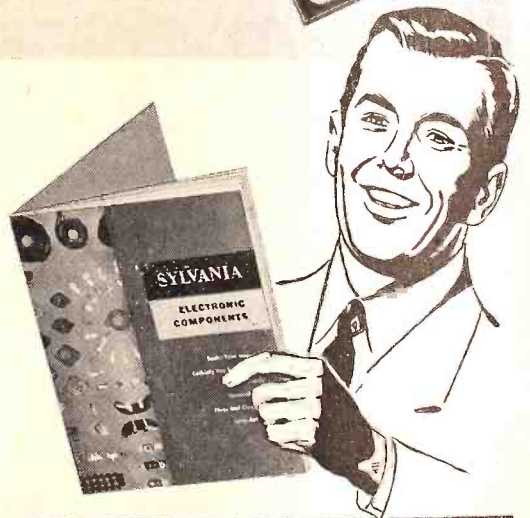
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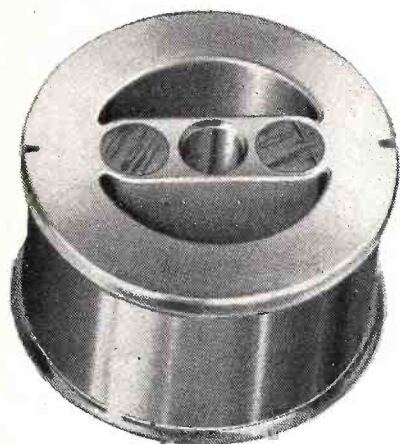


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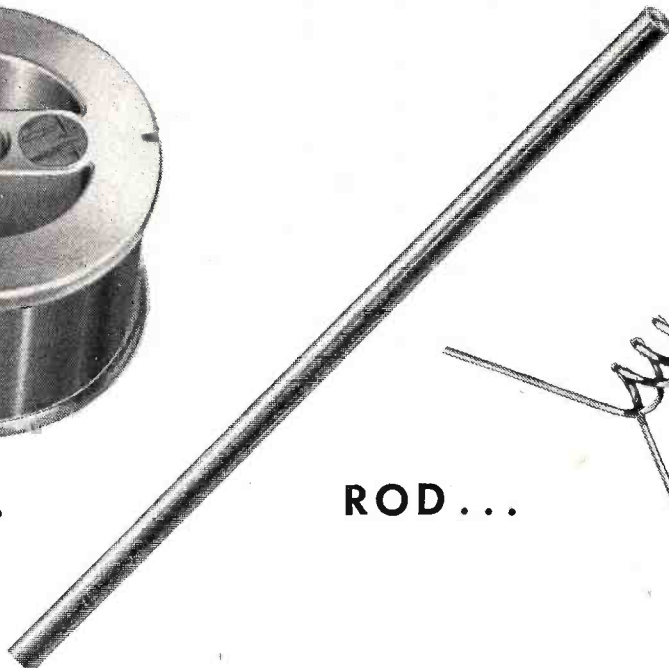


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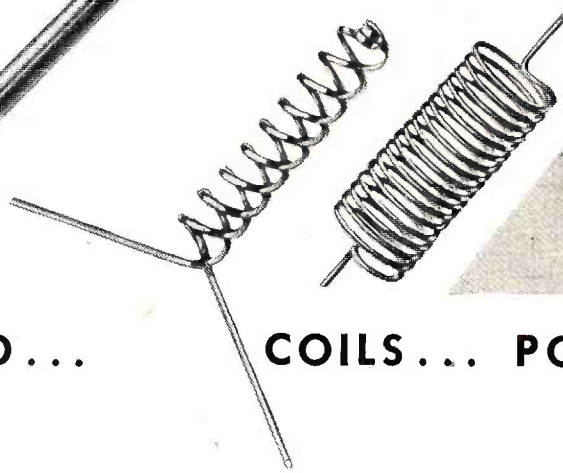
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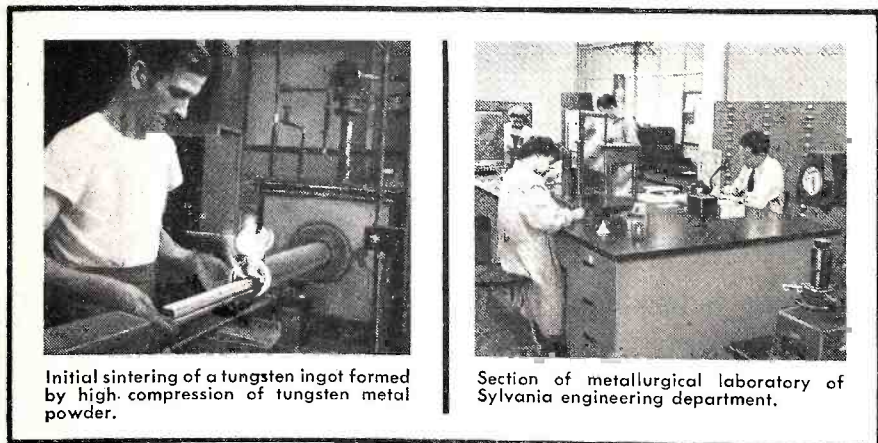
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The Editors

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VIDEO AMPLIFIER

Optimum transient response analysis yields design curves that permit rapid determination of parameters and evaluation of circuit performance for video amplifiers using conventional types of peaking networks. Typical examples are worked out in detail.

By **W. K. SQUIRES**
and **H. L. NEWMAN**

OF THE VARIOUS elements of television systems, the low-pass or video amplifier has probably received the most extensive investigation. The majority of the analytical work¹ has been confined to the determination of the steady-state characteristics of the various coupling networks employed. Only recently has attention been focused on the transient response.^{2,3,4}

The purpose of this paper is to show how transient analysis can provide the engineer with a direct, reliable method of resolving circuit limitations and performance specifications into an optimum video amplifier design.

The problem of attaining an optimum design is as follows: certain definite performance criteria are established; that is, gain, maximum rise time and overshoot permissible. Generally, stray circuit capacitances can be evaluated or at least estimated. The problem thus narrows down to determining the type and number of tubes to employ and the best coupling network configuration. Finally, the constants of the various circuit elements must be ascertained.

General Procedure

The general analytical procedure used in preparing the accompanying design curves was as follows: an equivalent circuit was drawn for each video coupling configuration considered, including the effect of inductance losses and distributed capacitances. Then, circuit equations were written in Laplace forms^{5,6} and solved for the relative

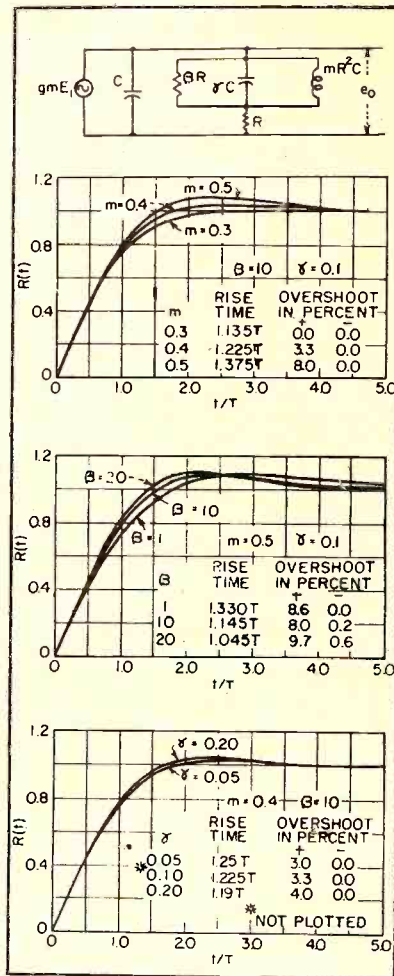


FIG. 1—Pentode shunt peaking

response to an input step function.

In most cases, the large number of energy storage elements appearing in the circuit resulted in expressions in S of high degree which would not afford a general time solution. Consequently, numerical values for each of the various parameters were chosen, and time solutions obtained and plotted for a large number of numerical cases. From these individual solutions, optimal values of the parameters were deduced and checked not only by trial time solutions but also by experimental work with model circuits. These values are presented in the design curves.

The video coupling circuits con-

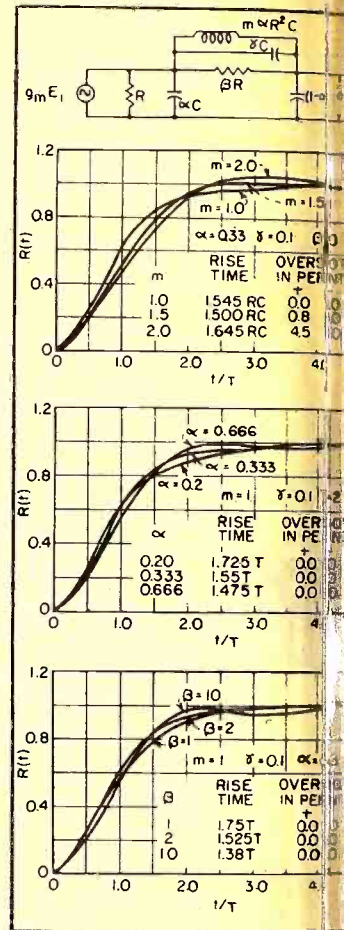


FIG. 2—Pentode series peaking

sidered were those usually described as shunt, series, or series-peaked. Both triode and pentode equivalent generators were included, and in the case of the pentode, families of curves were plotted to study the effect of load resistances.

Pentode Peaking

The simplest case is the series-peaked pentode having the equivalent circuit shown in Fig. 1. The circuit elements are expressed in parametric form; for example, the distributed capacitance of the tube inductance is simply γC . It has been observed by many workers that an optimum

DESIGN CHARTS

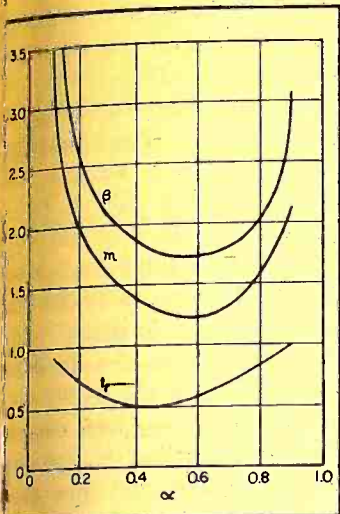


Fig. 3—Design curves for pentode series peaking for optimum m , β and γ ($\gamma=0.1$)

lies close to 0.4. It can also be seen that distributed capacitance is the inductance causes no difficulty until γ exceeds 0.2. Since γ represents the relative loss of the inductance, the effect of coils of low Q can be determined. The curves in Fig. 1 show the effect of varying m , β and γ .

The equivalent circuit for pentode series peaking is shown in Fig. 2. As the value of α is not normally under the control of the designer, optimum values for the other parameters have been obtained and these are plotted in the design curves of Fig. 3. For any value of α , the curves give the values of m and β to produce the minimum rise time for a maximum overshoot of one percent. It should be observed that values of α near 0.4 offer the shortest rise times. In Fig. 2 the effect of varying α and β can be determined for a practical circuit design.

A combination of the shunt and series peaking circuits is shown in Fig. 4. In this case there are six storage elements, and as expected, this relatively complicated circuit is very sensitive to changes in parameters. However, if the constants are properly chosen, much shorter rise times are possible than can be obtained with the simpler circuits.

parameters and the difficulty in solving even specific numerical cases of the circuit equation, the attainment of optimum conditions for all values of α is not a simple task. Although further analytical work is still in progress, Fig. 4A shows the effect of varying both the series and shunt inductances while Fig. 4B gives optimum values for the parameters to produce minimum rise times with small overshoot for various values of α .

In all of the cases presented above, the pentode has been considered as a constant-current generator. When it is necessary to consider the effects of low plate resistances, the triode equivalent generator (the constant voltage source with finite series resistance) should be adopted. Although this approach is most valuable for triode representation, it is also useful for the analysis of low-plate-resistance pentodes.

Triode Peaking

The equivalent circuit with the triode plate resistance given parametrically as ρR is shown in Fig. 5 along with relative response for various values of the parameters.

The effect of changing ρ is particularly interesting; as may be deduced from these curves and as will be shown later, the performance of the triode is superior to that of the pentode when plate-supply power and peak output voltage become important.

The equivalent triode series peaking circuit is shown in Fig. 6. The circuit has the relative response for various values of the parameters given in the curves of Fig. 6. From the analysis of many such curves, optimum relations of the parameters are obtained and plotted in Fig. 7. When these optimums are utilized, the resulting rise times are those given by Fig. 8. All responses resulting from the use of these values have overshoots of less than one percent.

The triode combination peaked circuit is shown in Fig. 9. Of all the circuits analyzed, the triode combination is by far the most involved. At the present time, insufficient data has been obtained to attain optimum relations as given in other cases. However, typical curves which will permit some understanding and application of this

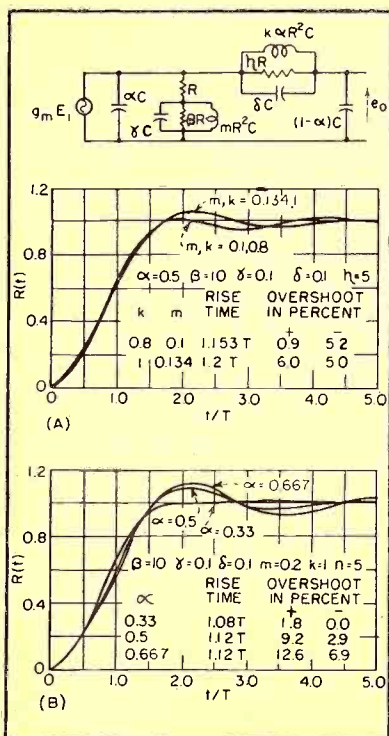


FIG. 4—Pentode combination peaking

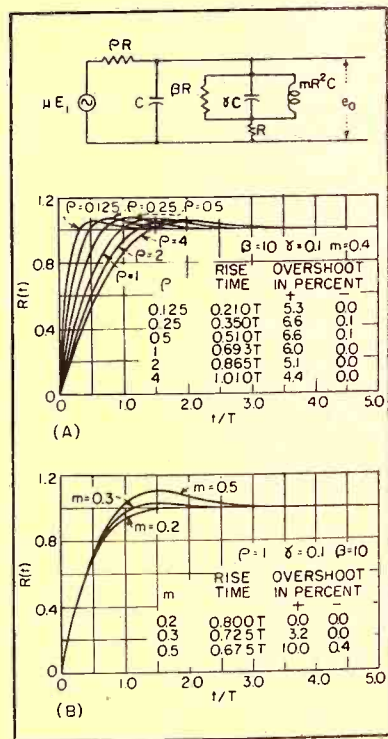


FIG. 5—Triode shunt peaking

Video Amplifier Design Charts

circuit are given. Figure 9A shows the effect of changing α while the result of varying k is shown in Fig. 9B.

Figures of Merit

When the response of the video coupling circuits is known, the remaining step in formulating the design procedure is to provide some method of selecting the best tube for the particular application. At least from the standpoint of tube performance, this can be done with the aid of figures of merit. From these merit figures contemporary tubes can be evaluated and their figures tabulated for different applications. This has been done but the tabulation is so extensive as to be prohibitive here.⁷

Although a general design procedure applicable to the majority of situations can be outlined, certain limitations are unavoidable. As all of the optimum relations previously described are for very small overshoot cases, the overall response of multistage amplifiers can be determined from the well known rule^{4,8} that the overshoot stays practically constant and the rise time is equal to the square root of the sum of the squares of the individual stage rise times.

The procedure that will be described is intended for single-stage design but with consideration of system problems it can be employed with multistage amplifiers. It is clear that no design procedure can take into account all the probabilities of individual problems such as cost, space and maintenance factors, but it can provide a general technical approach which should simplify the organization of the overall design problem.

Typical Problem

To illustrate the design procedure, let it be required to design a single-stage video amplifier having maximum possible voltage gain, less than one percent overshoot and a rise time of 0.1 microsecond. The stage is to work into a load having a total input capacitance of 20 μf ;

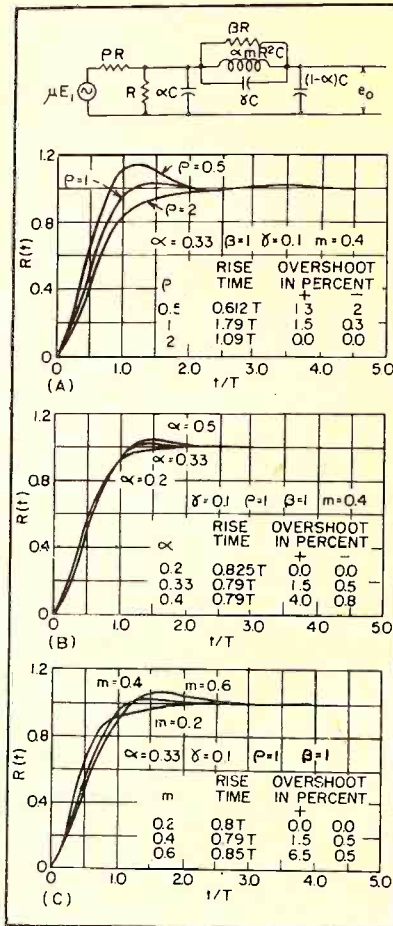


FIG. 6—Triode series peaking

the stray capacitance at the output of the tube itself is estimated to be 8 μf . The coupling network is to be relatively simple of adjustment.

These performance requirements indicate that series peaking should be used since this configuration yields low rise time and only moderate circuit complication. Calculations will be made for both pentodes and triodes, with the former being considered first.

Reference to the figures of merit for pentodes used for voltage gain indicates that the 6AH6 represents the best choice of tubes for this application. The significant data for this tube are: $g_m = 9,000 \mu\text{mhos}$, $C_{out} = 2.0 \mu\text{f}$, $C = 2.0 + 8.0 + 20.0 = 30.0 \mu\text{f}$, $\alpha C = 2.0 + 8.0 = 10.0 \mu\text{f}$ and $\alpha = 0.333$. Then, from Fig. 3: $t_r = 1.51 RC$, $m = 1.5$ and $\beta = 2.0$.

Therefore $R = 0.1 \times 10^{-8} / 1.51 \times 30 \times 10^{-12} = 2,210$ ohms
 $L = mR^2C = 0.333 \times 1.5 \times$

$$(2,210)^2 \times 30 \times 10^{-12} = 73$$

$$R = 2.0 \times 2,210 = 4,420$$

$$\text{gain} = g_m R = 19.9$$

This completes the design of the pentode stage. The triode stage is approached in a similar manner. The 12AV7 is found to have the following figures of merit to be the best choice and has the following characteristics: $\mu = 41$, $r_p = 4,800 \Omega$, $C_{out} = 0.45 \mu\text{f}$ so that $C = 8.0 + 20.0 = 28.45 \mu\text{f}$ giving $R = 845 \mu\text{f}$ and $\alpha = 0.297$.

From this point, the design procedure for triodes is not as straightforward as that for pentodes since t_r is a function of α and ρ . A rapidly converging trial and error process can be used to determine ρ and R as follows: assume $\rho = 0.5$. Then $R = 9,600$ ohms. From Fig. 7: $m = 0.54 RC$, and $R = 0.1 \times 10^{-8} / 0.54 \times 28.45 \times 10^{-12} = 6,250$ ohms.

This means the assumed value of ρ is too small: assume $\rho = 0.4$ which requires $R = 4,800$ ohms.

Again, from Fig. 7 and $R = 4,570$ ohms, $m = 0.77 RC$, and $R = 4,570$ ohms is still too low. Another trial indicates that a value of $\rho = 0.42$ is probably correct. This is probably so and yields a value $R = 4,570$ ohms. Then, from Fig. 7: $m = 0.42$ and $\beta = 1.05$. The

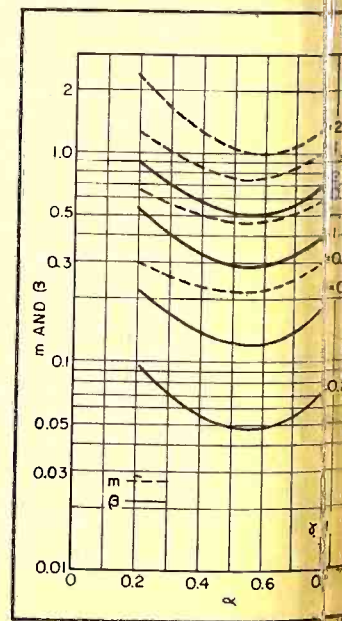


FIG. 7—Triode series peaking for determining optimum m and β

the actual constants are calculated
 $\tau = mR^2C = 70.5 \mu\text{h}$
 $R = 1.05 \times 4,450 = 4,670 \text{ ohms}$
 $\text{gain} = \mu / (1 + \rho) = 41 / 2.08 =$

Special Characteristics

Examination of any of the triode response curves showing the results of varying ρ , discloses the fact that as ρ increases so does the rise time. If at the same time reference is made to typical triode characteristic curves, it can be seen that r_p and consequently ρ varies very rapidly with grid voltage, particularly in the region near cut-off. As a result, the rise time of the triode amplifier is a function of its driving voltage; when the grid voltage is far negative, the rise time is long, decreasing as the grid voltage becomes less negative. Over the normal operating range of typical triodes when used as video amplifiers in class A, this effect is relatively negligible as the variation of ρ is slight.

However, this characteristic of variable rise time can be exploited when triodes are used to amplify asymmetrical voltage such as a video signal. If a video signal of sufficient amplitude, with the synchronizing signal polarized negative is applied to the grid of a triode amplifier the rise time of the signal will be longer during synchronizing time than during picture time. It is possible under these circumstances to have the rise time necessary to good video amplification and at the same time have a slow rise time, or narrow bandwidth channel, for the synchronizing signal.

As a ratio of maximum to minimum rise time of the order of five is possible, it can be seen that considerable improvements in signal-to-noise ratio for the synchronizing signal can be obtained. The design of a triode stage to be operated in this manner is made with the same procedure previously described and the rise time and subsequent bandwidth reduction determined from

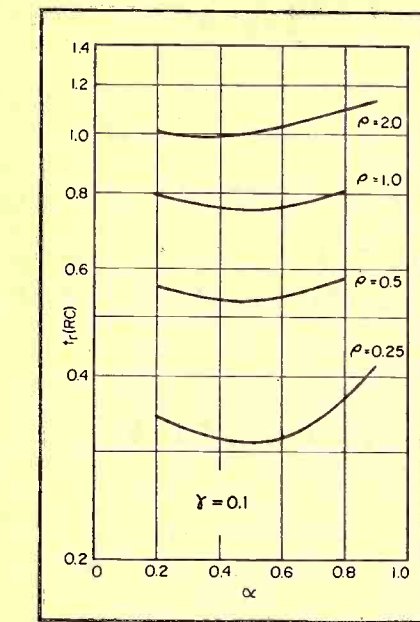


FIG. 8—Triode series peaking curves for determining optimum f_r .

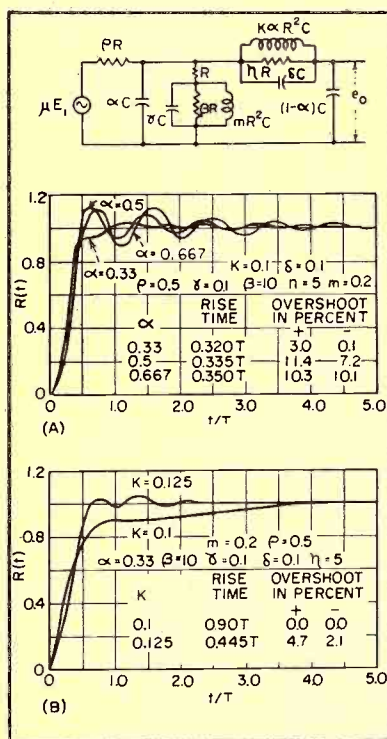


FIG. 9—Triode combination peaking

the optimum curves for the peaking circuit.

From the transient analysis of several video coupling networks, relationships among the various parameters have been obtained to produce optimum transient responses. When these optimum relationships are combined with applicable figures of merit, a de-

sign procedure is formulated which permits direct and concise design of both pentode and triode amplifiers.

Summary and Conclusion

From study of the triode response curves and experience with actual circuits, it is clear that the triode amplifier is quite superior to the pentode when the attainment of maximum output voltage is the major criterion. For the same plate supply power and tube dissipation, a triode, properly peaked, can produce from two to three times as much voltage output as a pentode. Of course the problems of cascading and driving the triode are relatively complex, but in many applications the increase in complexity would be a small price to pay for the increase in overall performance. In addition, the triode offers certain advantages in synchronizing signal-to-noise ratio.

From the standpoint of circuit synthesis, the use of the direct solution of circuit equations in terms of their primary functions, in this case reproduction of transients, leads to simple and interpretable design formulation.

The authors are particularly indebted to Karl R. Wendt for his general guidance and criticism and to Laverne H. Hardy for his extensive assistance in the analytical work.

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AUDIO NOMOGRAPHS

Three nomographs give component values needed to obtain desired gain and bandwidth in a pentode audio-frequency amplifier, without use of sliderule. Method involves use of equivalent circuits for high, low and middle frequency ranges

DESIGN of a pentode a-f amplifier is simplified by reducing the basic circuit to equivalent circuits for mid-range, high and low frequencies¹, as shown in Fig. 1. Optimum values of circuit components can be obtained directly from the nomograph in Fig. 2, 3 and 4. An actual example will serve to illustrate the design procedure, after which the condensed instructions alongside Fig. 4 should suffice for practical use.

Example. Design an amplifier having 40 db (100 times) voltage gain with a -3 db passband of 50 to 20,000 cps. This is to drive a 6V6 self-biased power amplifier, for which a 500,000-ohm grid resistor R_g is recommended for self-biased operation.

Choose a pentode that will give the required gain. Here the 6SJ7 would seem to be a good choice since it has high transconductance and the same heater voltage requirement as the 6V6. Reference to a tube manual gives a g_m of 1,600 micromhos and $R_p = 1$ meg for 250 plate volts and -3 grid volts.

To find R_L , first locate 40 db (or 100 times) on the A scale and 1,600 on the g_m scale of Fig. 2. Draw a straight line through these points and read 63,000 ohms for R_{equiv} . Draw a second straight line from R_{equiv} to 0.5 meg on R_p , to intersect R_L at 75,000 ohms. Use 82,000 ohms, the closest 10-percent RETMA value, as the plate load resistance.

By **JOSEPH F. SODARO**

To check the upper 3-db-down frequency limit f_1 , add 7 $\mu\mu\text{f}$ for the 6SJ7 output capacitance C_o , 9.5 $\mu\mu\text{f}$ for the 6V6 input capacitance C_i and an estimated 13.5 $\mu\mu\text{f}$ for stray and wiring capacitance C_w to get 30 $\mu\mu\text{f}$ for C_s . (A safe guess for C_w in conventional circuits is 10 to 15 $\mu\mu\text{f}$.) Draw a line from 63,000 on R_{equiv} (Fig. 3) to 30 on C_s and read 83,000 cps on f_1 . Thus, the upper 3-db-down frequency f_1 is

more than adequate with the estimated shunt capacitance. If f_1 is too low, the shunt capacitance or R_L must be reduced. Lower R_L will reduce the mid-frequency gain, however.

To determine the minimum allowable coupling capacitance C_c , add 500,000 and 82,000 to get 582,000 ohms for $R_p + R_L$. Draw a line on Fig. 4 from this to 50 cps on f_2 and read 0.0055 μf on C_c as the minimum allowable coupling value. The reactance of this capacitance equals $R_p + R_L$ at the lower 3-db-down frequency f_2 . Use 0.006 or 0.01 μf .

Next, determine the minimum allowable screen bypass capacitance. From tube and circuit data, choose 370,000 ohms for screen dropping resistor R_s . Divide $f_2 = 50$ by 10 to get 5 for f_3 . Draw a line through these R_s and f_3 values on Fig. 4, and read 0.09 μf on C_s . Use 0.1 μf .

Finally, determine the minimum allowable cathode bypass capacitance. From tube and circuit data, choose 680 ohms for R_k . Multiply this by $G_m = 1,600 \times 10^{-6}$ mhos to get 1.08 which is approximately one. According to the tabulation alongside Fig. 4, f_4 is then $f_3 \div 10$, or 5. Connect 680 on R_k with 5 on f_4 and read 47 μf on C_k as a minimum allowable cathode bypass capacitance.

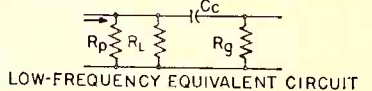
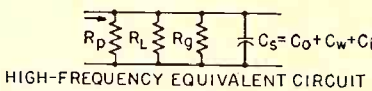
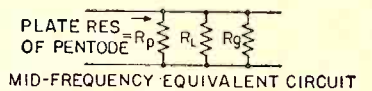
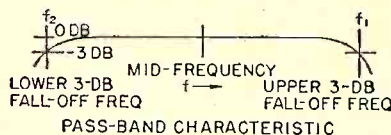
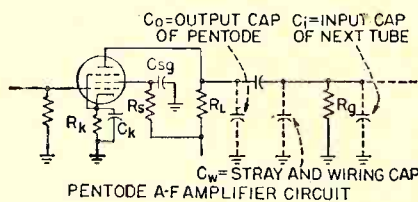
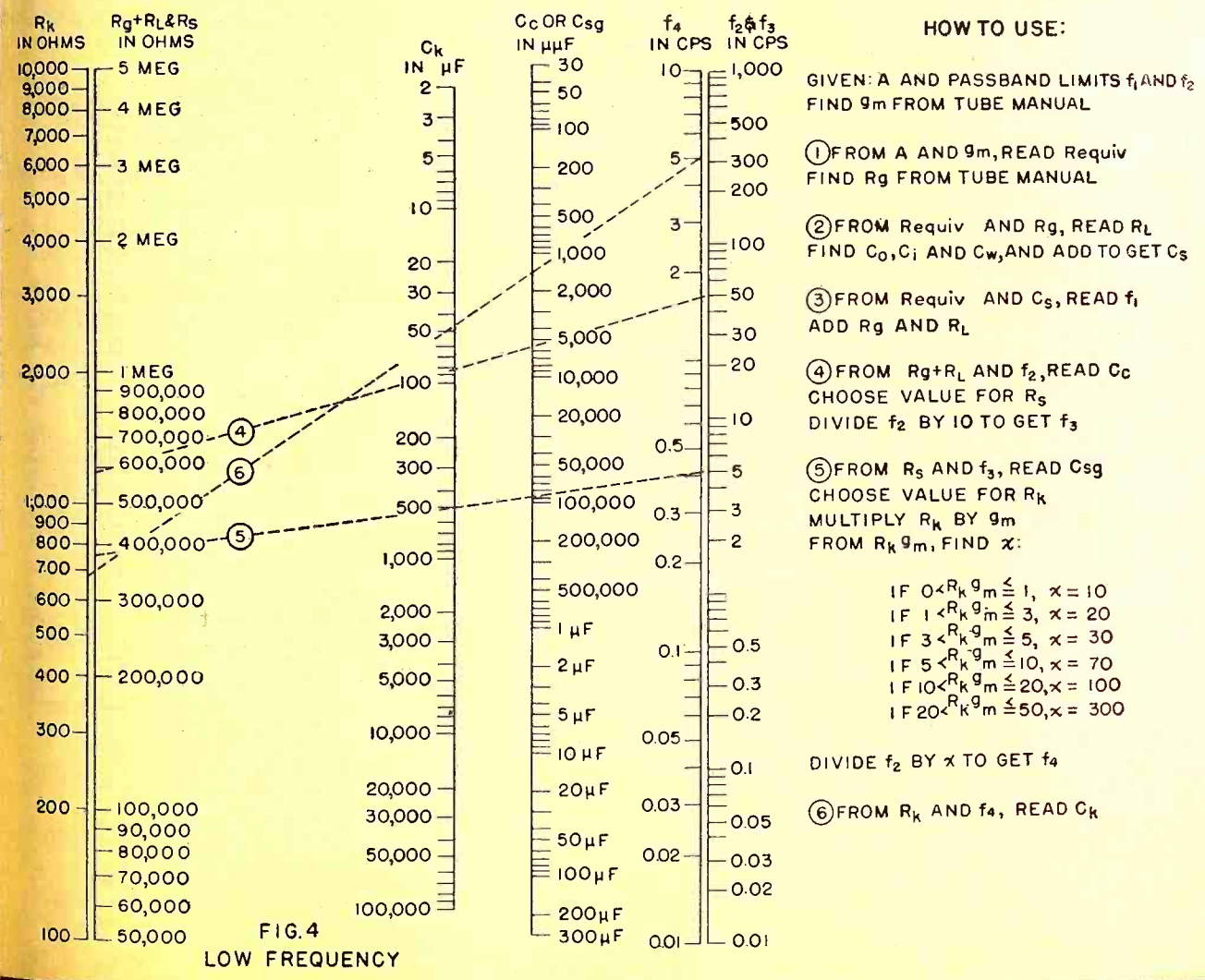
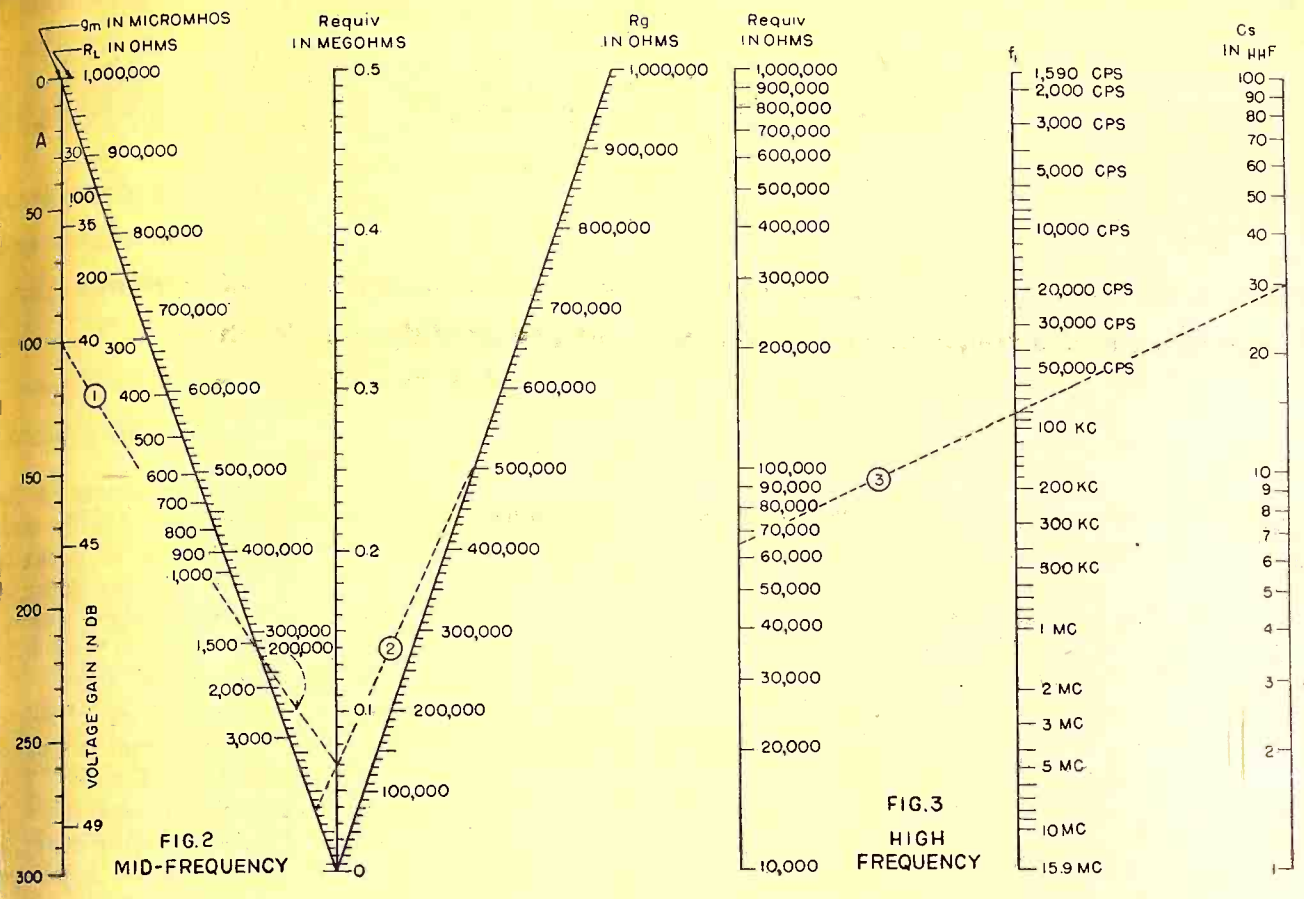


FIG. 1—Basic circuit, characteristic response curve and equivalent versions for three different regions of the audio spectrum

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FIELD-POWER CONVERSION

Direct-reading conversion chart enables quick transfer of propagation data from field-strength to power-density values. Gain in db above 1 microvolt per meter or gain or loss in db above 1 microwatt per square meter shows at a glance

IN calculations involving propagation curves it is often convenient to do the computation in terms of power density rather than in terms of field strength, which is given in most propagation curves. Changing field intensity into power density can be greatly simplified by the conversion chart.

The chart is based upon the equation

$$P = \frac{E^2}{120\pi}$$

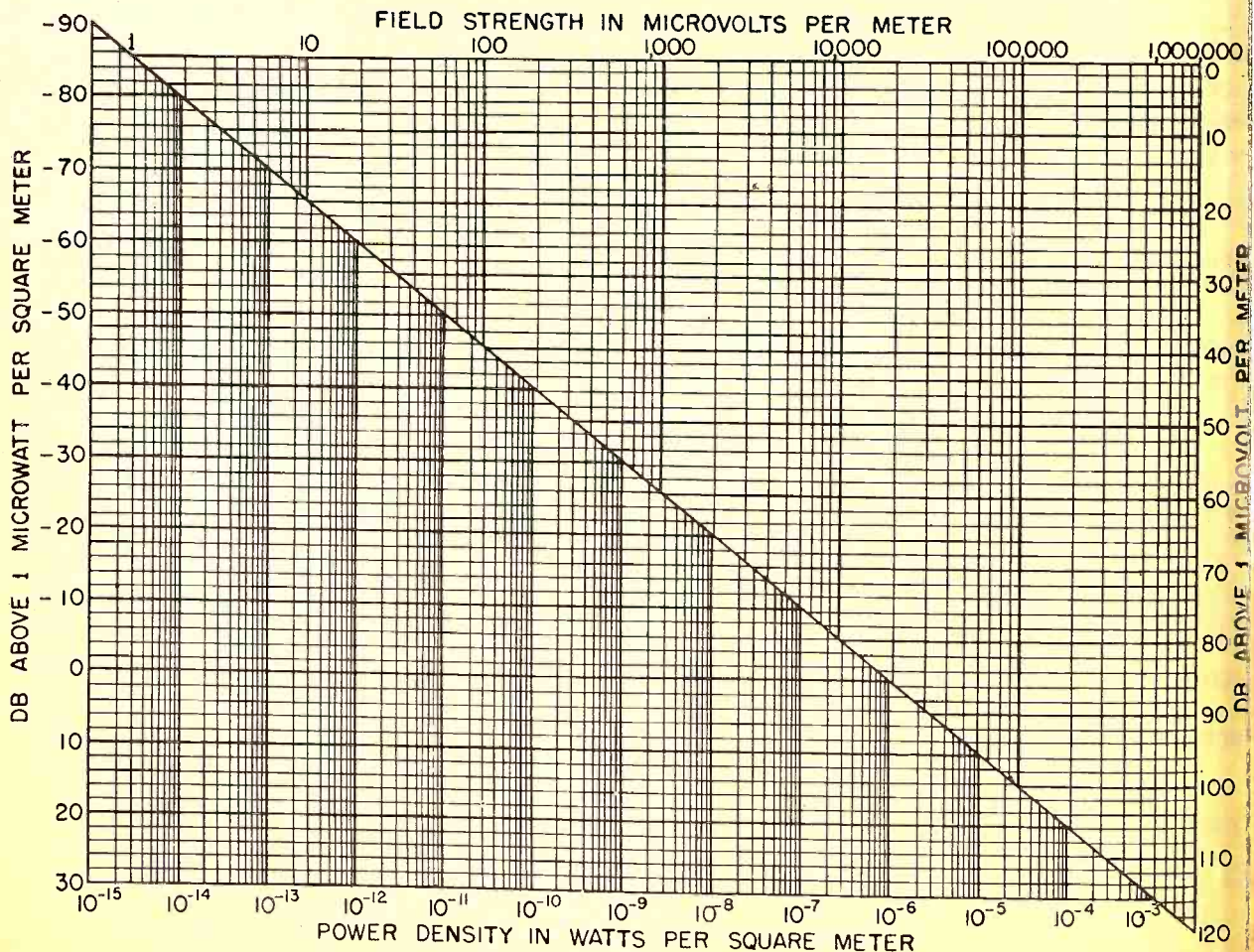
By **ROBERT E. PERRY**

where E is the field intensity, P is the power density and 120π is the resistance of free space.

The conversion chart is direct reading. A value on the left scale

can be found in terms of the right scale on the right side by reading directly across, or it can be read in terms of the upper or lower scale by reading over the diagonal line and then down to the desired scale.

For example, a field of 50 μV per meter corresponds to a power density of approximately 10^{-10} watts per square meter, which is 54 db above 1 μV per meter or about 32 db below 1 μW per square meter.



TRANSISTOR EQUATIONS USING h-PARAMETERS

Equations based on four h-parameters of base-input common-emitter circuit permit rapid calculation of operating characteristics for other circuit configurations, using easily obtained measurements

By C. C. CHENG

SIMPLIFICATION of transistor circuit calculations and measurements result from specifying the four-terminal network with input current i_1 and output voltage v_2 as independent variables and output current i_2 and input voltage v_1 as dependent variables. The h -parameters are thus introduced, and circuit equations become

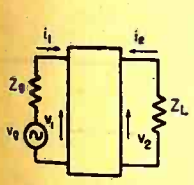
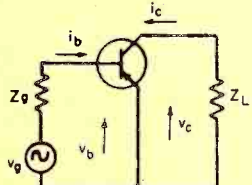
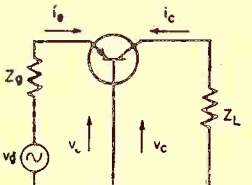
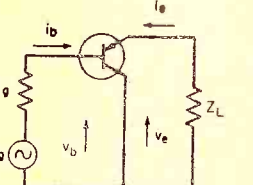
$$v_1 = h_{11}i_1 + h_{12}v_2 = \frac{1}{y_{11}}i_1 + \mu_{12}v_2$$

$$i_2 = h_{21}i_1 + h_{22}v_2 = \alpha_{21}i_1 + \frac{1}{Z_{22}}v_2$$

where h_{11} , h_{12} , h_{21} and h_{22} are the

four h -parameters and $y_{11} = 1/h_{11}$ is defined as the short-circuit input admittance, $\mu_{12} = h_{12}$ the reverse open-circuit voltage gain, $\alpha_{21} = h_{21}$ the forward short-circuit current gain, and $Z_{22} = 1/h_{22}$ the open-circuit output impedance. These parameters are comparatively easy to measure and show directly the funda-

mental properties of the transistor, such as current gain. The fundamental parameters selected in this paper are the four h -parameters of the base-input common-emitter circuit. They are $y_{11e} = 1/h_{11e}$, $\mu_{bc} = h_{12e}$, $\alpha_{cb} = h_{21e}$, and $Z_{22e} = 1/h_{22e}$. All the circuit equations summarized in the following table for three basic circuit configurations are in terms of these four h -parameters so that application engineers can use them directly whenever the transistor h -parameters are specified.

| CIRCUIT CONFIGURATION | COMMON EMITTER | COMMON BASE | COMMON COLLECTOR |
|--|--|--|---|
|  |  |  |  |
| h-Parameter $y_{11} = \frac{1}{h_{11}}$ $\mu_{12} = h_{12}$ $\alpha_{21} = h_{21}$ $Z_{22} = \frac{1}{h_{22}}$ $S = 1 - \mu_{12}\alpha_{21}y_{11}Z_{22}$ | y_{11e} μ_{bc} α_{cb} Z_{22e} $S_e = 1 - \mu_{bc}\alpha_{cb}y_{11e}Z_{22e}$ | $(1 + \alpha_{cb})y_{11e}$ $\mu_{ec} = \mu_{bc} \frac{S_e}{1 - S_e}$, if $ \alpha_{cb} > 1$ $\alpha_{ce} = \frac{-\alpha_{cb}}{1 + \alpha_{cb}} = -\alpha$ $\alpha \equiv -\alpha_{ce}$ $(1 + \alpha_{cb})Z_{22e}$ $S_b = 1 + (1 + \alpha_{cb})S_e$ | y_{11e} $\mu_{bc} = 1 - \mu_{bc} \approx 1$ $ \mu_{bc} < 1$ $\alpha_{cb} = -(1 + \alpha_{cb})$ Z_{22e} $S_c = 1 + (1 - \mu_{bc})(1 + \alpha_{cb})y_{11e}Z_{22e}$ $\approx 1 + \alpha_{cb}y_{11e}Z_{22e}$ $\left \frac{\alpha_{cb}}{\mu_{bc}} \right > 1$ $ \mu_{bc} < 1$ |

Transistor Equations Using *h*-Parameters

| CIRCUIT CONFIGURATION | COMMON EMITTER | COMMON BASE | COMMON COLLECTOR |
|--|---|---|--|
| Z-Parameters $Z_{11} = \frac{S}{y_{11}}$ $Z_{12} = \mu_{12}Z_{22}$ $Z_{21} = -\alpha_{21}Z_{22}$ | $\frac{S_e}{y_{11e}}$ $\mu_{bc}Z_{22e}$ $-\alpha_{cb}Z_{22e}$ | $\frac{S_b}{(1 + \alpha_{cb})y_{11e}} = \frac{S_e}{y_{11e}}$ $\frac{S_e}{y_{11e}} - \mu_{bc}Z_{22e}$ $\alpha_{cb}Z_{22e}$ | $\frac{S_c}{y_{11c}} = \frac{1}{y_{11e}} + \alpha_{cb}Z_{22e}$ $(1 - \mu_{bc})Z_{22e} = Z_{22c}$ $(1 + \alpha_{cb})Z_{22e} = \alpha_{cb}Z_{22c}$ |
| Y-Parameters $y_{12} = -\mu_{12}y_{11}$ $y_{21} = \alpha_{21}y_{11}$ $y_{22} = \frac{S}{Z_{22}}$ | $-\mu_{bc}y_{11c}$ $\alpha_{cb}y_{11e}$ $\frac{S_e}{Z_{22e}}$ | $\frac{S_e}{Z_{22e}}$ $-\alpha_{cb}y_{11e}$ $= \frac{1 + (1 + \alpha_{cb})S_e}{(1 + \alpha_{cb})Z_{22e}} = \frac{S_e}{Z_{22e}}$ | $-(1 - \mu_{bc})y_{11c} = -y_{11e}$ $-(1 + \alpha_{cb})y_{11e}$ $\frac{S_e}{Z_{22e}} = \frac{1}{Z_{22c}} + \alpha_{cb}y_{11e}$ |

| | COMMON EMITTER | COMMON BASE | COMMON COLLECTOR |
|---|--|--|--|
| Other Parameters $\alpha_{12} = \frac{1}{\alpha_{21}} \left(1 - \frac{1}{S}\right)$ $\mu_{21} = \frac{1}{\mu_{12}} \left(1 - \frac{1}{S}\right)$ | $\frac{1}{\alpha_{cb}} \left(1 - \frac{1}{S_e}\right)$ $\frac{1}{\mu_{bc}} \left(1 - \frac{1}{S_e}\right)$ | $\alpha_{ec} = \frac{-\alpha_{cb}S_e}{1 + (1 + \alpha_{cb})S_e}$ $\mu_{ce} = -\frac{1}{\mu_{bc}} \left(1 - \frac{1}{S_e}\right)$ | $\alpha_{be} = \frac{-1}{1 + \alpha + \frac{1}{y_{11c}Z_{22e}}}$ $\mu_{eb} = \frac{1}{1 - \mu_{bc} + \frac{1}{(1 + \alpha_{cb})y_{11e}Z_{22e}}}$ |
| Input Impedance = Z_{in} $= \frac{1}{y_{11}} - \frac{\mu_{12}\alpha_{21}}{1 + \frac{Z_L}{Z_{22}}}$ | $Z_{in} = \frac{1}{y_{11e}} - \frac{\mu_{bc}\alpha_{cb}}{1 + \frac{Z_L}{Z_{22e}}} Z_L$ $= \frac{1}{y_{11e}} - \mu_{bc}\alpha_{cb}Z_L; Z_L \ll Z_{22e}$ | $Z_{in} = \frac{1}{(1 + \alpha_{cb})y_{11e}}; Z_L \ll Z_{22e}$ | $Z_{in} = \frac{1}{y_{11c}} + (1 + \alpha_{cb})Z_L; Z_L \ll Z_{22e}$ |
| Output Impedance = Z_o $= \frac{1}{\frac{1}{Z_{22}} - \frac{\mu_{12}\alpha_{21}}{Z_o + \frac{1}{y_{11}}}}$ $= \frac{Z_{22}}{S} \quad Z_o < \frac{1}{y_{11}}$ | $Z_o = \frac{1}{\frac{1}{Z_{22e}} - \frac{\mu_{bc}\alpha_{cb}}{Z_o - \frac{1}{y_{11e}}}}$ $= \frac{Z_{22e}}{S_e} \quad Z_o < \frac{1}{y_{11e}}$ | $Z_o = \frac{Z_{22e}}{\frac{1}{1 + \alpha_{cb}} + S_e}$ $Z_o < \frac{1}{y_{11e}(1 + \alpha_{cb})}$ | $Z_o = \frac{Z_{22e}}{1 + \alpha_{cb}y_{11c}Z_{22e}} \quad \mu_{bc} < 1, \alpha_{cb} > 1$ |
| Voltage Gain = K_V $= \frac{-y_{11}Z_L}{S - \frac{Z_L}{Z_{22}}}$ $= -\frac{y_{11}Z_L}{S}, \text{ if } Z_L \ll Z_{22}$ | $K_V = \frac{-y_{11e}Z_L}{S_e - \frac{Z_L}{Z_{22e}}}$ $= -\frac{y_{11e}Z_L}{S_e}$ | $K_V = \frac{-y_{11c}Z_L}{S_e + \frac{1}{1 + \alpha_{cb}} - \frac{Z_L}{Z_{22e}(1 + \alpha_{cb})^2}}$ $= \frac{-y_{11c}Z_L}{S_e + \frac{1}{1 + \alpha_{cb}}}$ | $K_V = \frac{-y_{11c}Z_L}{1 + \alpha_{cb}y_{11c}Z_{22e}}$ |

Transistor Equations Using h -Parameters

| | COMMON EMITTER | COMMON BASE | COMMON COLLECTOR |
|---|--|---|--|
| Current Gain = K_i $= \frac{\alpha_{21}}{1 + \frac{Z_L}{Z_{22}}}$ | $K_i = \frac{\alpha_{cb}}{1 + \frac{Z_L}{Z_{22e}}}$ | $K_i = \frac{-\alpha_{cb}}{1 + \alpha_{cb} + \frac{Z_L}{Z_{22e}}}$ | $K_i = \frac{-(1 + \alpha_{cb})}{1 + \frac{Z_L}{Z_{22e}}}$ |
| Power Gain = $K_p = 4R_oR_L$ $\left[\frac{\alpha_{21}}{\left(Z_o + \frac{1}{y_{11}} \right) \left(1 + \frac{Z_L}{Z_{22}} \right) - \mu_{12}\alpha_{21}Z_L} \right]^2$ | $K_p = 4R_oR_L$ $\left[\frac{\alpha_{cb}}{\left(Z_o + \frac{1}{y_{11e}} \right) \left(1 + \frac{Z_L}{Z_{22e}} \right) - \mu_{bc}\alpha_{cb}Z_L} \right]^2$ | $K_p = 4R_oR_L$ $\left[\frac{\alpha_{cb}}{\left(Z_o + \frac{1}{(1 + \alpha_{cb})y_{11e}} \right) \left(1 + \alpha_{cb} + \frac{Z_L}{Z_{22e}} \right) + \frac{S_e Z_L}{y_{11e}Z_{22e}}} \right]^2$ | $K_p = 4R_oR_L$ $\left[\frac{1 + \alpha_{cb}}{\left(Z_o + \frac{1}{y_{11e}} \right) \left(1 + \frac{Z_L}{Z_{22e}} \right) + \alpha_{cb}Z_L} \right]^2$ |

Equations listed above are applicable to both high and low-frequency operation. For the low-frequency case only, substitute g_{11e} , α_{cbo} , μ_{bco} , r_{22e} , and S_{eo} for y_{11e} , α_{cb} , μ_{cb} , Z_{22e} and S_e respectively as shown in the equations that follow

| | | | |
|--|---|---|--|
| Matched Input Resistance = $R_{im} = \frac{\sqrt{S_o}}{g_{11}}$ | $R_{im} = \frac{\sqrt{S_{eo}}}{g_{11e}}$ | $R_{im} = \frac{\sqrt{S_{eo}}}{g_{11e}} \frac{1}{\sqrt{1 + \alpha_{cbo}}}$ | $S_{co} = 1 + (1 + \alpha_{cbo})(1 - \mu_{bco})g_{11e}r_{22e}$ $= \alpha_{cbo}g_{11e}r_{22e}$ $R_{im} = \frac{\sqrt{S_{co}}}{g_{11e}}$ |
| Matched Output Resistance = $R_{om} = \frac{r_{22}}{\sqrt{S_o}}$ Ratio $\frac{R_{om}}{R_{im}} = \frac{r_{22}}{r_{11}} = \frac{r_{22}g_{11}}{S_o}$ | $R_{om} = \frac{r_{22e}}{\sqrt{S_{eo}}}$ $\frac{R_{om}}{R_{im}} = \frac{r_{22e}g_{11e}}{S_{eo}}$ | $R_{om} = \frac{r_{22e}}{\sqrt{S_{eo}}} \sqrt{1 + \alpha_{cbo}}$ $\frac{R_{om}}{R_{im}} = \frac{r_{22e}g_{11e}}{S_{eo}} (1 + \alpha_{cbo})$ | $R_{om} = \frac{r_{22e}}{\sqrt{S_{co}}}$ $\frac{R_{om}}{R_{im}} = \frac{r_{22e}g_{11e}}{S_{co}} = \frac{1}{\alpha_{cbo}}$ |
| Matched Voltage Gain = $K_{Vm} = \frac{-\alpha_{21o}g_{11}r_{22}}{S_o + \sqrt{S_o}}$ | $K_{Vm} = \frac{-\alpha_{cb}g_{11e}r_{22e}}{S_{eo} + \sqrt{S_{eo}}}$ | $K_{Vm} = \frac{\alpha_{cbo}(1 + \alpha_{cbo})g_{11e}r_{22e}}{1 + (1 + \alpha_{cbo})S_{eo} + \sqrt{1 + (1 + \alpha_{cbo})S_{eo}}}$ $= \frac{\alpha_{cbo}g_{11e}r_{22e}}{S_{eo} + \sqrt{1 + \alpha_{cbo}}}$ | $K_{Vm} = \frac{(1 + \alpha_{cbo})g_{11e}r_{22e}}{S_{co} + \sqrt{S_{co}}}$ |
| Matched Current Gain = $K_{im} = \frac{\alpha_{21o}}{1 + \frac{1}{\sqrt{S_o}}}$ | $K_{im} = \frac{\alpha_{cbo}}{1 + \frac{1}{\sqrt{S_{eo}}}}$ | $K_{im} = \frac{-\alpha_{cbo}}{(1 + \alpha_{cbo}) \left(1 + \sqrt{\frac{1}{\alpha_{cbo}S_{eo}}} \right)}$ | $K_{im} = \frac{-(1 + \alpha_{cbo})}{1 + \sqrt{S_{co}}}$ |
| Matched Power Gain = $K_{pm} = \frac{g_{11}r_{22}\alpha_{21o}^2}{S_o \left(1 + \frac{1}{\sqrt{S_o}} \right)^2}$ | $K_{pm} = \frac{g_{11e}r_{22e}\alpha_{cbo}^2}{S_{eo} \left(1 + \frac{1}{\sqrt{S_{eo}}} \right)^2}$ | $K_{pm} = \frac{g_{11e}r_{22e}\alpha_{cbo}^2}{\alpha_{cbo}S_{eo} \left(1 + \sqrt{\frac{1}{\alpha_{cbo}S_{eo}}} \right)^2}$ | $K_{pm} = \frac{g_{11e}r_{22e}(1 + \alpha_{cbo})^2}{S_{co} \left(1 + \frac{1}{\sqrt{S_{co}}} \right)^2}$ |

TRANSISTOR EQUATIONS

Circuit gain and impedance characteristics are given in terms of transistor parameters for grounded base, grounded emitter and grounded collector configurations. Simplifying approximations are given where appropriate

By F. R. STANSEL

THE ACCOMPANYING tabulation summarizes some of the important circuit equations useful to engineers in the application of transistors.

All equations are given in terms of the transistor parameters: collector resistance r_c , base resistance r_b , emitter resistance r_e , and current amplification constant α . These quantities are all described in

references listed in the bibliography. The quantity r_c is almost always much larger than r_b , and r_e , and often is even much larger than the load resistance. This makes possible approximations that greatly simplify the complicated exact equations. To evaluate these approximations in this tabulation, the exact expression is always given first followed, where appropriate, by a

simpler approximation equation. The other quantities listed are self-explanatory.

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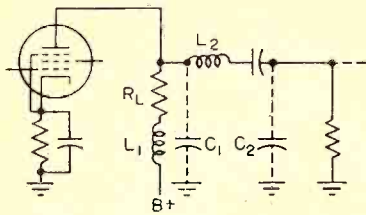
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| | GROUNDING BASE | GROUNDING EMITTER | GROUNDING COLLECTOR |
|-------------------|--|---|---|
| | | | |
| $\frac{e_2}{e_1}$ | $= \frac{\alpha R_L}{r_e + r_b(1-\alpha) + \frac{(r_e + r_b)R_L}{(r_c + r_b)}}$ IF $R_L \ll r_c$ $\approx \frac{\alpha R_L}{r_e + r_b(1-\alpha)}$ | $= \frac{-R_L \left[\alpha - \frac{r_e + r_b}{r_c + r_b} \right]}{r_e + r_b(1-\alpha) + \frac{(r_e + r_b)R_L}{(r_c + r_b)}}$ IF $R_L \ll r_c, r_e + r_b \ll r_c$ $\approx \frac{-\alpha R_L}{r_e + r_b(1-\alpha)}$ | $= \frac{r_c}{r_c + r_b} \left[\frac{1}{\frac{R_L + r_e}{R_L} + \frac{r_b(1-\alpha)}{R_L}} \right]$ IF $r_e \ll R_L, r_b(1-\alpha) \ll R_L, r_b \ll r_c$ $\approx \text{UNITY}$ |
| $\frac{e_2}{e_g}$ | $= \frac{\alpha R_L}{\left[r_e + r_b + R_G \right] \left[1 + \frac{R_L}{r_c + r_b} \right] - \alpha r_b}$ IF $R_L \ll r_c$ $\approx \frac{\alpha R_L}{r_e + R_G + r_b(1-\alpha)}$ | $= \frac{-R_L \left[\alpha - \frac{r_e + r_b}{r_c + r_b} \right]}{\left[r_e + r_b \right] \left[1 + \frac{R_L}{r_c + r_b} \right] + R_G \left[1 + \frac{R_L + r_e}{r_c + r_b} \right] - \alpha (r_b + R_G)}$ IF $R_L + r_e \ll r_c, r_e + r_b \ll r_c$ $\approx \frac{-\alpha R_L}{r_e + (1-\alpha)(r_b + R_G)}$ | $= \frac{1}{\left[1 + \frac{r_e}{R_L} \right] \left[1 + \frac{r_b + R_G}{r_c} \right] + \left[\frac{r_b + R_G}{R_L} \right] [1-\alpha]}$ IF $r_e \ll R_L, r_b + R_G \ll r_c, r_b \ll r_c$ $\approx \frac{1}{1 + \left[\frac{r_b + R_G}{R_L} \right] [1-\alpha]}$ |
| $\frac{i_2}{i_1}$ | $= \frac{\alpha}{1 + \frac{R_L}{r_c + r_b}}$ | $= \frac{-\left[\alpha - \frac{r_e + r_b}{r_c + r_b} \right]}{\left[1 - \alpha \right] + \frac{R_L + r_e}{r_c + r_b}}$ IF $r_e \ll r_c, r_e \ll R_L, r_b \ll r_c$ $\approx \frac{-\alpha}{(1-\alpha) + \frac{R_L}{r_c}}$ | $= \frac{1}{\left[1 - \alpha \right] \left[\frac{r_c + r_b}{r_c} \right] + \frac{R_L + r_e}{r_c}}$ IF $r_b \ll r_c, r_e \ll R_L$ $\approx \frac{1}{(1-\alpha) + \frac{R_L}{r_c}}$ |

| | GROUNDING BASE | GROUNDING EMITTER | GROUNDING COLLECTOR |
|---|---|--|--|
| INPUT RESISTANCE R_{IN} | $= r_e + r_b \left[1 - \frac{\alpha R_L}{r_c + r_b} \right]$ <p>IF $R_L \ll r_c$ $\cong r_e + r_b (1 - \alpha)$</p> | $= r_b + r_e \left[\frac{r_c + R_L}{r_c + r_b} \frac{R_L + r_e}{r_c + r_b} + (1 - \alpha) \right]$ <p>IF $r_b \ll r_c, r_e \ll R_L$ $\cong r_b + r_e \left[1 + \frac{R_L}{r_c} \right]$</p> <p>IF IN ADDITION $R_L \ll r_c$ $\cong r_b + \frac{r_e}{1 - \alpha}$</p> | $= r_b + \frac{r_c}{1 + \frac{(1 - \alpha)(r_c + r_b)}{R_L + r_e}}$ <p>IF $r_b \ll r_c$ THIS IS EQUIVALENT TO</p> |
| OUTPUT RESISTANCE R_{OUT} | $= (r_c + r_b) \frac{r_e + r_b(1 - \alpha) + R_G}{r_e + r_b + R_G}$ <p>IF $r_b \ll r_c$ $\cong r_c \frac{r_e + r_b(1 - \alpha) + R_G}{r_e + r_b + R_G}$</p> | $= r_c \frac{\left[1 + \frac{r_b + R_G}{r_c} \right] \left[r_e + (1 - \alpha)r_b \right] + R_G(1 - \alpha)}{r_e + r_b + R_G}$ <p>IF $r_b + R_G \ll r_c$ $\cong r_c \frac{r_e + (1 - \alpha)(r_b + R_G)}{r_e + r_b + R_G}$</p> | $= r_e + \frac{(1 - \alpha)(r_c + r_b)}{1 + \frac{r_c}{R_G + r_b}}$ <p>IF $r_b \ll r_c$ THIS IS EQUIVALENT TO</p> |
| OPERATING GAIN POWER TO LOAD = MAX. POWER FROM GEN. | $= \frac{4 R_L R_G \alpha^2}{\left\{ \frac{R_L}{r_c + r_b} \left[r_e + r_b + R_G \right] + \left[r_e + R_G + r_b(1 - \alpha) \right] \right\}^2}$ <p>IF $R_L \ll r_c$ $\cong \frac{4 R_L R_G \alpha^2}{\left[r_e + R_G + r_b(1 - \alpha) \right]^2}$</p> | $= \frac{4 R_G R_L \left[\alpha - \frac{r_e + r_b}{r_c + r_b} \right]^2}{\left\{ \frac{R_L}{r_c + r_b} \left[1 + \frac{R_L}{r_c + r_b} \right] + R_G \left[1 + \frac{R_L + r_e}{r_c + r_b} \right] - \alpha \left[r_b + R_G \right] \right\}^2}$ <p>IF $R_L + r_e \ll r_c, r_e + r_b \ll r_c$ $\cong \frac{4 R_G R_L \alpha^2}{\left[r_e + (1 - \alpha)(r_b + R_G) \right]^2}$</p> | $= \frac{4 R_G}{R_L \left\{ \left[1 + \frac{r_e}{R_L} \right] \left[1 + \frac{r_b + R_G}{r_c} \right] + \left[1 - \alpha \right] \left[\frac{r_b + R_G}{R_L} \right] \left[1 + \frac{r_b}{r_c} \right] \right\}^2}$ <p>IF $r_e \ll R_L, r_b + R_G \ll r_c$ $\cong \frac{4 R_G}{R_L \left[1 + \frac{r_b + R_G}{R_L} (1 - \alpha) \right]^2}$</p> |
| INSERTION GAIN POWER TO LOAD = POWER GEN. WOULD DELIVER TO SAME LOAD | $= \left[1 + \frac{R_G}{R_L} \right]^2 \frac{\alpha^2 R_L^2}{\left\{ \left[r_e + r_b + R_G \right] \left[1 + \frac{R_L}{r_c + r_b} \right] - \alpha r_b \right\}^2}$ <p>IF $R_L \ll r_c$ $\cong \left[1 + \frac{R_G}{R_L} \right]^2 \frac{\alpha^2 R_L^2}{\left[r_e + R_G + r_b(1 - \alpha) \right]^2}$</p> | $= \frac{\left[1 + \frac{R_G}{R_L} \right]^2 \left[\alpha - \frac{r_e + r_b}{r_c + r_b} \right]^2}{\left\{ \frac{r_e + r_b}{R_L} \left[1 + \frac{R_L}{r_c + r_b} \right] + \frac{R_G}{R_L} \left[1 + \frac{R_L + r_e}{r_c + r_b} \right] - \alpha \left[\frac{r_b + R_G}{R_L} \right] \right\}^2}$ <p>IF $R_L + r_e \ll r_c, r_e + r_b \ll r_c$ $\cong \left[1 + \frac{R_G}{R_L} \right]^2 \frac{\alpha^2 R_L^2}{\left[r_e + (1 - \alpha)(r_b + R_G) \right]^2}$</p> | $= \frac{\left[1 + \frac{R_G}{R_L} \right]^2}{\left\{ \left[1 + \frac{r_e}{R_L} \right] \left[1 + \frac{r_b + R_G}{r_c} \right] + \frac{r_b + R_G}{R_L} \left[1 - \alpha \right] \left[1 + \frac{r_b}{r_c} \right] \right\}^2}$ <p>IF $r_e \ll R_L, r_b + R_G \ll r_c$ $\cong \frac{\left[R_L + R_G \right]^2}{\left[R_L + (1 - \alpha)(r_b + R_G) \right]^2}$</p> |
| MAXIMUM AVAILABLE GAIN | $= \frac{\alpha^2 (r_c + r_b)}{(r_e + r_b)} \times \frac{1}{(1 + \beta_b)^2}$ $\beta_b = \sqrt{\frac{r_e + (1 - \alpha)r_b}{r_e + r_b}}$ <p>IF $r_b \ll r_c$ $= \frac{\alpha^2 r_c}{(r_e + r_b)(1 + \beta_b)^2}$</p> | $= \frac{\left[\frac{r_e + r_b}{r_c + r_b} - \alpha \right]^2}{\left[\frac{r_e + r_b}{r_c + r_b} \right] \left[\frac{r_e}{r_c + r_b} + (1 - \alpha) \right] \left[1 + \beta_e \right]^2}$ $\beta_e = \sqrt{\frac{r_c + r_b}{r_e + r_b} \frac{r_e + (1 - \alpha)r_b}{r_e + (1 - \alpha)(r_c + r_b)}}$ <p>IF $r_e + r_b \ll r_c, r_b \ll r_c$ $\cong \frac{r_c}{r_e + r_b} \times \frac{\alpha^2}{1 - \alpha} \times \frac{1}{(1 + \beta_e)^2}$</p> $\beta_e \cong \sqrt{\frac{r_c [r_e + (1 - \alpha)r_b]}{[r_e + r_b][r_e + (1 - \alpha)r_c]}}$ | $= \frac{1}{\left[\frac{r_b + r_c}{r_c} \right] \left[\frac{r_e + (1 - \alpha)(r_c + r_b)}{r_c} \right] \left[1 + \beta_c \right]^2}$ $\beta_c = \sqrt{\frac{r_e + (1 - \alpha)r_b}{r_e + (1 - \alpha)(r_c + r_b)}}$ <p>IF $r_b \ll r_c, r_e \ll r_c$ $\cong \frac{1}{(1 - \alpha)(1 + \beta_c)^2}$</p> $\beta_c \cong \sqrt{\frac{r_e + (1 - \alpha)r_b}{r_e + (1 - \alpha)r_c}}$ |
| LOAD AND GEN. RES. FOR MAX AVAIL. GAIN | $R_{GM} = (r_e + r_b) \beta_b$ $R_{LM} = (r_c + r_b) \beta_b$ IF $r_b \ll r_c$ $\cong r_c \beta_b$ | $R_{GM} = (r_e + r_b) \beta_e$ $R_{LM} = [r_e + (1 - \alpha)(r_c + r_b)] \beta_e$ IF $r_b \ll r_c$ $\cong [r_e + (1 - \alpha)r_c] \beta_e$ | $R_{GM} = (r_c + r_b) \beta_c$ IF $r_b \ll r_c$ $\cong r_c \beta_c$ $R_{LM} = [r_e + (1 - \alpha)(r_c + r_b)] \beta_c$ IF $r_b \ll r_c$ $\cong [r_e + (1 - \alpha)r_c] \beta_c$ |

SHUNT-SERIES PEAKING

Nomograph solves design equations to give shunt and series inductance values required for given high-frequency cutoff and existing shunt input and output capacitance. Available gain with combination is 80 percent greater than either alone



By JOSEPH F. SODARO

SHUNT-SERIES peaking is illustrated by the basic circuit shown. This network is often used in television video amplifiers and other pulse systems where greater amplification is required than that obtainable from either shunt or series peaking alone. The gain is 80 percent greater than simple shunt peaking under certain conditions.¹ One of these conditions is that the input capacitance C_2 is twice the output capacitance C_1 .

Design procedure is as follows: measure or estimate C_1 and C_2 taking into account wiring, tube socket, and other strays, and adjust to make $C_2 = 2C_1$ using a shunt trimmer if necessary. Next, choose the desired high-frequency cutoff, f . Total C_1 and C_2 plus strays to obtain C_s . With these values calculate R_L , the load resistance, from

$$R_L = \frac{1.8}{2\pi f C_s} \quad (1)$$

The shunt compensating inductance L_1 is determined next from

$$L_1 = \frac{0.216 R_L}{2\pi f} \quad (2)$$

Finally, the required series in-

ductance is evaluated from

$$L_2 = \frac{0.937 R_L}{2\pi f} \quad (3)$$

Equations 1, 2 and 3 are the other required conditions for 1.8 times simple-shunt gain. These form the basis for the nomograph.

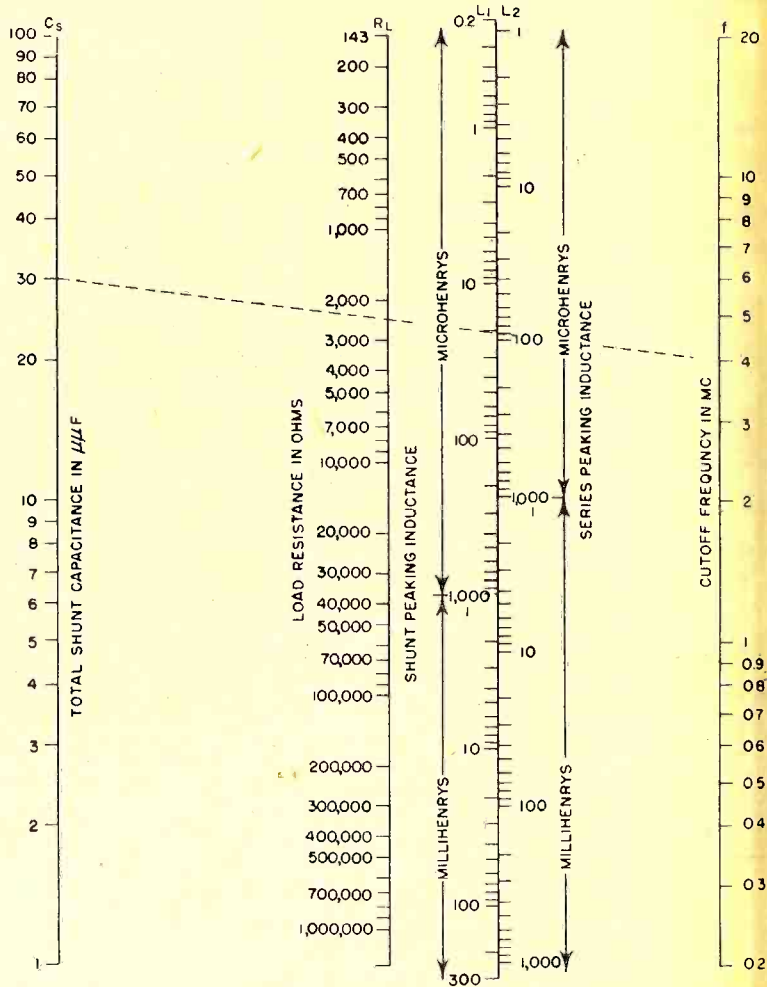
To use the nomograph, construct a straight line from the shunt capacitance value on the C_s scale to the cutoff frequency on the f scale. At the intersections of this line with the R_L , L_1

and L_2 scales read load resistance, shunt inductance, and series inductance values.

As an example, assume a 4-MHz high-frequency cutoff is required for a total shunt capacitance of $30 \mu\text{f}$. Construct a straight line from 30 on C_s to 4 on f . Read 21 μh on L_1 , 90 μh on L_2 and estimate 2,400 ohms on R_L .

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CATHODE FOLLOWER RESPONSE

Chart gives permissible cathode-follower pulse drive at video frequencies in terms of low-frequency sinusoidal input. Video-frequency overloading and distortion in conventionally loaded circuits originate in output time constant

By RALPH H. BAER

CATHODE FOLLOWERS frequently overload and distort on video signals when designed on the basis of low-frequency formulas. This behavior results from the effect of the time constant associated with

the output impedance of the cathode follower and the load capacitance. The usual formula for the peak signal permissible is

$$e_{p \text{ peak}} = \frac{E_B}{\mu} \left[\frac{1 + \frac{R_k}{R_p} (\mu + 1)}{\frac{R_k}{R_p} + 2} \right] \quad (1)$$

which is readily calculated. Inspection of Eq. 1 shows that medium values of μ (15-30) are

desirable for maximum permissible input signal.

When a video signal with rise time t microseconds is applied to a cathode follower this permissible grid swing is reduced by a factor of

$$1 + \frac{\frac{R_k}{R_p}}{\frac{R_k}{R_p} + 1} \left(\frac{1 - e^{-\frac{t}{T}}}{\frac{t}{T}} \right) \quad (2)$$

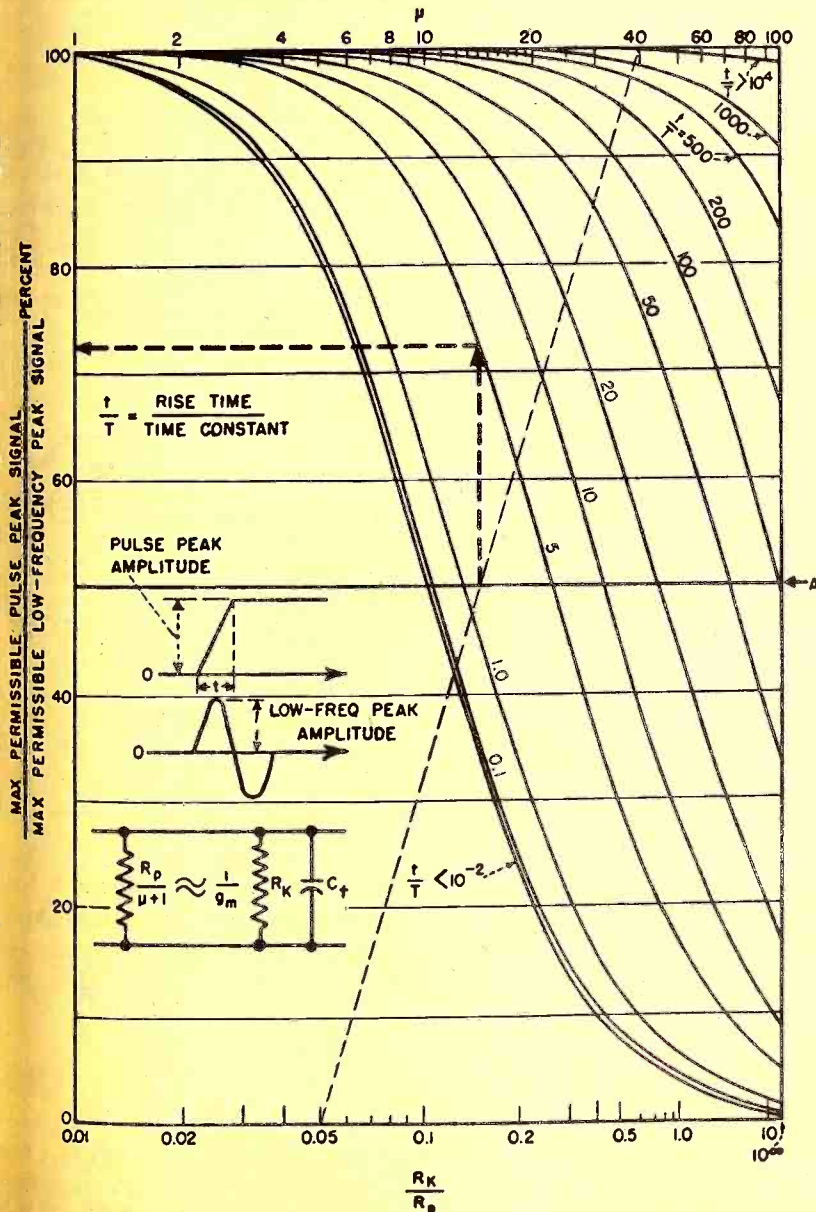
where T is the time constant. Whenever T approaches the pulse rise time in order of magnitude, the reduction in permissible grid signal can no longer be neglected and the correction factor of Eq. 2 becomes essential.

The graph is a solution of Eq. 2; the following procedure applies when a pulse waveform of rise time t is to be handled without distortion where

$$T = \frac{C_T R_k}{1 + g_m R_k}$$

(a) Determine the value of R_k/R_p and t/T . (b) On the graph, connect R_k/R_p with μ . (c) At the intersection of line A with the line drawn in step (b), read vertically up or down to the proper t/T curve. The solution is then obtained from the percent scale by reading horizontally to the left.

As an example, consider a tube with $\mu = 40$, $R_p = 20,000$ and a load impedance of $R_k = 1,000$ and $C_i = 250 \mu\mu\text{f}$ in parallel. From Eq. 1 $e_{p \text{ peak}} = 5.6$ volts for $E_B = 150$ volts. Suppose a video signal with rise time $t = 0.42 \mu\text{sec}$ is handled by the cathode follower. Then $T = 0.0834 \mu\text{sec}$ and $t/T = 5$. From the graph the permissible peak signal is seen to be 72.3 percent of $e_{p \text{ peak}}$ at low frequencies, or 4 volts.



PHASE-SELECTIVE DETECTORS

Half-wave, full-wave and electromechanical circuits for use in self-balancing bridge phase discriminators and a-c null detectors. Applications include automatic motor control and operation, radar search-track and navigation systems

By CURTIS R. SCHAFER

IN ALL DETECTOR applications it is desirable to operate at fairly high current and voltage levels to minimize errors due to unbalance in the circuit.

Input V_1 is the unknown signal, or carrier modulated by the unknown signal. The other input V_2 is a reference voltage of the same frequency and phase as the signal to be detected. Output is a pulsating d-c.

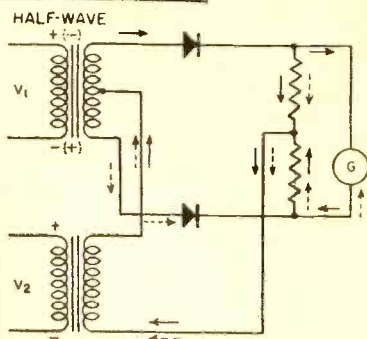
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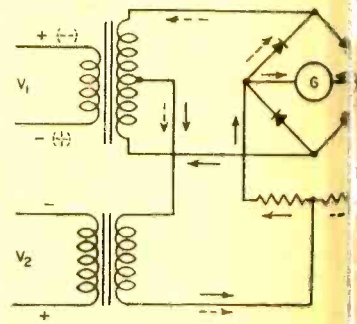
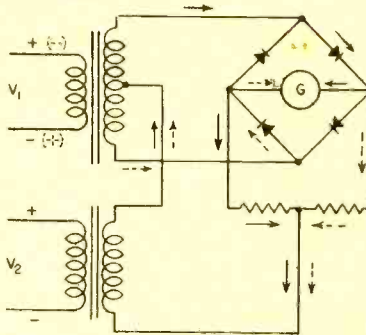
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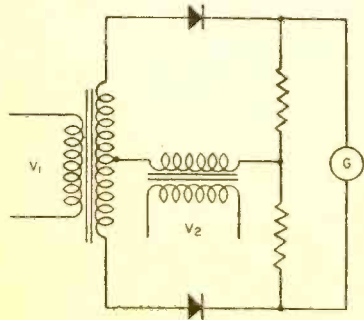
Basic Operation



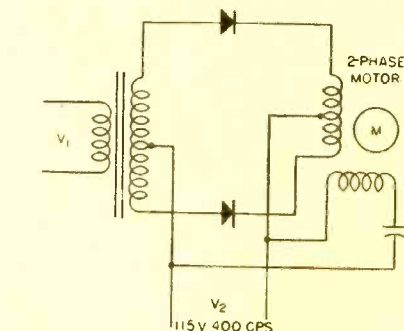
FULL-WAVE



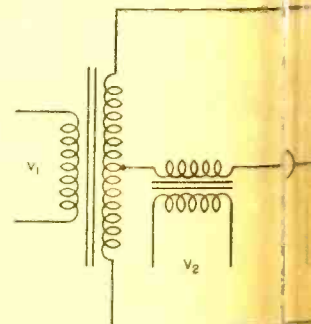
Half-Wave Type



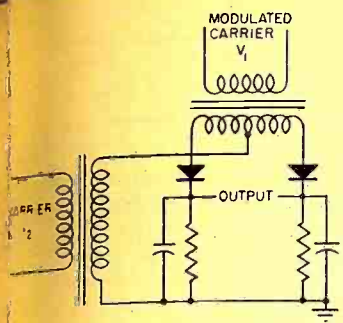
WALTER PHASE-SELECTIVE RECTIFIER^{1, 2}— Gives square-law response, with sensitivity decreasing near balance point. Meter reads zero if V_1 and V_2 are 90 deg out of phase



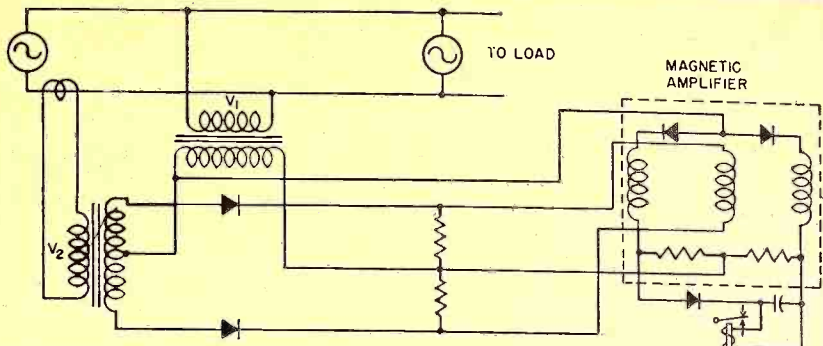
VARIATION OF WALTER CIRCUIT— Suitable for output stage of amplifier in self-balancing bridge. Germanium power rectifiers or diffused-junction diodes can be used



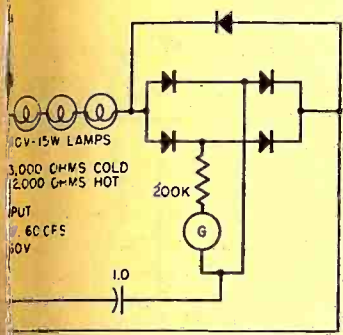
VHF RADIO-RANGE CARRIER PHASE INDICATOR³— Meter indicates zero when V_1 and V_2 are 90 degrees out of phase. Used to demodulate 10-kc f-100



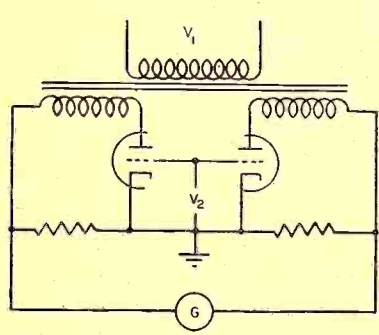
PHASE-SENSITIVE DEMODULATOR⁴— Has push-pull output. Input may be from balanced or single-ended carrier. Carrier signal is reference



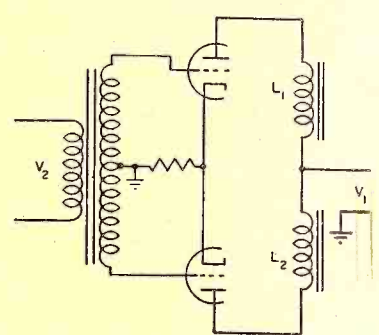
MAMON PHASE DISCRIMINATOR⁵— Uses balanced, polarized magnetic amplifier to boost output of phase-selective detector. Application shown is used to operate relay to disconnect alternator in case of field-excitation failure, loss of synchronization or drive failure



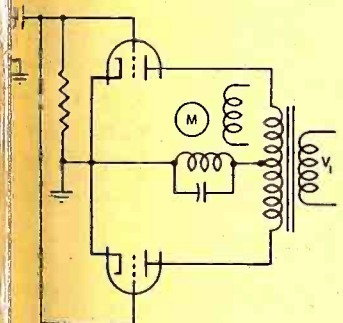
WINGSTONE PHASE SEQUENCE INDICATOR⁶— A fifty-volt voltage change will cause a four-fold change in the meter indication



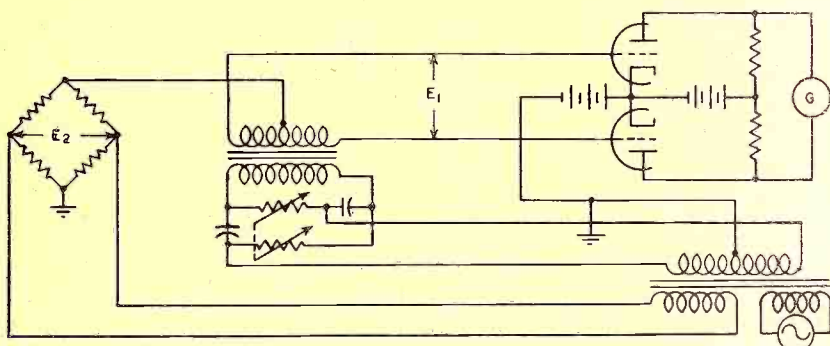
COSENS PHASE-SELECTIVE BRIDGE⁷— Triode amplification provides high sensitivity. Output proportional to phase angle divided by $V_1 V_2$



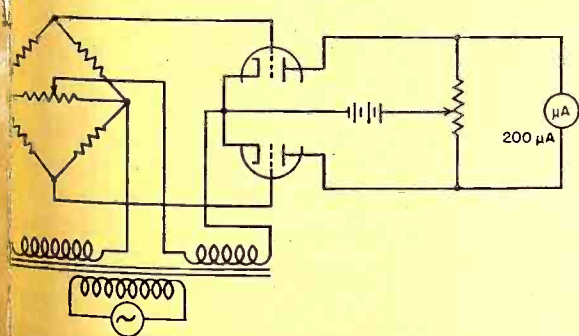
MODIFIED COSENS BRIDGE DETECTOR⁸— Applicable to servo control. Coils L_1 and L_2 are differential relay coils or fields of d-c servo motor



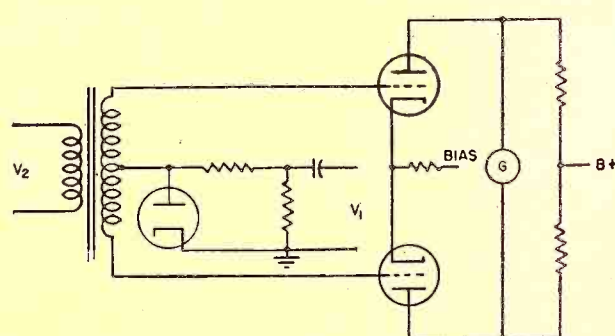
DOWN DISCRIMINATOR⁹— Electronic potentiometer. Modification of Cosens circuit for use with two-phase a-c servo motor



BRIDGE-BALANCE DETECTOR¹⁰— Current in meter is proportional to $E_1 E_2 \cos \theta$. By adjusting phase of E_1 , output current can be made dependent on only the reactive or resistive component of either voltage. Phase is adjusted by dual potentiometer in phase shifting circuit

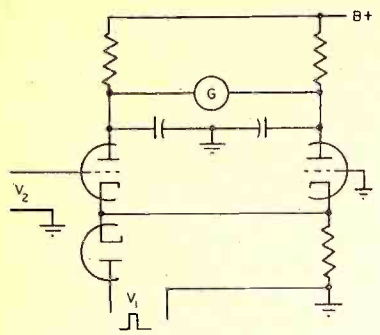


YAMAMURA PHASE BRIDGE¹¹— Has accuracy of 0.1 percent with an input of 20 volts at frequencies up to 50 kc

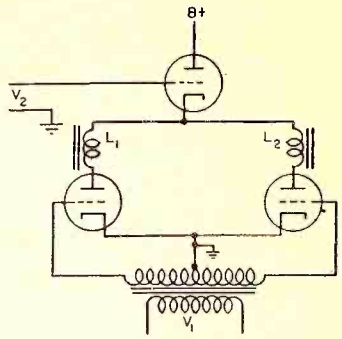


GATED-GRID DETECTOR⁸— Rectangular reference waveform produced from sine wave V_1 by diode and R-C circuit

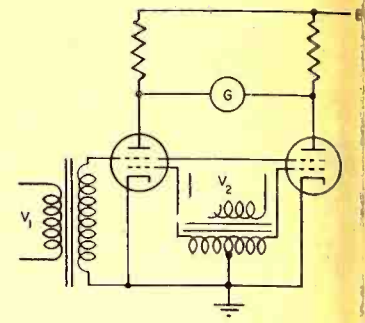
Phase-Selective Detectors



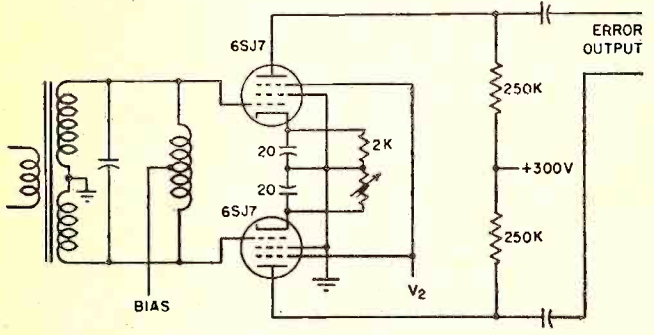
GATED-CATHODE DETECTOR⁸— Similar in operation to gated-grid circuit except that pulses are applied to cathodes. Common cathode resistor for all tubes provides nearly push-pull grid-cathode voltages



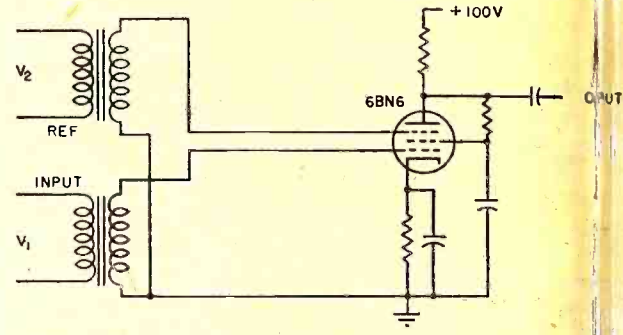
CATHODE-GATED DETECTOR WITH CURRENT OUTPUT⁸— Used with d-c servo motor. Coils L_1 and L_2 are split field of servo motor or differential relay. Provides differential current with low output impedance



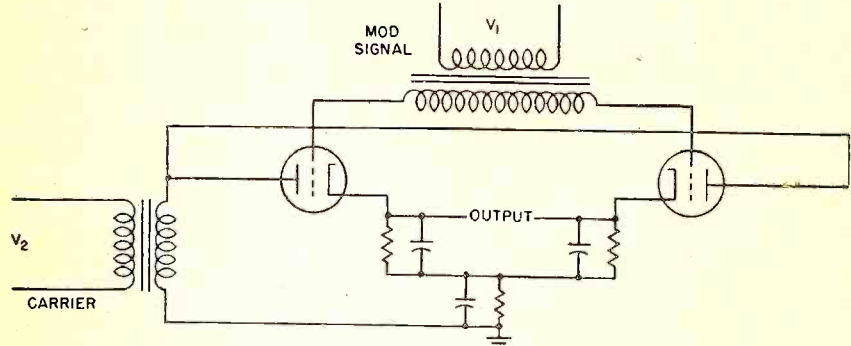
MORTON SCREEN-GRID PHASE DETECTOR¹³— Reference voltage V_2 is applied to control grids and variable voltage V_1 is applied to screens. System puts light load on power supply of variable phase



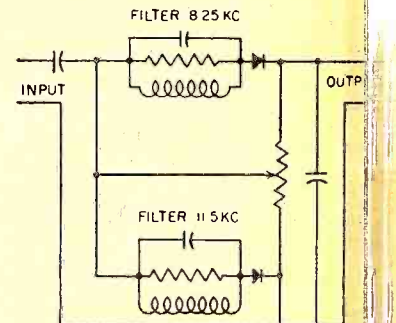
PENTODE PHASE DETECTOR¹²— Used in radar units. Has a gain of 70 using 6SJ7 tubes; with 6AS6 tubes gain is 120 with 40-volt, 2,000-cps reference voltage on V_2



GATED-BEAM PHASE DETECTOR¹⁴— Plate current is at maximum for in-phase operation, and at a minimum for 180-degree phase difference

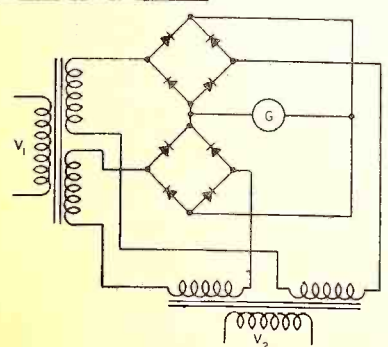


BALANCED-TRIODE DEMODULATOR¹⁵— Push-pull modulated signal is applied to grids. Unmodulated carrier is used as reference and to supply plate voltage. Output is push-pull error signal

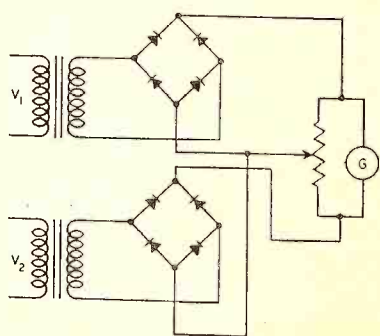


VHF OMNIRANGE DEMODULATOR — Recovers 60-cps modulating signal from 10-kc f-m subcarrier

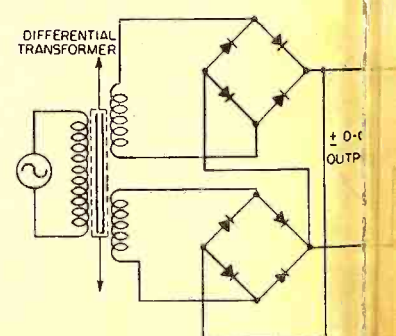
Full-Wave Type



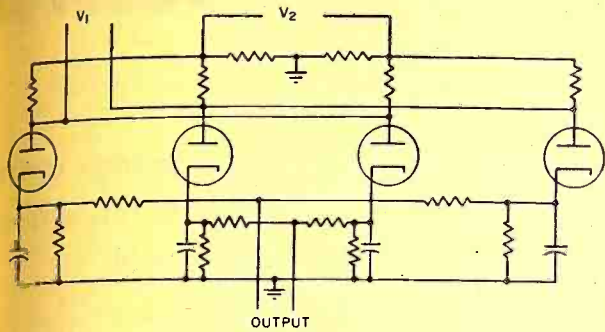
PHASE-SELECTIVE DETECTOR FOR BRIDGES¹⁷— Double-bridge system for use at high frequencies



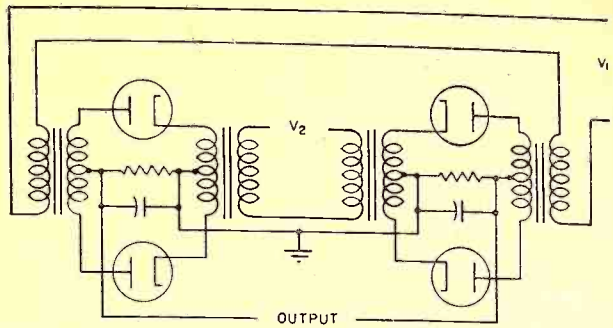
DOUBLE-BRIDGE PHASE DETECTOR — Used in CAA landing system as part of crossed-pointer indicator



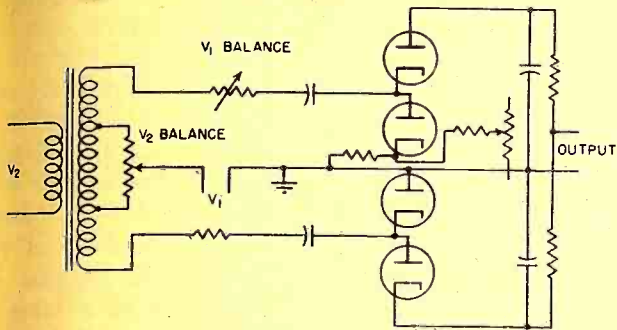
DENSITROL RECTIFIER BRIDGE¹⁸— Core of differential transformer is actuated by float



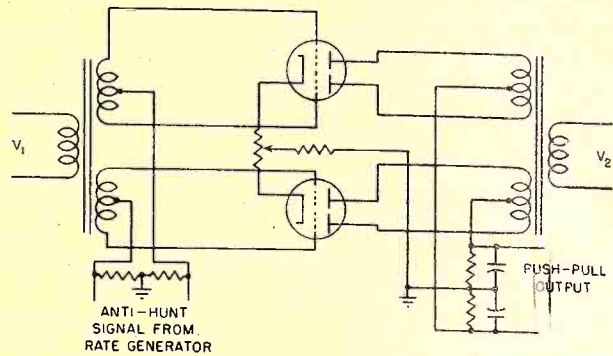
FULL-WAVE DEMODULATOR¹⁵— Push-pull inputs and output. Inputs are carrier-balanced. Signal V_1 is compared to unmodulated carrier signal V_2



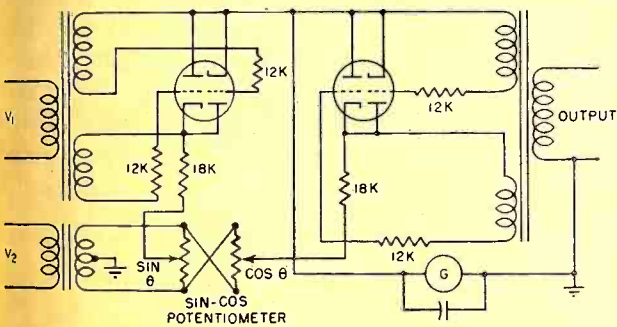
WARD-LEONARD SYSTEM DETECTOR¹⁸— Commercial variation of full-wave demodulator system. Output is used to control d-c motor through d-c amplifier



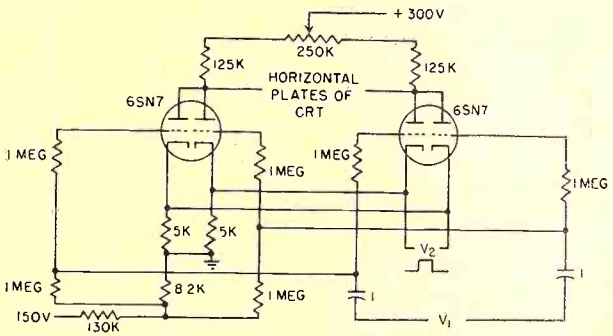
R. L. FRANK PHASE COMPARATOR²⁰— Insensitive to the third and all even harmonics of both input voltages. Combines two 120-degree-conduction cascade doubler circuits



AMPLIDYNE SYSTEM PHASE DETECTOR¹⁸— Has provision for antihunt signal injection from rate generator. Circuit gives high power amplification

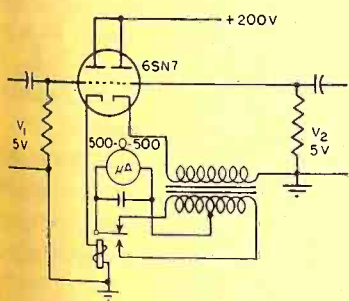


DOUBLE-CLAMP PHASE DETECTOR²⁰— Used in British omnidirectional beacon. A 200-pps signal is applied to sine-cosine potentiometer as a reference signal. Output is indicated on a zero-center course meter

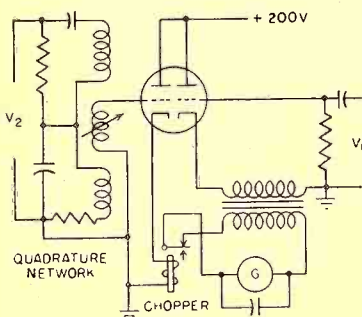


SCR-615 PHASE-SENSITIVE AMPLIFIER¹⁶— Radar application with cathode-ray tube display. Cathodes are gated by sine-wave generator. Reference voltage comes from two-phase generator synchronized with antenna

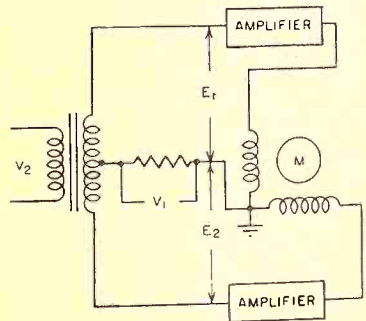
Electromechanical Type



WALD PHASE INDICATOR²²— Has high input impedance. Accuracy is ± 1 percent. Average output current $I_{max} \cos \theta/\pi$. Upper frequency limit is determined by chopper used



WALD REBALANCING PHASE INDICATOR²²— Similar to Wald indicator, but higher precision. Resolver is rotated so meter indicates zero. Phase shift is indicated on resolver dial



SERVO MOTOR PHASE DETECTOR— Phase detection is accomplished in two-phase motor. Output is a mechanical torque of reversible polarity. $E_1 = V_1 + V_2$, $E_2 = V_1 - V_2$

CATHODE-FOLLOWER

Graphical procedure simplifies design and eliminates cut-and-try. Charts show output impedance vs input voltage for nine tube types commonly used in cathode-follower circuits and give required resistor value for operating point selected

CATHODE FOLLOWERS are widely used as sources of low output impedance but it is often troublesome to find the d-c operating point required to achieve a desired value of impedance.

The output impedance as seen by an external load is equivalent to the parallel combination of $1/g_m$, r_p , and R_k . Since the tube parameters g_m and r_p are usually given in handbooks for only a few values of plate voltage and current, cathode-follower design often reduces to a tedious cut-and-try procedure.

The accompanying charts, however, enable the designer to choose circuit components directly to achieve the desired output impedance with either direct or a-c coupling to the

By N. O. SOKAL

cathode-follower grid. They also furnish information needed to calculate gain and input impedance and plot input-output curves.

The charts show output impedance R_o plotted against d-c grid-to-ground voltage for various values of cathode resistance. Nine tube types commonly used in cathode-follower circuits are considered.

Assumptions

The expression for output impedance is derived from the

small-signal linear-equivalent circuit and is applicable for small excursions of input voltage about a given operating point such that R_o does not change appreciably during the cycle. This is the case for most cathode followers where the a-c component of the input waveform is a few volts or less.

When the input wave is large enough, the excursions of E_{gk} make appreciable changes in R_o , and account must be taken of the rates of rise and fall of the input and output waveforms. When the input rises and falls slowly enough, the large-signal cathode follower can be analyzed point-by-point using the charts. If the input falls faster than the cathode circuit can follow, the waveform is large, the tube can be cut off. This case violates the linearizing assumption and will not be treated.

Chart Makeup

The charts show output impedance R_o plotted against grid-to-ground voltage E_{gk} for various values of cathode resistor R_k . The circuit is shown in Fig. 1A.

Curves also are plotted for various values of R_b/R_k , where R_b is the bias resistor in a self-biased a-c coupled circuit, as in Fig. 1B, and R_k is the total resistance from cathode to ground.

The dashed lines intersecting the solid R_k lines show successive values of E_{gk} , starting with zero at the right and progressing left toward cutoff.

The small bars perpendicular to the R_k curves mark points of maximum allowable plate dis-

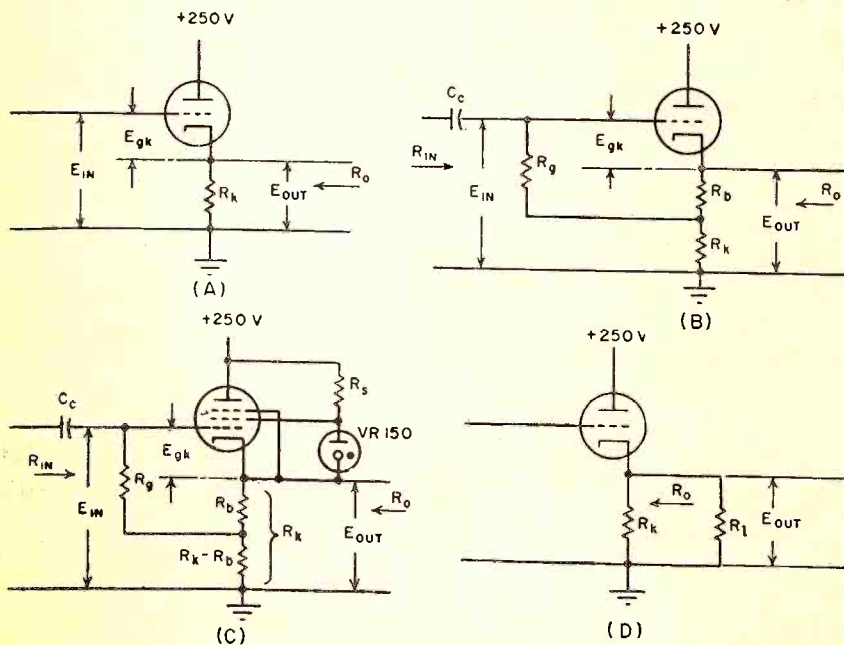


FIG. 1—Design procedure applies to direct-coupled cathode followers (A), a-c coupled, self-biasing circuits (B and C) and to cathode followers whose output is directly coupled to a resistive load (D)

DESIGN CHARTS

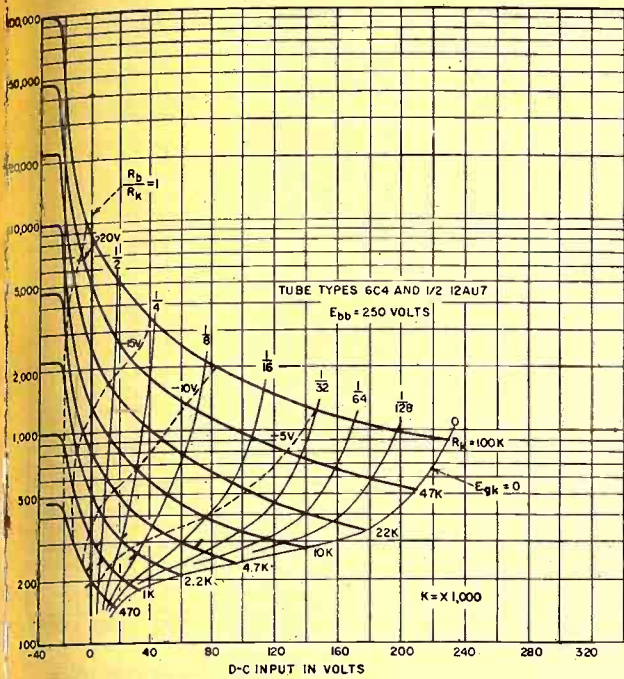


FIG. 2—Design curves for types 6C4 and 12AU7

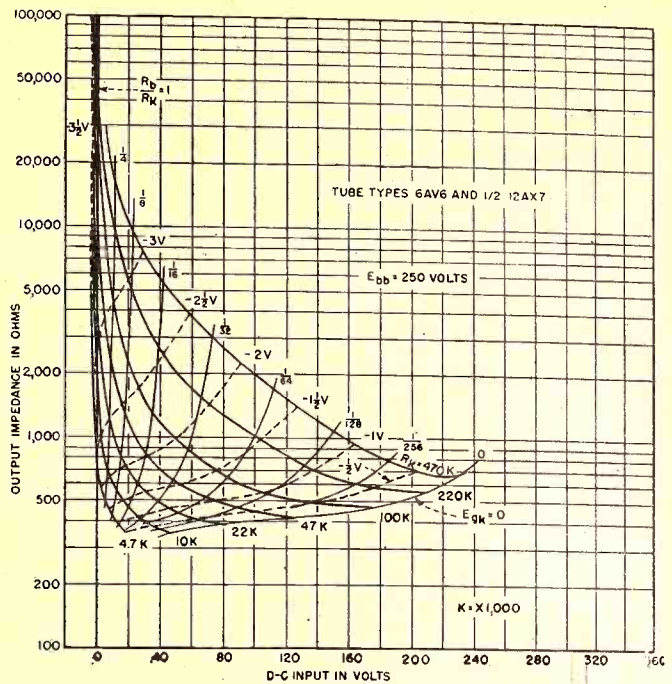


FIG. 3—Output impedance chart for 6AV6 and 1/2 12AX7

pation. Points to the right of a bar require greater than allowable average dissipation. This area can still be used in on-off service if the duty ratio keeps the average dissipation below the rated value.

Two sets of bars are shown in Fig. 2. The upper bars, which occur at lower input voltages, refer to 1/2-12AU7. The others refer to the 6C4. In Fig. 3 all of the conditions shown on the chart are below the maximum rated plate dissipation of the 1/2-12AX7; the bars refer to the 6AV6. In Fig. 4 the 6AB4 and 1/2-12AT7 are both rated for the same dissipation, so only one set of bars is shown. The upper bars in Fig. 5 and 6 occur at low input voltages and apply to the 6CL6; the lower bars apply to the 6AG7.

The charts are usable directly for circuits with plate-supply voltages within 20 percent of design value. For voltage-supply variations greater than this amount, the designer may have to refer to the tube characteristics for corrections to the

nominal operating point.

Design Relations

The output impedance is

$$R_o = \frac{1}{\frac{1}{r_p} + g_m + \frac{1}{R_k}} \quad (1)$$

Circuit gain is

$$A = \frac{d E_{out}}{d E_{in}} = \frac{d [E_{in} + E_{gk}]}{d E_{in}} = 1 + \frac{d E_{gk}}{d E_{in}} \quad (2)$$

For graphical use, this becomes

$$A = 1 - \left| \frac{\Delta E_{gk}}{\Delta E_{in}} \right| \quad (3)$$

To find the gain of the circuit, take a step in E_{gk} straddling the operating point, read off the corresponding change in E_{in} and apply in Eq. 3.

The input resistance is

$$R_{in} = \left[\frac{R_o}{1 - A \frac{(R_k - R_b)}{R_k}} \right] \quad (4)$$

The cathode current is

$$i_k = \frac{E_{out}}{R_k} = \frac{E_{in} + |E_{gk}|}{R_k} \quad (5)$$

Voltages E_{in} and E_{gk} can be read from the chart. For triodes,

i_k is the plate current; for pentodes it is the sum of plate and screen currents. In both cases it represents the total drain on the B+ supply.

The input-output curve, E_{out} vs E_{in} , is easily obtained, since $E_{out} = E_{in} + |E_{gk}|$. Voltage E_{gk} can be read in steps along any desired R_k curve, and the corresponding E_{in} read off the horizontal axis. The sum plotted against E_{in} gives the input-output curve.

Design Procedure

Example 1—For a direct-coupled cathode follower (Fig. 1A) using 1/2-12AU7 it is desired to find the proper cathode resistor for a nominal output impedance $R_o = 600$ ohms when E_{in} , the d-c signal level at the grid, is +80 volts.

Solution: In Fig. 2 the intersection of $E_{in} = 80$ volts with $R_o = 600$ ohms lies just below the $R_k = 22$ K curve, so R_k is slightly less than 22 K. By interpolation it is seen to be about 20 K.

Example 2—It is desired to distribute the audio output of a

Cathode-Follower Design Charts

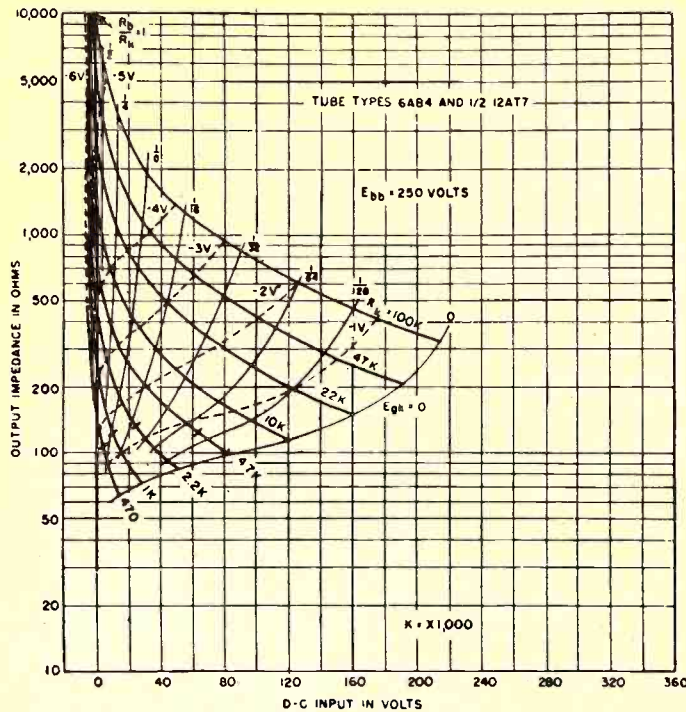


FIG. 4—Type 6AB4 and 1/2 12AT7 design charts

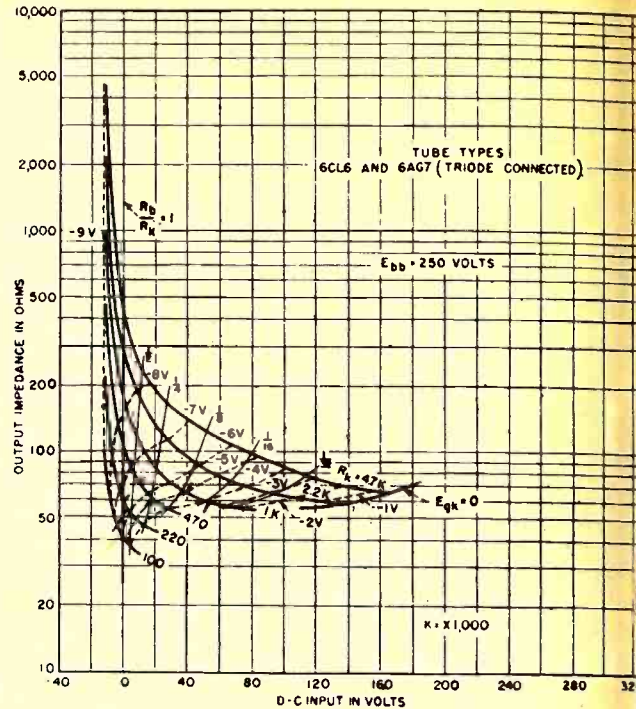


FIG. 5—Chart for 6CL6 and 6AG7 in triode connection

radio tuner to a number of amplifiers in different locations. The total amount of cable connecting the tuner to the amplifiers is 500 feet, and the capacitance of the signal wire to ground is 26.5 μf per ft. It is desired to have the upper and lower half-power frequencies, f_2 and f_1 , be 20,000 cps and 20 cps respectively. The tube to be used is a 6C4 connected as an a-c coupled, self-biased cathode follower (Fig. 1B).

Solution: For the upper half-power frequency to be 20,000 cps, an output impedance $R_o = 1/2\pi f_2 C$ is required, where C is the capacitance to ground of the signal wire, which is 26.5 μf per ft \times 500 feet = 1,330 μf . The output impedance required is $R_o = 1/2\pi \times 20,000 \times 1330 \times 10^{-12} = 600$ ohms.

When self-bias is used, the cathode resistance can be any convenient value, and the bias resistor will be chosen to provide the proper d-c conditions for the tube.

Choosing 22 K for the cathode resistance, the intersection of the $R_k = 22$ K curve in Fig. 2 with

$R_o = 600$ ohms lies between $R_b/R_k = \frac{1}{3}$ and $\frac{1}{16}$. By interpolation, it is seen to be at about $R_b/R_k = \frac{1}{13}$. Then $R_b = \frac{1}{13} R_k = \frac{1}{13} \times 22 \text{ K} \approx 1.8 \text{ K}$, and the bottom resistor is $R_k - R_b = 22 \text{ K} - 1.8 \text{ K} \approx 20 \text{ K}$.

To find the gain under these conditions, take a five-volt step in E_{gk} straddling the operating point; E_{gk} goes from -15 volts to -10 volts, while E_{in} goes from 47 volts to 103 volts. Substituting into Eq. 3

$$A = 1 - \left| \frac{15 - 10}{47 - 103} \right|$$

$$= 1 - \frac{5}{56} = 0.91$$

The input resistance from Eq. 4 is

$$R_{in} = \frac{R_g}{1 - 0.91 \left(\frac{20 \text{ K}}{21.8 \text{ K}} \right)}$$

$$= 6.1 R_o$$

If the coupling network is to have a lower half-power frequency f_1 , the coupling capacitor C_c should equal $1/2\pi f_1 R_{in}$. For most tubes, R_o is not recommended to be greater than one megohm; lower values are preferred to reduce the bias-shifting

effect of grid current. If $R_o = 100 \text{ K}$, then $R_{in} = 6.1 R_o = 610 \text{ K}$ and if $f_1 = 20$ cps is required, $C_c = 1/2\pi \times 20(610 \text{ K}) = 0.013 \mu\text{f}$. The closest nominal value is 0.01 μf and $R_o = 180 \text{ K}$ instead of the assumed 100 K gives the required R-C product with allowance for a -20-percent tolerance on the capacitance and a -10-percent tolerance on the resistance.

The cathode current, from Eq. 5, is $i_k = (87 + 6\frac{1}{2})/22 \text{ K} = 4 \text{ ma}$.

Design Notes

If the cathode follower is to deliver small voltages across high-impedance loads, a low-power tube such as the 12AU7 or 12AX7 can be used. If the tube is to deliver large voltages across low-impedance loads, a high-power tube such as the 6AG7 or 6AS7 should be used. If the tube is to be direct-coupled to input voltages near zero or slightly negative, a high-cutoff-voltage (low- μ) tube such as the 12AU7 or 6AS7 is indicated.

When a cathode follower is to be operated at a high cathode

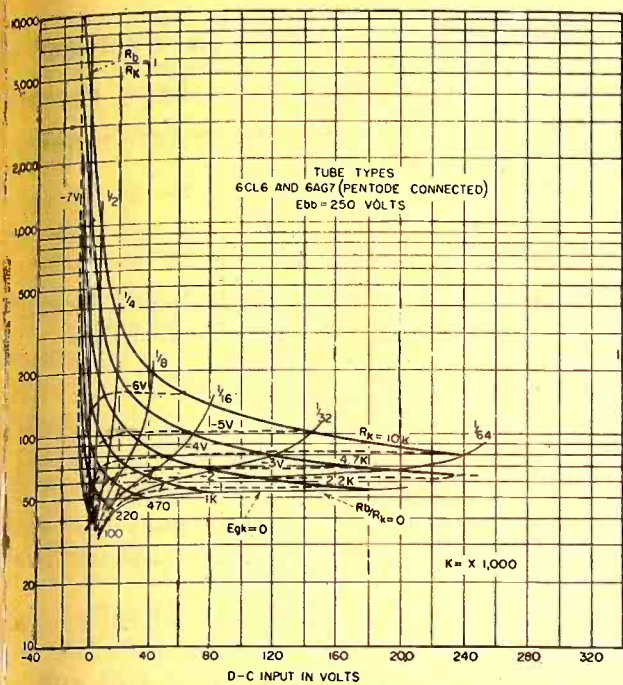


FIG. 6—Pentode connected 6CL6 and 6AG7

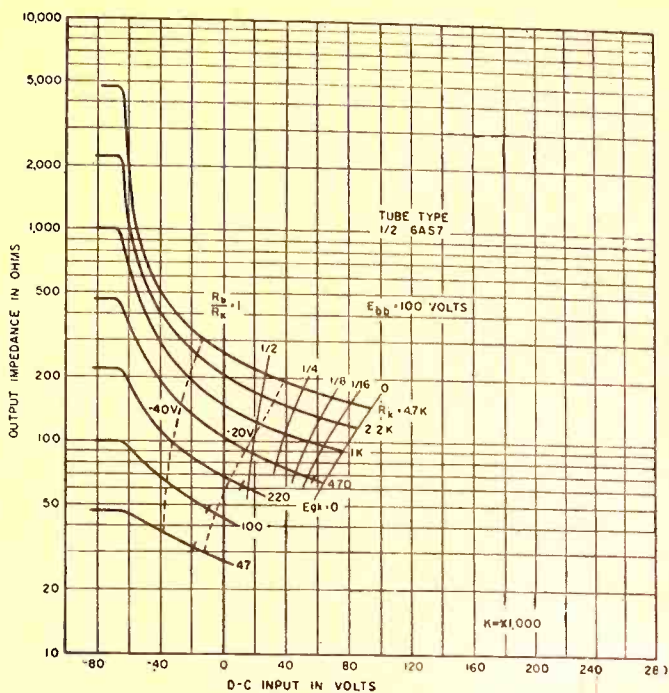


FIG. 7—Design chart for 1/2 6AS7 tube

voltage, care should be taken not to exceed the maximum allowable heater-to-cathode voltage rating of the tube. If a grounded heater supply causes the voltage to exceed the ratings, the heater supply can be connected either to cathode or to a point of positive voltage. If it is connected to the cathode, the capacitance to ground of the heater transformer and wiring will be in parallel with the load. The heater-cathode voltage rating for the 6C4, 6AV6, 6AB4, 12AT7, 6CL6 and 6AG7 is 90 volts. For the 12AU7 and 12AX7 it is 180 volts. For the 6AS7 it is 300 volts.

If a-c coupling is used, self-bias is usually preferable to fixed bias, since variations of the tube from the nominal characteristics tend to be counteracted.

Operation within a fraction of a volt of zero-bias may prove more erratic than with a volt or more of bias, since there may be fractional-volt variations in contact potential between grid and cathode and in initial velocity of electrons leaving the cathode. These effects tend to shift the bias point and will make

less difference when there is appreciable bias already on the tube.

Special Cases

For the 6AG7 shown pentode-connected in Fig. 1C, the VR-150 can be replaced by a bypass capacitor. Resistor R , may be adjusted to give 150 volts.

If the cathode follower output is direct-coupled to a resistive load, as in Fig. 1D, R_L changes the d-c conditions on the tube, affecting g_m and r_p , and thus changing the output impedance. This can be taken into account by considering the cathode load as R_k in parallel with R_L when looking up the bias conditions on the chart. The output impedance read off the chart will then be R_o in parallel with R_L . Resistor R_L can easily be taken out to find the true R_o .

$$\text{True } R_o = \frac{R_o \text{ chart}}{1 - \frac{R_o \text{ chart}}{R_L}}$$

The true R_o and true R_k are still related by the R_b/R_k ratio, and E_{in} read off the chart is also correct.

If the output impedance is re-

quired to be lower than can be obtained within the power dissipation rating of the best available tube, either connect in parallel N cathode followers each designed to have an output impedance NR , where R is the required output impedance, or reduce the plate-supply voltage so that the operating point can be shifted to one of higher d-c current without exceeding rated dissipation. The higher current produces higher g_m and lower impedance. For such changes in supply voltage, new charts must be constructed.

Allowance should be made for normal tolerances of the components, including the tube. Under given voltages, the g_m of the tube can vary on the order of ± 40 percent from the nominal. Self-biasing tends to minimize these variations, but if the output impedance must be held below some maximum value, the nominal design value should be sufficiently lower to allow for tolerance on g_m .

The author wishes to thank Vladimir Kenn of Raytheon Manufacturing Co. for supplying special data on tubes.

TEN R-F TRANSMISSION LI

Ten equations commonly used to compute relationships between electrical and mechanical properties of radio-frequency transmission lines have been converted to convenient nomographs covering both two-wire and coaxial lines for frequencies up to 20,000 mc

By PHILLIP H. SMITH

TEN of the most useful transmission-line equations have been plotted as nomographs as a convenience to the radio engineer. The derivation of the formulas is based upon certain simplifying assumptions which are generally considered justifiable for r-f lines.

1. *Characteristic Impedance of Transmission Lines.* For radio-frequency transmission lines where the losses per wavelength are relatively small, the characteristic impedance is essentially a pure resistance. The characteristic impedance is numerically equal to the square root of the ratio of the distributed inductance to the distributed capacitance per unit length. Since both of these parameters are uniquely related to the physical size and spacing of the conductors, it is possible to express the characteristic impedance in terms of the physical dimensions of the line.

Thus, the characteristic impedance Z_0 in ohms of an open 2-wire line is

$$Z_0 = 276 \log_{10} (2D/d) \quad (1)$$

where D is the wire separation on centers and d is the wire diameter, both in the same units. Figure 1 shows the characteristic impedance of an open 2-wire line as a function of the conductor dimensions and their center-line spacing.

2. *Characteristic Impedance of a Coaxial Line.* The characteristic impedance Z_0 in ohms of a coaxial transmission line is

$$Z_0 = 138 \log_{10} (D/d) \quad (2)$$

where D is the inner diameter of

the outer conductor and d is the outer diameter of the inner conductor. This applies only to a line where the medium between conductors is predominantly a gas, such as air, at low pressures.

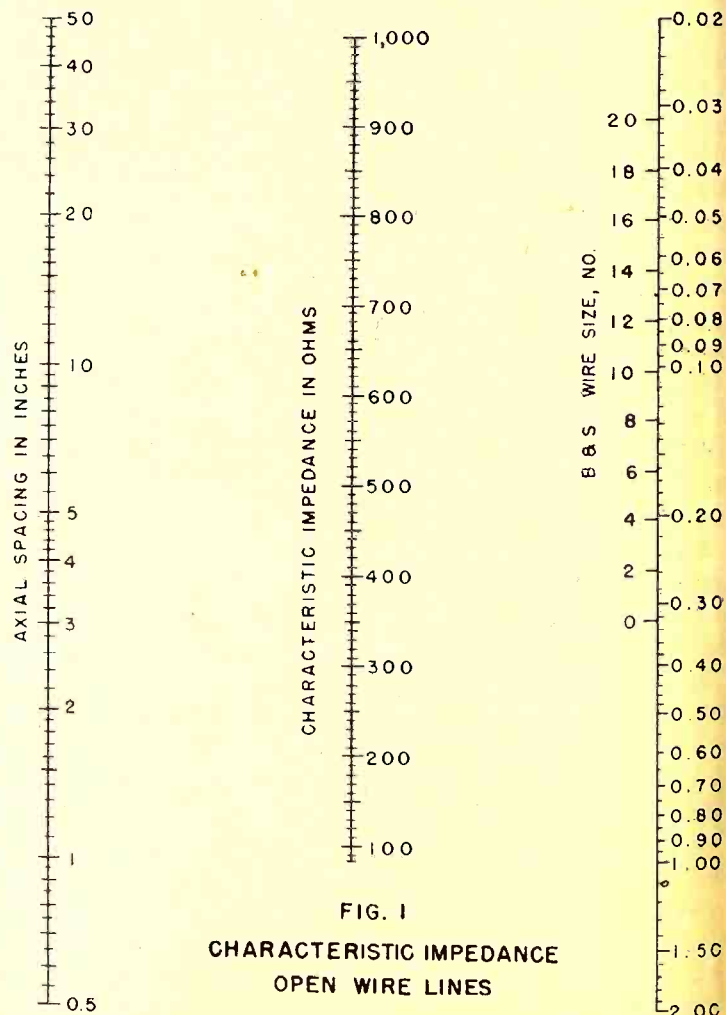
If the coax line is filled with a uniform dielectric material other than a low-pressure gas, the characteristic impedance is reduced by a factor equal to $1/k^{\frac{1}{2}}$, where k is the relative dielectric constant of the material. For a line with bead insulators at small uniform intervals, the

effective dielectric constant may be computed from

$$k_e = (k t + s)/(t + s)$$

where t is the thickness of the bead and s is the spacing between two beads, both t and s being in the same units, and k is the relative dielectric constant of the bead.

A number of optimum arrangements for the characteristic impedance of coaxial lines exist which are based upon different considerations such as the maximum power handling capability



NOMOGRAPHS

minimum loss. Several of these optimum values are indicated along the characteristic impedance scale on the right-hand side of the nomograph. Fortunately, all of these optimum values are relatively broad in their characteristics and a considerable departure can generally be tolerated for any particular application.

Figure 2 shows the characteristic impedance of a gas dielectric coaxial transmission line as a function of the two conductor diameters.

High-Frequency Resistance of a Coaxial Line. The high-frequency resistance of a coaxial transmission line is one of the principal factors which determine the attenuation along the line. It is also one of the factors which determine the minimum anti-resonant imped-

ance and the minimum resonant impedance of a line section when used as a circuit element. The high-frequency resistance of a coaxial line is a function of both conductor dimensions and of the frequency (due to skin effect). It is also a function of the resistivity of the material of which the conductors are made.

For copper coaxial lines the high-frequency loop resistance R in ohms per 1,000 feet is

$$R = 0.0315 f^{1/2} \left[\frac{1}{d} - \frac{1}{D} \right] \quad (3)$$

where f is the frequency in kilocycles, D is the inner diameter of the outer conductor in inches, and d is the outer diameter of the inner conductor in inches.

For conductors other than copper, the high-frequency resistance is proportional to the square root of the ratio of the

resistivity of the conductor to that of copper.

Figure 3 shows the resistance of a copper coaxial line as a function of the conductor dimensions and the frequency. Dielectric losses, which are negligible in a gas dielectric line, are not included.

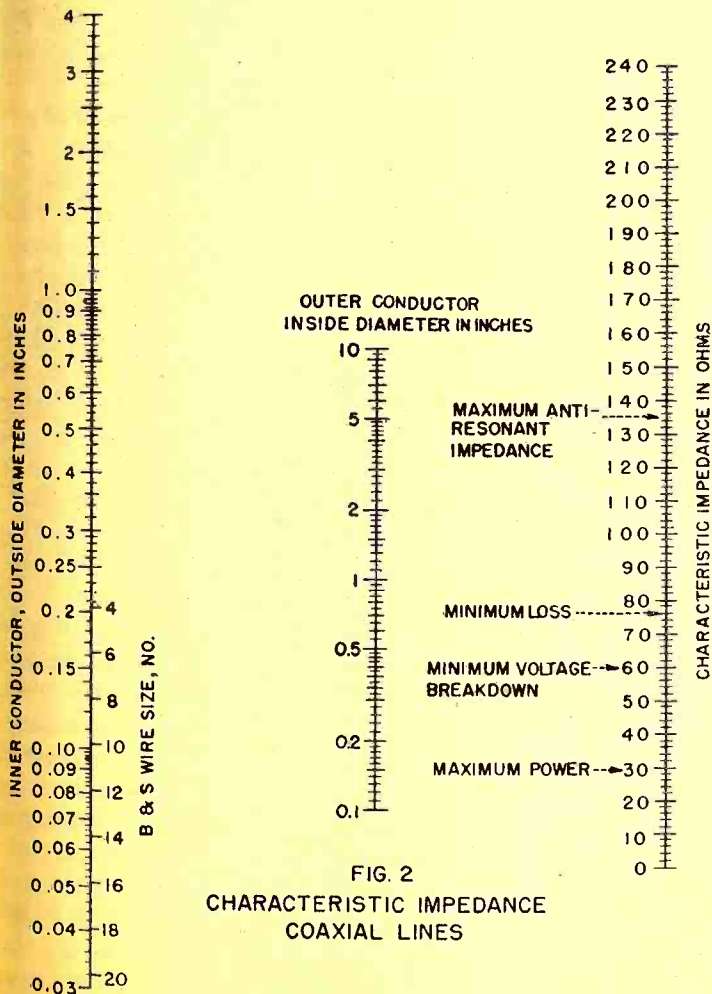
The nomograph in Fig. 3 is used as follows: draw a straight line connecting points on the first and fourth scales from the left, which show, respectively, the line conductor diameters. Obtain the intersection of this line with the second scale, marked Size Factor. Now project this intersection to a corresponding point on the third scale, marked Pivot Line, as shown in the example on the nomograph. Finally, connect this new pivot point with a straight line intersecting the desired value on the sixth or frequency scale. The intersection of this latter straight line with the scale marked Resistance in ohms per 1,000 feet gives the desired loop resistance value.

4. Conversion of Loss Resistance to Decibels Attenuation per Unit Length. It is sometimes convenient to convert loop resistance of a transmission line (as obtained from Fig. 3) to decibels (db) per unit length. This may be done if the characteristic impedance of the line is known. The conversion equation is simply

$$\text{db} = R/0.23025 Z_0 \quad (4)$$

where R is the loop resistance and Z_0 is the characteristic impedance. This relationship is plotted on the nomograph of Fig. 4. The nomograph applies to either open-wire or coaxial lines and does not require the line conductors to be of copper.

5. Antiresonant Impedance of a Transmission Line Section. The antiresonant impedance Z_{AR} of a transmission line section either open or short-circuited at its far end is a function of the



Ten R-F Transmission Line Nomographs (continued)

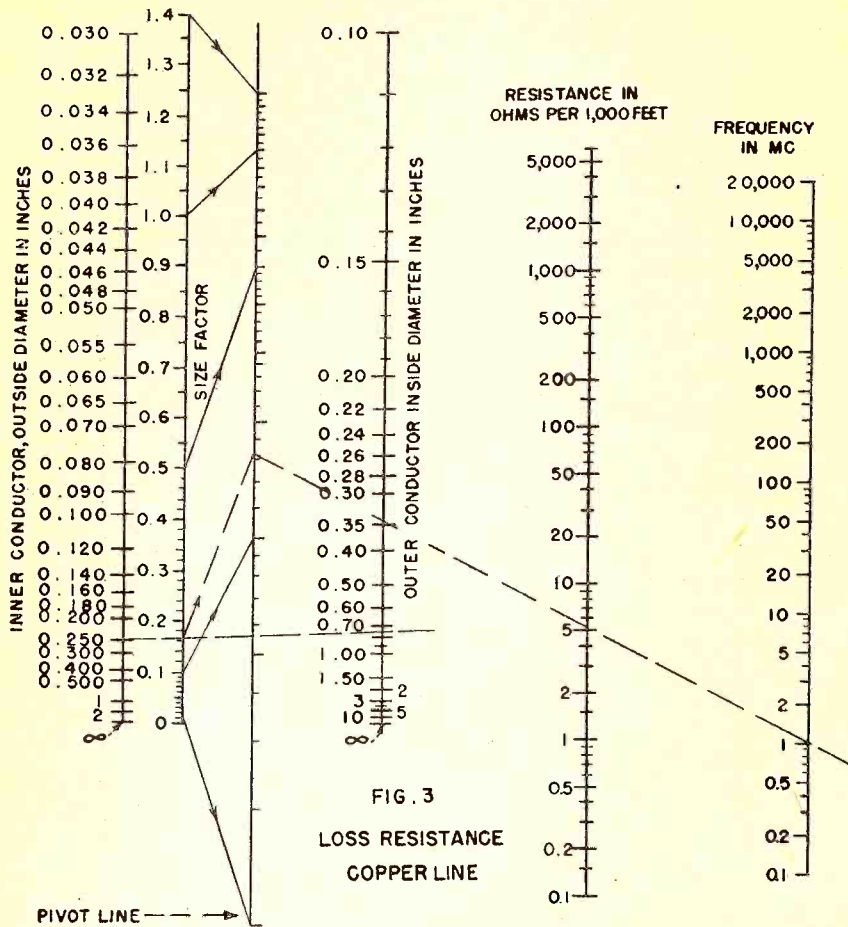


FIG. 3
LOSS RESISTANCE
COPPER LINE

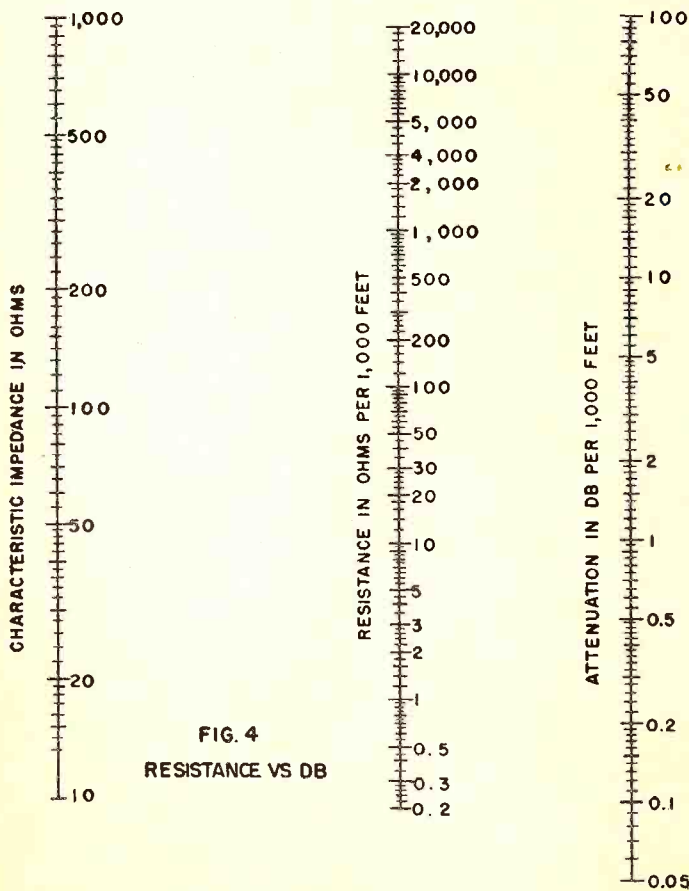


FIG. 4
RESISTANCE VS DB

total conductor resistance, the characteristic impedance of the section. The relationship

$$Z_{AR} = 2 Z_0^2 / R$$

where Z_0 is the characteristic impedance and R is the resistance of the antiresonant line section.

The shortest antiresonant section is one-quarter wavelength long (short-circuited at its far end) and according to its antiresonant impedance. A line section one-half wavelength long short-circuited at the far end will have only half as high an antiresonant impedance because its resistance R is twice as great.

Figure 5 shows the antiresonant impedance of a transmission line as a function of the transmission-line resistance and the characteristic impedance of the section. This nomograph applies equally to either coaxial or open-wire lines.

The resonant impedance of a transmission-line section is simply one-half of its transmission-line resistance (obtained from Fig. 3), and accordingly, no nomograph has been plotted for this.

6. *Input Reactance of a Transmission-Line Section.* A section of transmission line is sometimes used as a reactance element in high-frequency circuits. The input reactance is a function of the electrical length of the line section and its characteristic impedance. The reactance varies between values essentially equivalent to plus or minus one half of the antiresonant impedance (obtained from Fig. 5). In air or gas dielectric coaxial lines, the electrical length is very nearly the same as the physical length measured in terms of free space wavelengths. A dielectric other than a gas results in a reduction of the length of the wave in the line which is proportional to the square root of the average dielectric constant. Thus a polyethylene coaxial cable with a dielectric constant of 2.5 will be electrically $(2.5)^{1/2}$ or 1.6 times as long as if the dielectric were gas.

The electrical length and the characteristic impedance of a section as well as its termination (either open circuit or short circuit) determine the magnitude and sign of the input reactance. For an open-wire or coaxial line section, open-circuited at its far end, the input reactance X , in ohms is

$$X_o = -Z_o \cot(360 l/\lambda) \quad (6)$$

where l/λ is the electrical length in wavelengths and Z_o is the characteristic impedance.

For an open-wire or coaxial line section, short circuited at its far end, the input reactance X , in ohms is

$$X_s = Z_o \tan(360 l/\lambda) \quad (6a)$$

Figure 6 shows the input reactance of an open or short-circuited transmission-line section as a function of the electrical length, the characteristic impedance and the termination.

Quarter-Wave Transmission-Line Impedance Transformer

Impedance transformers can be made along radio-frequency transmission lines by employing a quarter-wave section of transmission line of selected characteristic impedance as an impedance transformer. When a line section is terminated in a pure resistance its input impedance will be a pure resistance which depends upon the load resistance value and the value of the characteristic impedance of the quarter-wave line section.

Figure 7 shows the input reactance R , in ohms of a quarter-wave open-wire or coaxial line section terminated in a pure resistance load. The relationship is

$$R = Z_o^2/R_l \quad (7)$$

where R is the terminating resistance and Z_o is the characteristic impedance.

Current-Phase Relationship Along a Transmission Line

The relationship of the current at any point along a radio-frequency transmission line will be uniform with length when the line is terminated in an impedance equivalent to the characteristic impedance;

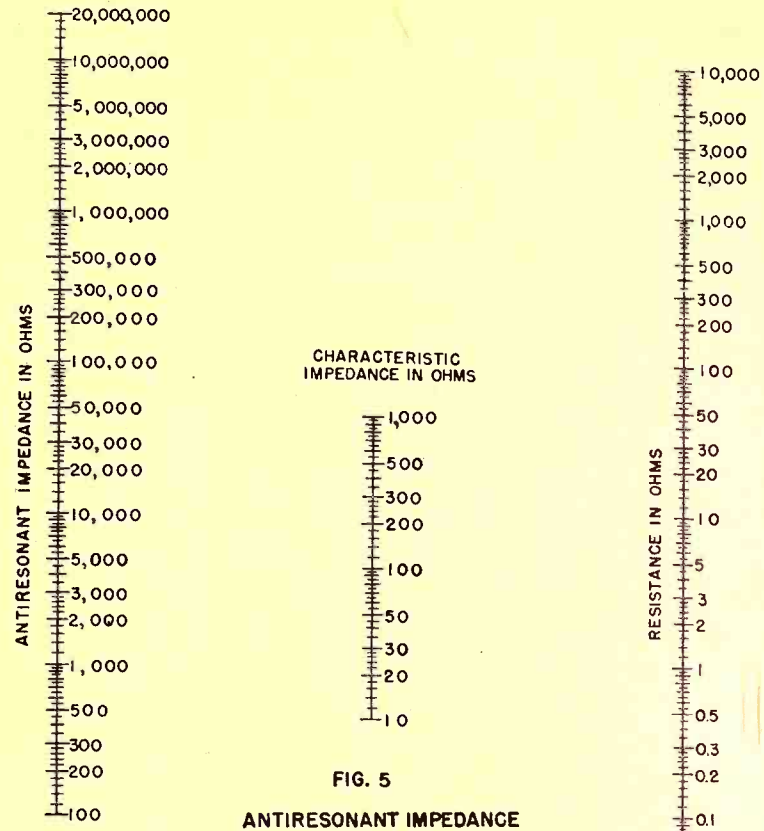


FIG. 5

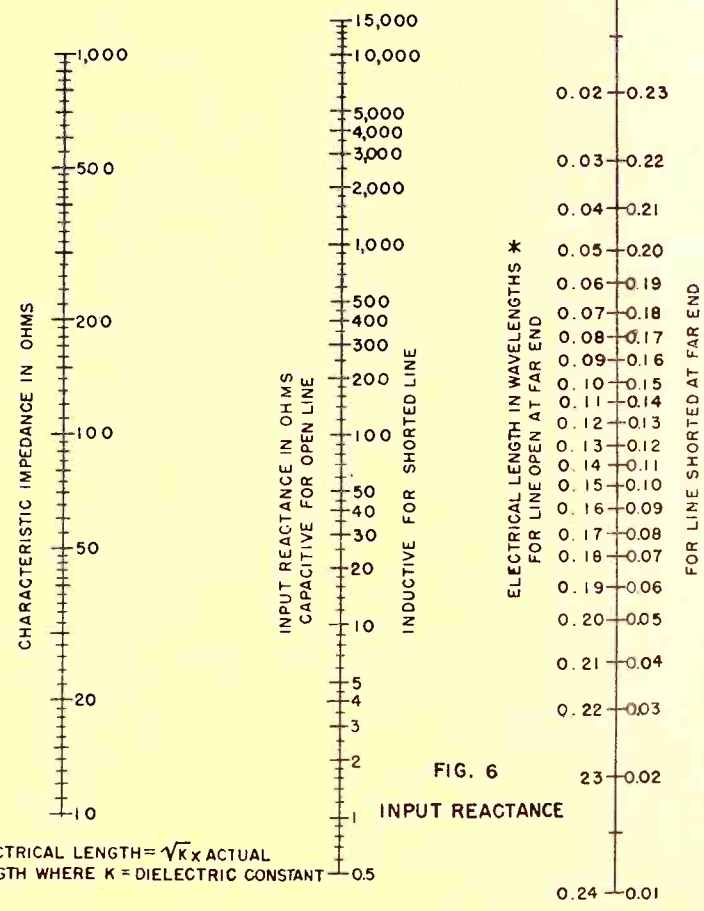


FIG. 6

* ELECTRICAL LENGTH = \sqrt{K} X ACTUAL LENGTH WHERE K = DIELECTRIC CONSTANT

Ten R-F Transmission Line Nomographs (continued)

otherwise the phase will vary nonuniformly along the line.

Figure 8 shows the phase relationship of the current at the sending end of a line, with respect to the current in a resistance load, as a function of the ratio of the load resistance to the characteristic impedance of the line, and of the effective length of line. The relationship giving line length in degrees is

$$\phi = \arctan \left[\frac{R_l}{Z_0} \tan \left(360 \frac{l}{\lambda} \right) \right] \quad (8)$$

where R_l is the load resistance, Z_0 is the characteristic impedance and l/λ is the electrical length in wavelengths.

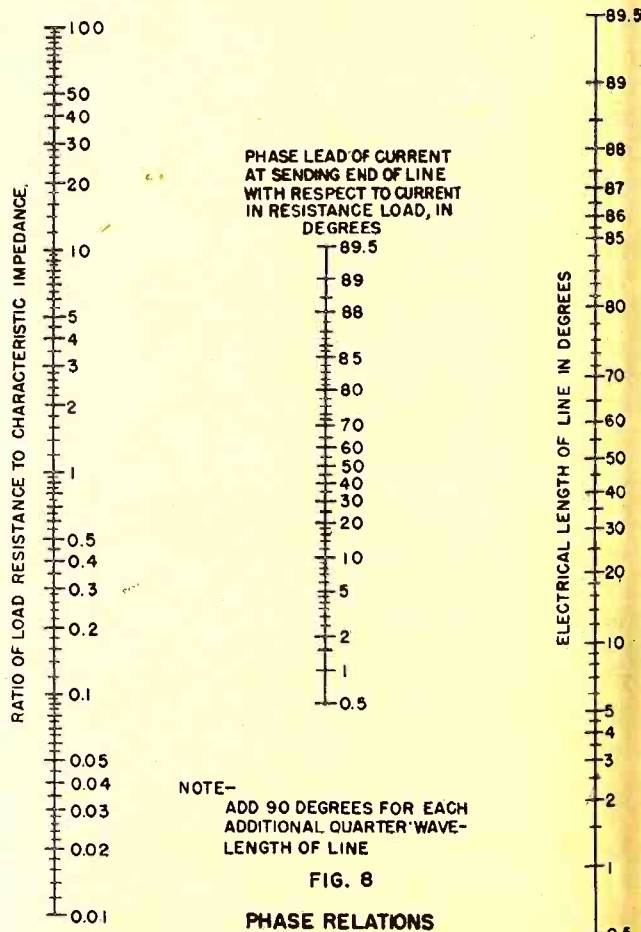
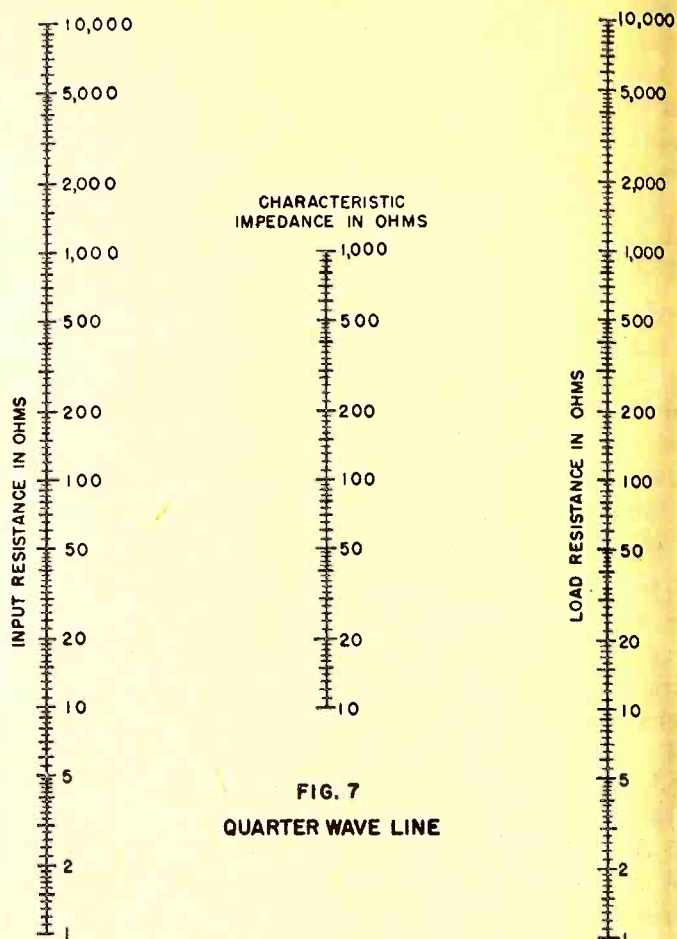
The current in the load will always lag the current at the sending end of a transmission line. It will undergo exactly 180 degrees of phase shift in each electrical halfwave length regardless of the ratio of the load resistance to the characteristic impedance.

9. Voltage Gradient along a Coaxial Line. In a coaxial transmission line the maximum voltage gradient occurs at the surface of the inner conductor. When this gradient exceeds the critical value of approximately 20,000 volts (rms) per cm, breakdown will occur in the form of either corona or arcover. If the characteristic impedance of the line is less than the optimum breakdown value of 60 ohms, arcover will occur without corona; if it is more than 60 ohms, corona will precede arcover.

Figure 9 shows the maximum voltage gradient G_{max} in rms volts per cm on a coaxial line as a function of the characteristic impedance of the line, the physical size of the inner conductor and the applied voltage. The relationship is

$$G_{max} = 47.2E/dZ_0 \quad (9)$$

where E is the applied rms voltage, d is the diameter of the inner conductor in inches, and Z_0 is the characteristic impedance.



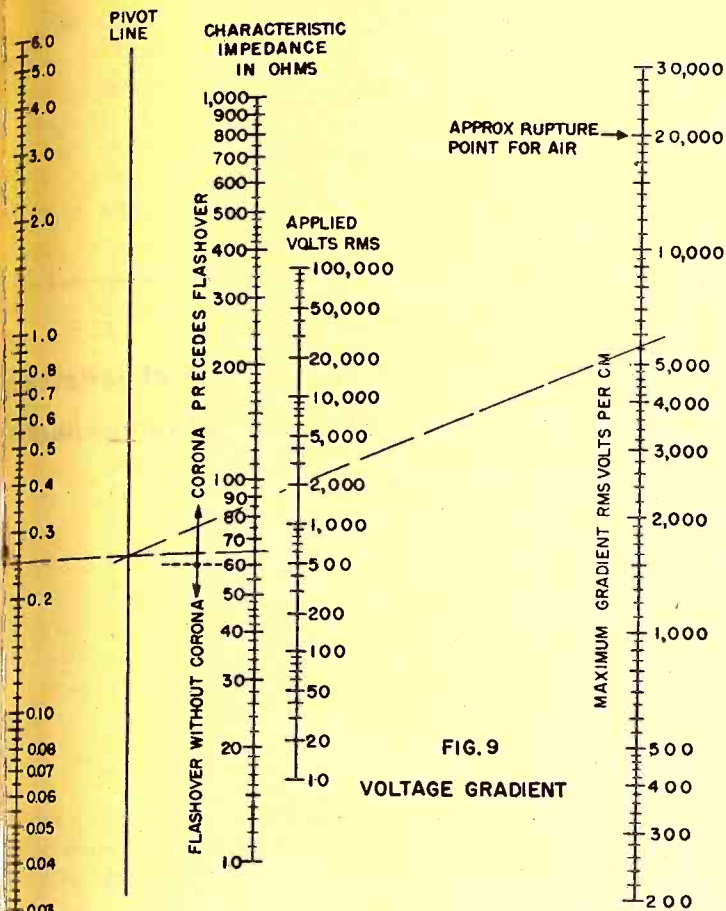


FIG. 9
VOLTAGE GRADIENT

This nomograph, Fig. 9, is used as follows: first, connect with a straight line points on the first and third scales from the left which represent the inner conductor diameter and the characteristic impedance (see example on nomograph). The intersection of this line with the second scale, labeled Pivot Line, is next connected with a second straight line passing through the desired point on the fourth scale, labeled Applied Volts RMS. The intersection of this second straight line with the fifth scale gives the desired value for the gradient on the surface of the inner conductor in rms volts per cm.

Bead insulators may cause higher gradients in their vicinity, resulting in premature voltage breakdown, particularly if they fit loosely on the inner conductor.

10. *Diminution of Standing-Wave Ratio Due to Line Loss.* A high-frequency transmission line whose characteristic impedance is not matched by the load impedance will have standing waves along its length. The standing-wave ratio in the vicinity of the load will be numerically equal to the ratio of the load resistance to the characteristic impedance (or its reciprocal if this is less than unity). If the line has attenuation, there will be a gradual diminution of the standing-wave ratio in the direction of the generator.

Figure 10 shows the relationship between the standing-wave ratio in a region near the generator (assuming that the wavelength is small compared to the line length), the standing-wave ratio near the load, and the line loss in decibels (as obtained from Fig. 3 and 4). The relationship is

$$db = \left[10 \log_{10} \frac{(S_L + 1)(S_G - 1)}{(S_L - 1)(S_G + 1)} \right]^{1/2} \quad (10)$$

where S_L is the voltage-standing-wave ratio near the load and S_G is the voltage standing wave ratio near the generator.

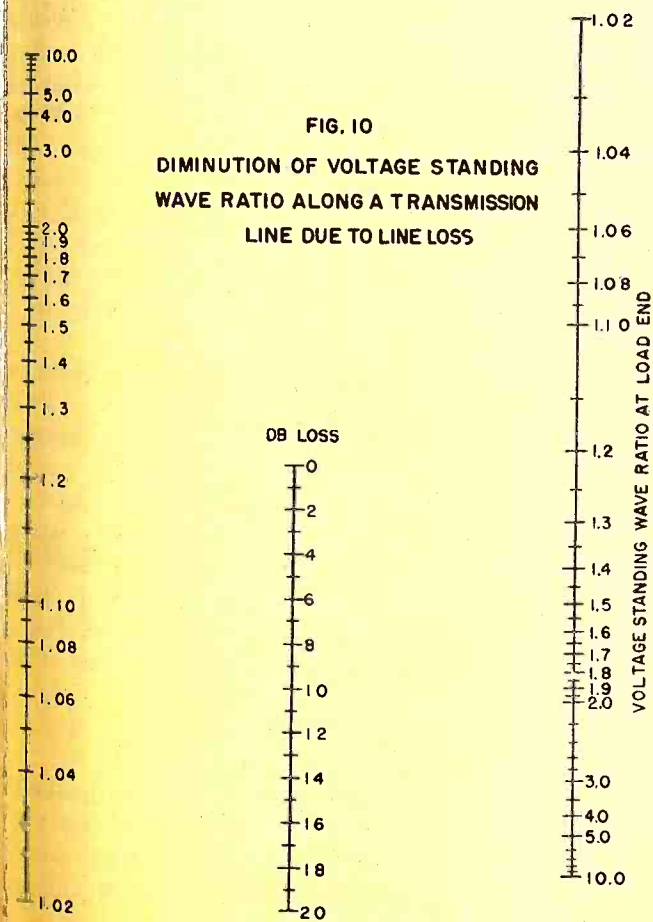


FIG. 10
DIMINUTION OF VOLTAGE STANDING WAVE RATIO ALONG A TRANSMISSION LINE DUE TO LINE LOSS

GRAPHICAL SOLUTION OF SKY-WAVE PROBLEMS

Chart shows relationship between great-circle distance, virtual height of reflecting ionosphere, equivalent path distance, angle of departure and angle of incidence at ionosphere. Any three can be found if other two are known

By R. A. HELLIWELL

IN RADIO communication problems involving transmission by means of sky-waves reflected from the ionosphere it is often necessary to relate: (1) great-circle distance between transmitter and receiver, (2) virtual height of reflection, (3) equivalent path distance between transmitter and receiver, (4) angle of departure, and (5) angle of incidence at the ionosphere. It is the purpose of this paper to present a simple graphical method whereby these factors can be determined rapidly without recourse to the analytical expressions. If any two factors are given, the other three can be found.

It is assumed that propagation can be represented by a ray and that the characteristics of the actual path of the ray can be represented with sufficient accuracy by the so-called equivalent path, shown in Fig. 1 as the lines AB and BC . The height h' of the apex B is called the virtual height, and D is the great-circle distance between the endpoints A and C . The angle β between AB and the tangent at A is called the vertical angle or

angle of departure. The ionosphere is assumed to be horizontally stratified and earth's magnetic field effects are neglected. The path is therefore symmetrical about the midpoint, and the angle of arrival is equal to the angle of departure.

Graphical computations are facilitated with the aid of the sky-wave transmission chart shown in Fig. 2. This is simply a vertical cross-section of the earth's atmosphere up to a height of 600 km. Great-circle

distance D on the earth's surface is plotted against virtual height h' appearing at left with the chart held sideways.

The vertical angle β is determined by aligning a straight edge with the origin and the midpoint of the equivalent path (co-ordinates h' and $D/2$) and reading the upper scale. The angle of incidence ϕ_0 is interpolated in the family of curves of constant ϕ_0 plotted on the chart. Secant ϕ_0 is read from the conversion chart below the main chart.

Since there are five basic variables (D, P, h', β , and ϕ_0) only two of which can be independent, there are ten possible combinations of independent variables. For any given pair of variables, the other three are determined from the chart. The procedure is illustrated in the following example for a selected pair of variables (D and h').

Example

Problem: Given a great-circle distance D of 3,000 km and a virtual height h' of 310 km, find the vertical angle β , the angle

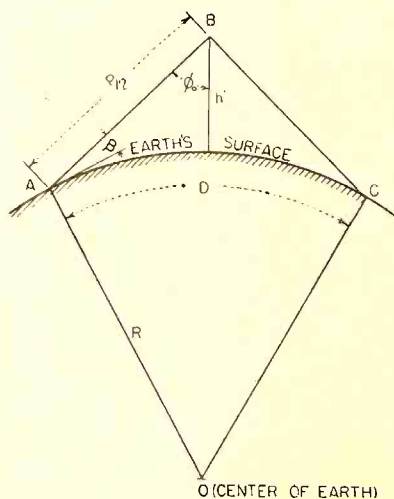


FIG. 1.—Diagram shows geometry of sky-wave propagation

of incidence ϕ_0 at the ionosphere, sec ϕ_0 , the path distance P , and the transmission time t .

Solution: Locate the apex of the path at $D/2 = 1,500$ km and $h' = 310$ km on Fig. 2. Align straight edge with origin and apex. Read $\beta = 4.5$ degrees on the upper scale. Read $\phi_0 = 72$ degrees by interpolating in family of curves of constant ϕ_0 . Obtain sec $\phi_0 = 3.2$ from conversion scale. Obtain $P = 3,140$ km by measuring distance from origin to apex, using the height scale on the chart, and multiplying result by 2. The transmission time $t = 10,470 \times 10^{-6}$ seconds is obtained by dividing the path distance P by the speed of light (3×10^8 km per sec).

The author wishes to acknowledge the helpful comments of A. M. Peterson.

Appendix

Some of the more important analytical expressions, based on Fig. 1, are given below for reference. Others can be derived readily.

$$\begin{aligned} & \sin \frac{D}{2R} \frac{180}{\pi} \\ = \tan^{-1} & \frac{\sin \frac{D}{2R} \frac{180}{\pi}}{1 - \cos \frac{D}{2R} \frac{180}{\pi} + \frac{h'}{R}} \\ = 90 - \phi_0 - & \frac{D}{2R} \frac{180}{\pi} \\ = R \left[\frac{\cos \beta}{\cos \left(\frac{D}{2R} \frac{180}{\pi} + \beta \right)} - 1 \right] \\ = \left[\cos^{-1} \left(\frac{R}{R + h'} \cos \beta \right) - \frac{\pi}{180} \beta \right] \\ = 2 \times & \frac{2R(R + h') \left(1 - \cos \frac{D}{2R} \frac{180}{\pi} \right) + h'^2}{2} \end{aligned}$$

- where D = great circle distance in km
- h' = virtual height in km
- P = path distance in km
- β = vertical angle in degrees
- ϕ_0 = angle of incidence in degrees
- R = earth radius (6,367 km)

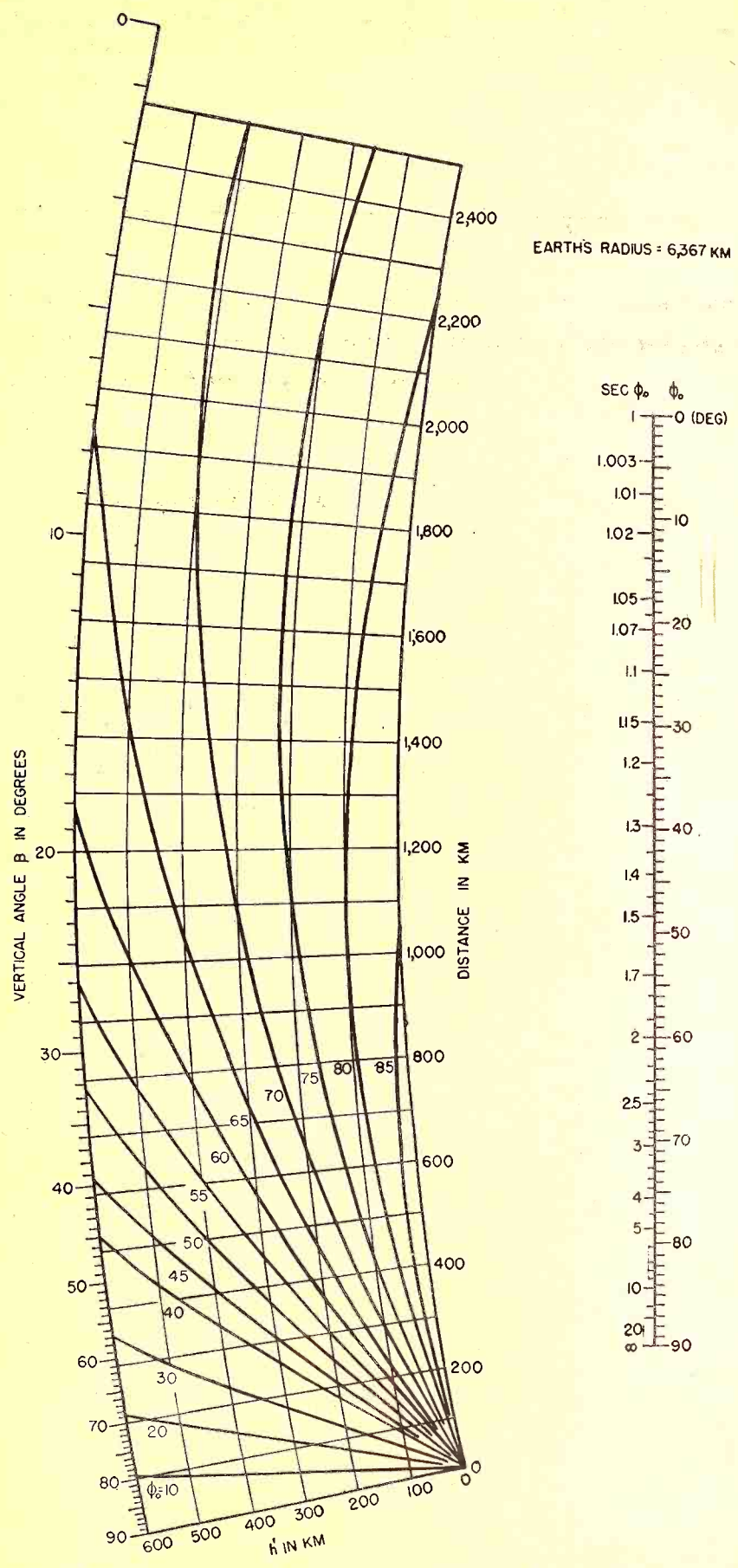


FIG. 2—Sky-wave transmission chart relates great-circle distance $D/2$ (see Fig. 1), virtual height, path distance, vertical angle and angle of incidence

PHASE SHIFT BY CRO

Two measurements of crt deflection against a cross-hatch grid-overlay show possible phase angles when entered in the nomogram. Rotation of beam resolves the ambiguity

By JOSEPH F. SODARO

PHASE ANGLE is most frequently measured by the cathode-ray oscilloscope pattern method. In this technique a reference-phase alternating voltage is one input and an unknown-phase alternating voltage is the quadrature input to the cathode-ray tube. The resulting pattern is a straight line, circle or ellipse depending upon the phase difference. The sine of the phase angle is the ratio of the intercept B to maximum A as shown in Fig. 1A.

Procedure

Adjust the undeflected beam to the crt center as indicated by the intersection of the midlines of the cross-hatch grid. Apply the unknown voltage to the vertical or y -input terminals and adjust the gain for any convenient deflection. Disconnect or turn off this input and apply the reference voltage to the horizontal or x -input terminals. Adjust this gain for an equal deflection. Reconnect the unknown voltage without changing amplification controls. Measure B and A in any equal units such as centimeters or tenths of inches. The arc-sine of the B -to- A ratio is the desired angle.

The nomograms shown in Fig. 2 facilitate this calculation. A general solution can be obtained by using scales A , B , and θ . Place a straight-edge between the pattern height value on the A scale and the intercept value

on the B scale. Read the unknown angle on the θ scale at the intersection of the straight-edge and this scale.

The 20-unit chart (C) shown in Fig. 2 is a simplified version designed on the basis that crt cross-hatch grids are often divided so that 40 divisions of total deflection along each axis can be used conveniently. Thus, A is a constant 20 units and need not be used with this nomogram. In fact, the peak of the composite trace may be off the circular crt without concern since constant input amplitude is essential in any case.

In using this calculator simply read phase angle opposite the intercept value. Multiples and sub-multiples of the intercept scale may be substituted if desired. For example, if the maximum is 10, divide intercept scale values by 2 and read.

Beam Rotation

The nomograms show that two answers can be obtained for each pattern. This ambiguity can be resolved by determining the crt beam rotation. One method of

resolution is that of superimposing a low-amplitude, higher-frequency sawtooth voltage upon the vertical input.¹ A typical pattern is shown in Fig. 1B.

Another method requires delaying the unknown phase by a small amount. This can be done by means of a phase-shifting network connected in series between the source and the oscilloscope. The small additional delay will modify the pattern. The modification will be toward different limiting patterns depending upon the beam rotation. For example, a 45-deg ellipse will become rounded and tend toward a circle when delayed. On the other hand the 315-deg pattern that looks similar will shift toward a straight line when the delay is added.

As an example in the use of the chart, assume that the maximum deflections are 32 units, the intercept is 5 units, the ellipse major-axis tilt is to the right and the beam rotation is clockwise. Construct a straight line from 32 on the A scale to 5 on the B scale. This line intercepts the θ scale at the 9, 171, and 351-deg point. By the ellipse tilt the choice is reduced to 9 or 351 deg. For clockwise rotation of the beam select 9 deg. Thus, there is a 9-deg phase difference between the applied voltages.

REFERENCE

(1) J. R. Haynes, Direction of Motion of Oscilloscope Spot, *Bell Lab Rec.*, 14, p 224, March 1936.

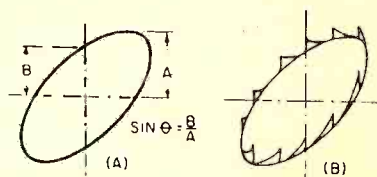


FIG. 1—Ratio of B to A is sine of the phase angle (A); typical pattern with sawtooth superimposed (B)

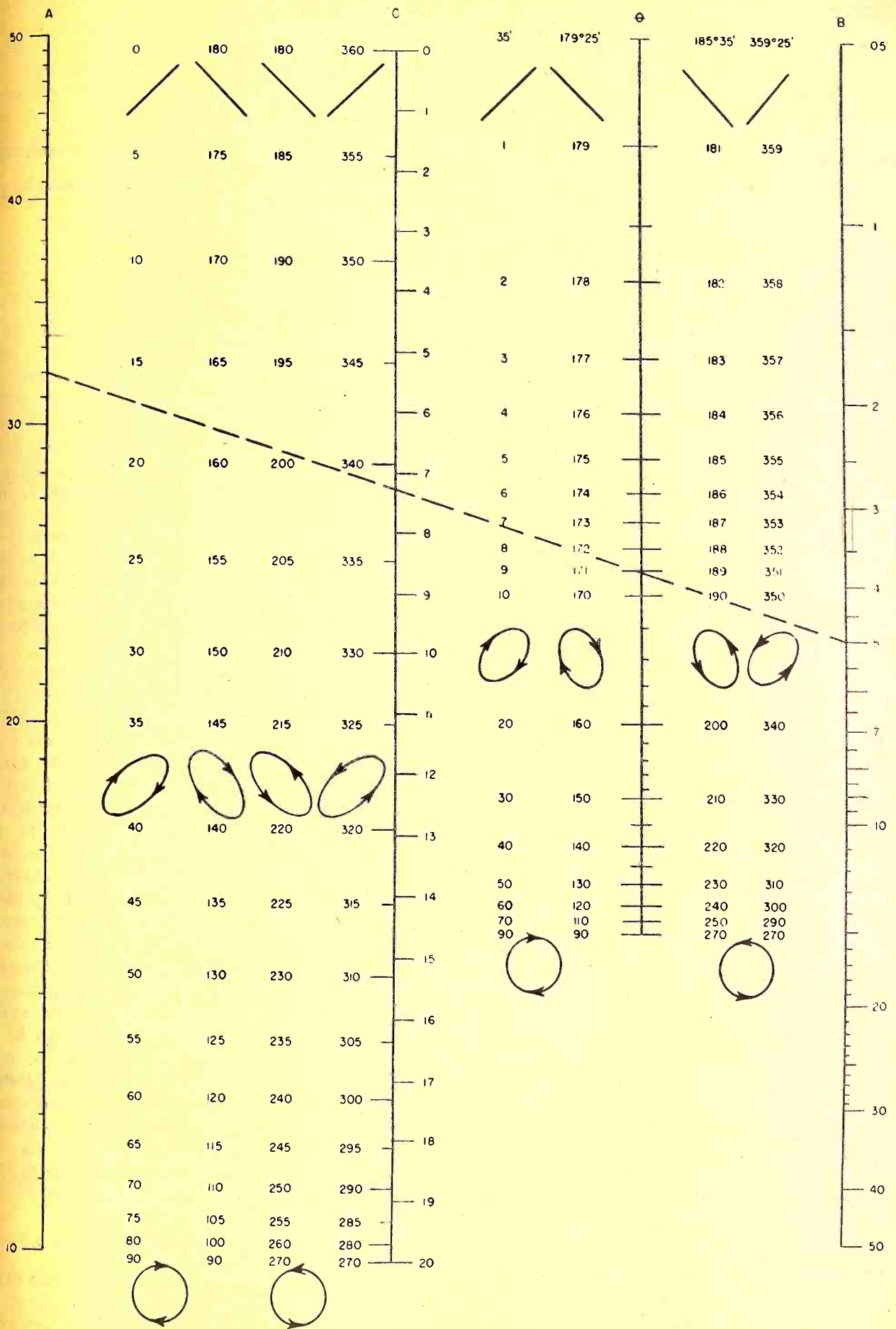


FIG. 2—Nomograms convert intercept-to-maximum ratios into phase angles as explained in text

PARALLEL-RESISTOR CHART

Permits quick choice of the best combination of two available RTMA preferred-value resistors in either 10-percent or 20-percent tolerance ranges to give a desired higher power rating at a particular resistance value

ONE problem that often comes up in laboratories is making full use of the most readily available standard components. Virtually all labs have a constant supply of $\frac{1}{2}$, 1 and 2 watt composition resistors in the standard 10-percent and 20-percent tolerance ranges. A typical problem might be combining two of these to get a 3-watt resistor of the required value. If making conventional calculations combined with trials, three or four trials are usually needed to find the resistor required. The chart in Fig. 1 reduces all of the calculation to a simple glance. The simplicity of the chart results from the solution of two simultaneous equations.

$$y = \frac{R_2}{A} x \quad (1)$$

$$y = \frac{R_1}{A} x + R_1 \quad (2)$$

Solving these two simultaneous equations, their point of intersection is at

$$x = \frac{R_1 A}{R_2 + R_1} \quad (3)$$

$$y = \frac{R_1 R_2}{R_1 + R_2} \quad (4)$$

The y ordinate is the solution for the parallel combination of two resistors or the series combination of two capacitors.

The choice of parallel resistors is, however, dependent upon the power dissipation in each resistor. This information can be derived by multiplying both sides of Eq. 3 by R_2 , then substituting

By MITCHELL ARON

combined parallel resistance R for $R_1 R_2 / (R_1 + R_2)$ to get

$$R_2 x = RA \quad (5)$$

Multiplying both sides by E^2 and rearranging gives

$$\frac{E_2}{R} x = \frac{E^2}{R^2} A \quad (6)$$

Now assume that the power being dissipated in the parallel combination is 1 watt, and let A be also arbitrarily made equal to 1. Equation 6 then becomes $x = E^2/R_2$. Since E^2/R_2 is the power dissipated in R_2 , the abscissa is proportional to the power dissipated in R_2 . Thus, for every watt dissipated in the parallel combination R , x watts will be dissipated in R_2 . The power dissipated in R_1 is of course the difference between the total and that dissipated in R_2 .

A plot of a series of the lines just discussed is given in Fig. 1. For convenience the heavy lines are drawn to the 20-percent series of preferred values and the combination of light and heavy lines form the 10-percent series of preferred values.

Example

Let it be required to find the nearest parallel combination of two resistors in the 20-percent series of preferred values to give a combined resistance of 4,000 ohms. The parallel combination must be able to dissipate 3 watts.

Solution: 4,000 ohms can be rewritten as 4.0×10^3 ohms. Follow the 4.0 horizontal line across, noting that the nearest intersection of two heavy lines is 6.8 and 10.0 and the intersection falls at $x = 0.41$. Thus the parallel combination of 6.8 K in parallel with 10 K is the nearest combination of 20-percent resistors to 4 K, and gives an exact resistance of 4.05 K. Since $10 = R_2$ (read on the righthand side of chart), the power rating R_2 must be $= 0.41 \times 3.0 = 1.23$ watts and the dissipation of R_1 is $3 - 1.23 = 1.77$ watts. The resistors that will fulfill the needs of the problem are 6.8 K, 20-percent, 2-watt in parallel with 10 K, 20-percent, 2-watt.

Although it is not required in most calculations of the type just explained, further information can be gleaned from the chart. For example, although the resistances in the preceding problem are not equal, due to standardization, resistances of equal 2-watt power rating are called for. The maximum power that can be dissipated by the parallel combination is determined by the power at which the smaller of the two resistances will dissipate 2 watts. Thus the maximum power for the combination, using the data from the chart, is

$$\frac{2}{1 - 0.41} = \frac{2}{0.59} = 3.4 \text{ watt}$$

Because of the similarity to the arithmetic, the chart works equally well for series combinations of capacitors.

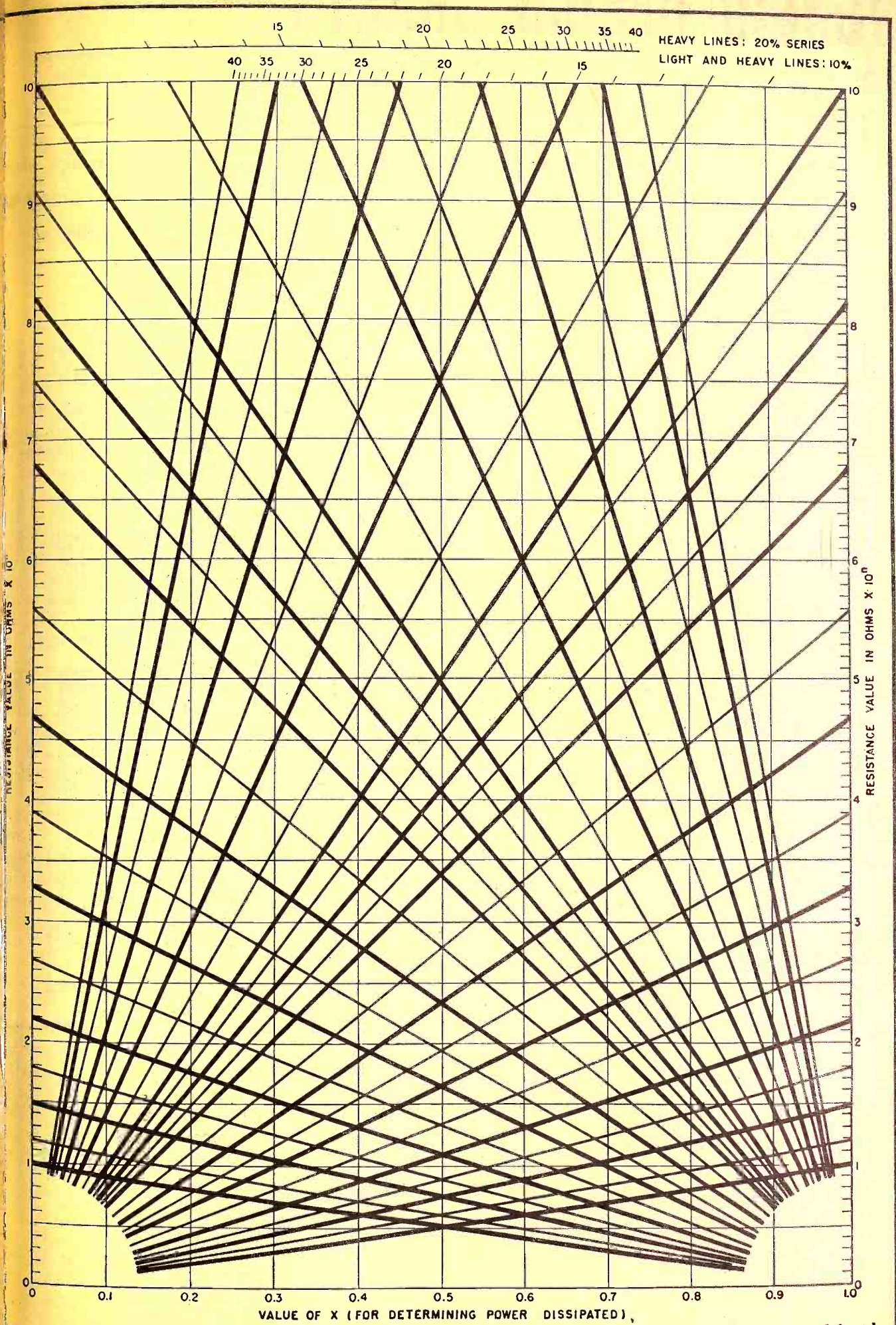


FIG. 1—Trace along horizontal line for desired parallel resistance, note nearest intersection of lines coming from lower left and right corners, and read RTMA preferred-values of required individual resistors on side and top scales for these lines

TOROID DESIGN CHARTS

Reference to these charts permits speedy determination of Q, frequency range, size and type of permalloy core, wire size and number of turns for toroidal transformers meet performance specifications in the 1-kc to 100-kc frequency range

By R. E. PROUTY

IN DESIGNING toroidal transformers it is necessary to determine the proper type (permeability) and size of core and the required size and number of turns of wire. Circuit considerations set the required Q, inductance and operating range. The accompanying charts tie all the parameters together. A majority of the possible combinations for 0.8-in. O.D., 1.06-in. O.D. and the 1.84-in. O.D. molybdenum permalloy cores are covered.

Design

In searching for the ideal toroidal transformer for a given application, the practical limits of each core and wire size are first established.

Each master chart (Fig. 1, 2 and 3) covers one core size. Each chart is plotted on 5-cycle log-log paper. The number of turns of wire necessary to obtain a given inductance for cores with typical mu values can readily be found. The horizontal lines that intersect the diagonal lines at their approximate upper limits establish, for the wire sizes indicated, the maximum number of turns that can be hand wound on that size of core.

By winding over two cores instead of one, the inductance can be exactly doubled for a given number of turns of wire. For example, referring to Fig. 1, the maximum possible inductance obtainable with No. 24 wire on a single core of 125 mu in the 1.84-in. size is 400 mh. In other words a maximum of 1,200 turns

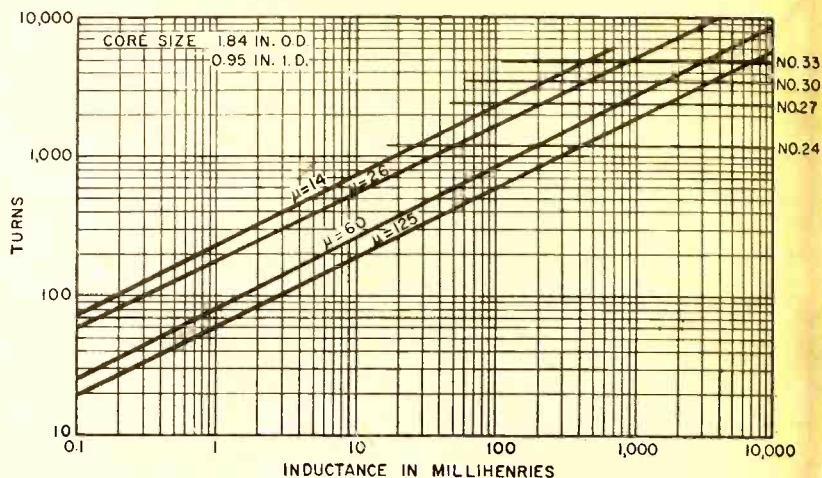


FIG. 1—Master design chart for toroids with 1.84-in. (O. D.) cores

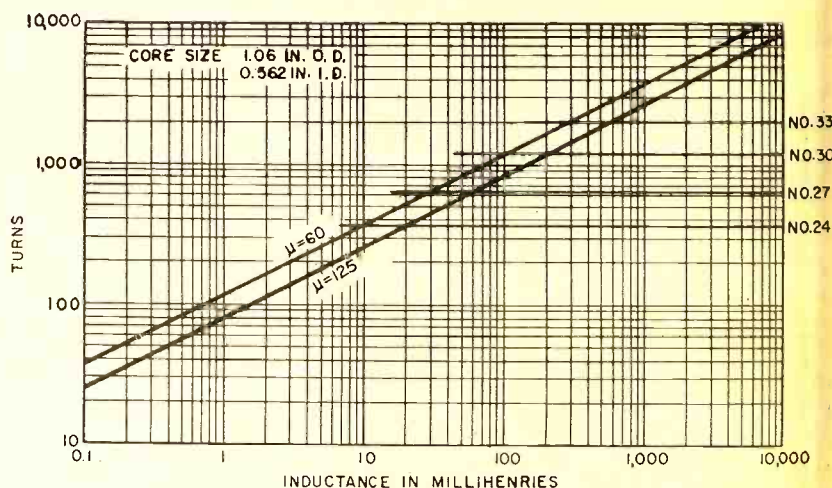


FIG. 2—Master design chart for toroids with 1.06-in. (O. D.) cores

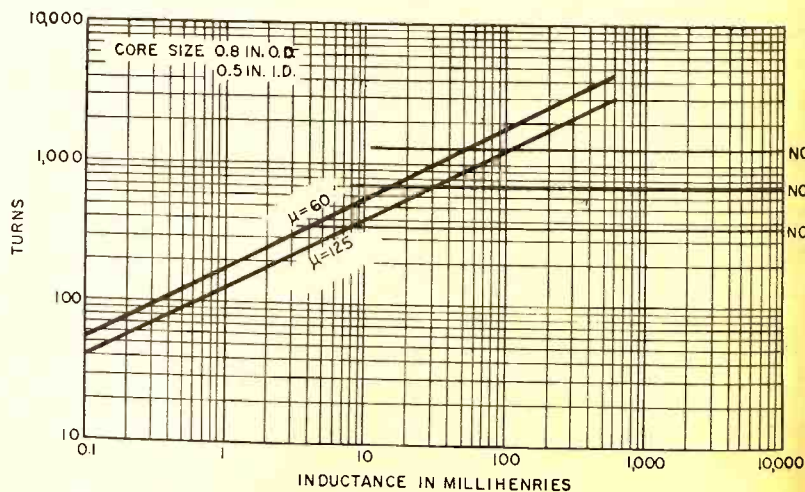


FIG. 3—Master design chart for toroids with 0.8-in. (O. D.) cores

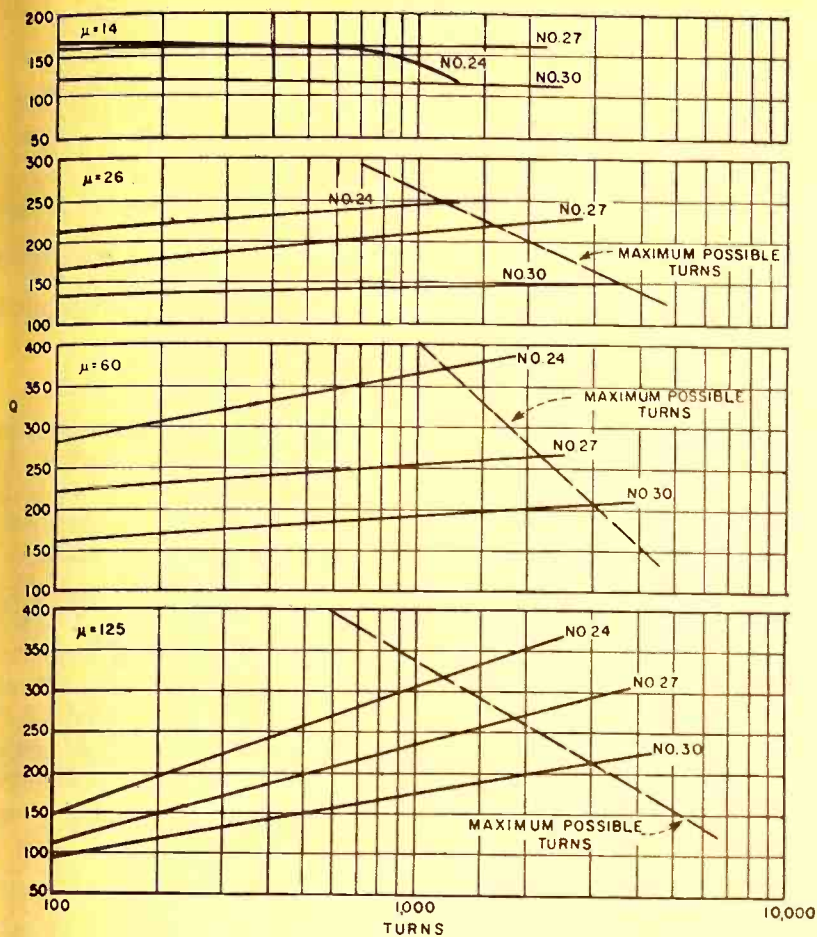


FIG. 4—Auxiliary design chart for toroids using 1.84-in. cores

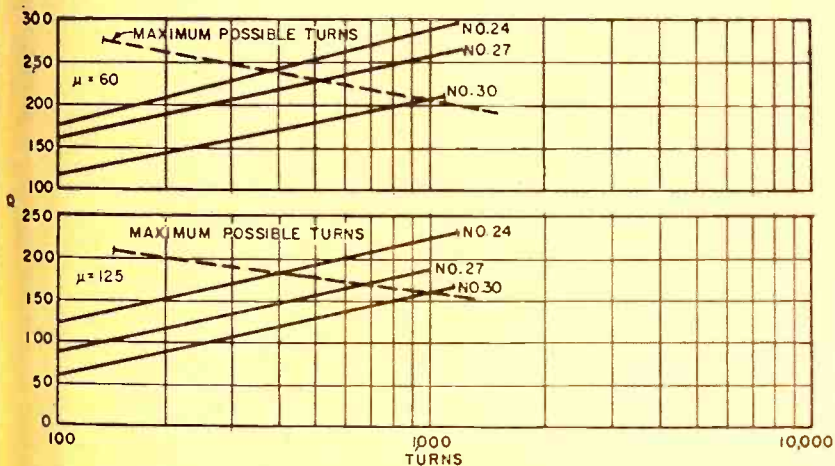


FIG. 5—Auxiliary design chart for toroids using 1.06-in. cores

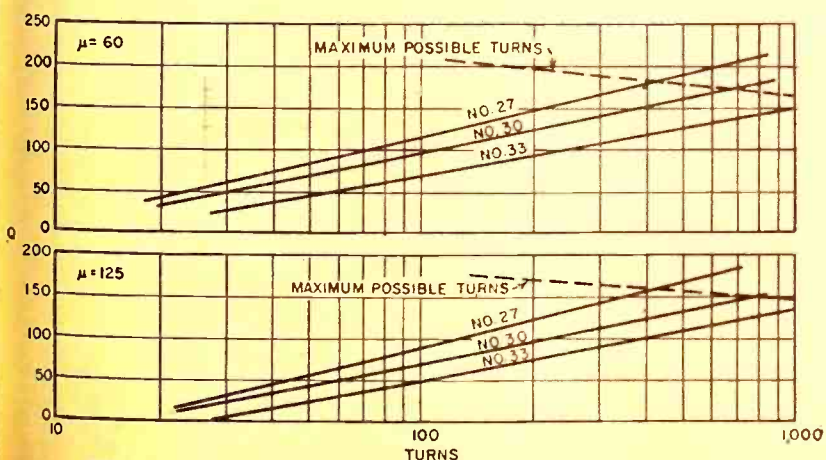


FIG. 6—Auxiliary design chart for toroids using 0.8-in. cores

of No. 24 wire can be wound on a 1.84-in. core. Using two superimposed cores, an inductance of 800 mh can be obtained with only 1,200 turns. Since this is a logarithmic progression, halving the number of turns will not halve the inductance.

Figure 1 is supported by a turns-against-Q chart (Fig. 4.) for each of the four core types. These show the actual Q obtained by winding the specified number of turns. Diagonal Q lines are plotted for each wire size. These are intersected by a dashed line indicating the limit of the number of turns that can be wound on a given core.

Figures 5 and 6 similarly refer to the master charts, Fig. 2 and 3 respectively.

Chokes

Since a transformer is nothing more than a multiplicity of chokes wound upon a common core, the data is valid for either a choke or transformer. In designing a transformer, the total number of turns of wire (primary and secondary) must be kept in mind. Since maximum efficiency is obtained when the toroidal core is wound fully with wire, the smallest possible core, or the largest possible wire size should always be chosen; Q, of course, holds precedence over other factors. The larger the diameter of wire used, the higher the Q. The choice of core permeability is inversely related to the operating frequency desired. The higher- μ cores operate best at the lower frequencies and conversely.

There is no set rule for using these charts. Some may find it more expedient to look first for the highest obtainable Q at a given frequency, then settle for the core that will provide it. Others may be inductance conscious and settle for the highest obtainable Q at a given inductance.

Figures 7 to 9 give quantitative data on toroids wound by the the author in compiling the accompanying charts.

Tables are on following page

TOROID DESIGN CHARTS

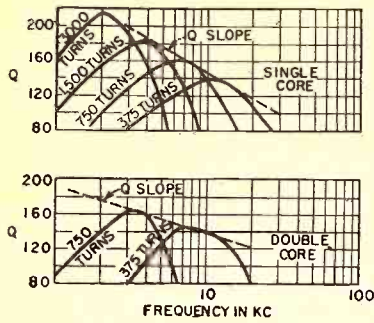
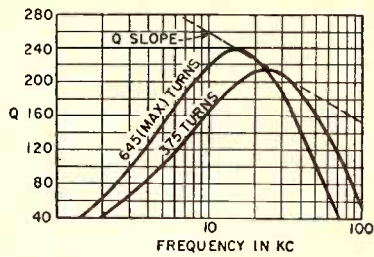


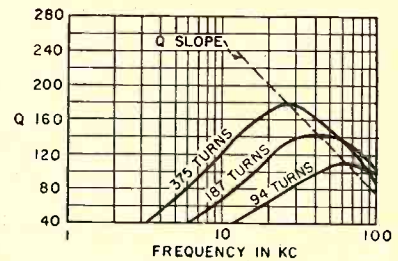
FIG. 7—Design data for toroids wound with No. 30 Formex wire on 1.84-in., 125-mu core.

| Freq in kc | Single Core | | | | Double Core | |
|-------------------------|-------------|-------------|---------------|---------------|-------------|-------------|
| | 375 turns Q | 750 turns Q | 1,500 turns Q | 3,000 turns Q | 375 turns Q | 750 turns Q |
| 1 | 25 | 50 | 100 | 162 | 35 | 90 |
| 2 | 50 | 100 | 158 | 215 | 65 | 140 |
| 3 | | | | | | 165 |
| 4 | 100 | 148 | 185 | 155 | 115 | 160 |
| 6 | 120 | 160 | 152 | 70 | 140 | 100 |
| 7 | | 162 | | | 145 | |
| 8 | 135 | 158 | 100 | | 140 | 43 |
| 10 | 140 | 138 | 60 | | 142 | |
| 12 | 138 | 118 | 35 | | 135 | |
| 15 | 130 | 87 | | | 117 | |
| 18 | 118 | 55 | | | 100 | |
| 20 | 104 | 45 | | | 82 | |
| 22 | 100 | | | | 70 | |
| 25 | 94 | | | | 55 | |
| 30 | 70 | | | | | |
| 40 | 45 | | | | | |
| 50 | 26 | | | | | |
| <i>L</i> (mh) | 38.7 | 154 | 618 | 2,530 | 78 | |
| <i>Q</i> | 140 | 162 | 185 | 215 | 145 | |
| <i>C</i> (μf) | 0.006 | 0.003 | 0.0024 | 0.0025 | 0.006 | |
| <i>R</i> _{d-c} | 7.75 | 16 | 33.7 | 73 | 12.6 | |



| Freq in kc | 375 turns Q | 645 (max) turns Q |
|-------------------------|-------------|-------------------|
| 2 | 42 | 65 |
| 3 | 65 | 100 |
| 4 | 82 | 125 |
| 5 | 100 | 150 |
| 6 | 118 | 170 |
| 7 | 130 | 185 |
| 8 | 145 | 200 |
| 10 | 168 | 215 |
| 12 | 182 | 230 |
| 15 | 202 | 238 |
| 18 | 205 | 232 |
| 20 | 212 | 228 |
| 25 | 215 | 210 |
| 30 | 210 | 190 |
| 40 | 185 | 138 |
| 50 | 162 | 100 |
| 60 | 140 | 68 |
| 70 | 115 | |
| 80 | 90 | |
| 90 | 72 | |
| <i>L</i> (mh) | 10.2 | 30.05 |
| <i>Q</i> | 215 | 238 |
| <i>C</i> (μf) | 0.0039 | 0.0038 |
| <i>R</i> _{d-c} | 2.47 | 4.6 |

FIG. 8—Design data for toroids wound with No. 27 Formex wire on 1.06-in., 60-mu core



| Freq. in kc | 94 turns Q | 187 turns Q | 375 turns Q |
|-------------------------|------------|-------------|-------------|
| 4 | | | 55 |
| 6 | | 43 | 80 |
| 8 | | 58 | 100 |
| 10 | 38 | 68 | 120 |
| 12 | 43 | 80 | 136 |
| 15 | 48 | 90 | 152 |
| 18 | 62 | 109 | 165 |
| 20 | 65 | 118 | 170 |
| 30 | 85 | 138 | 176 |
| 40 | 100 | 142 | 162 |
| 50 | 102 | 139 | 148 |
| 60 | 112 | 138 | 138 |
| 70 | 108 | 132 | 128 |
| 80 | 106 | 120 | 108 |
| 90 | 104 | 112 | 98 |
| 100 | 99 | 104 | 86 |
| 120 | 92 | 90 | 70 |
| 150 | 79 | 77 | |
| 180 | 64 | 68 | |
| <i>L</i> (mh) | 0.3 | 1.14 | 4.68 |
| <i>Q</i> | 112 | 142 | 176 |
| <i>C</i> (μf) | 0.0177 | 0.0141 | 0.0059 |
| <i>R</i> _{d-c} | 0.382 | 0.768 | 1.71 |

FIG. 9—Design data for toroids wound with No. 27 Formex wire on 0.8-in., 60-mu core

MAGNETIC DRUM DESIGN

Nomograph relates drum diameter, spot density, frequency, angular velocity, access time and number of spots stored, to speed determination of design having optimum compromise of cost, storage volume and access time for modern computing machines

THE SINGLE NOMOGRAPH below suffices for all quantities involved in the design of magnetic drums.

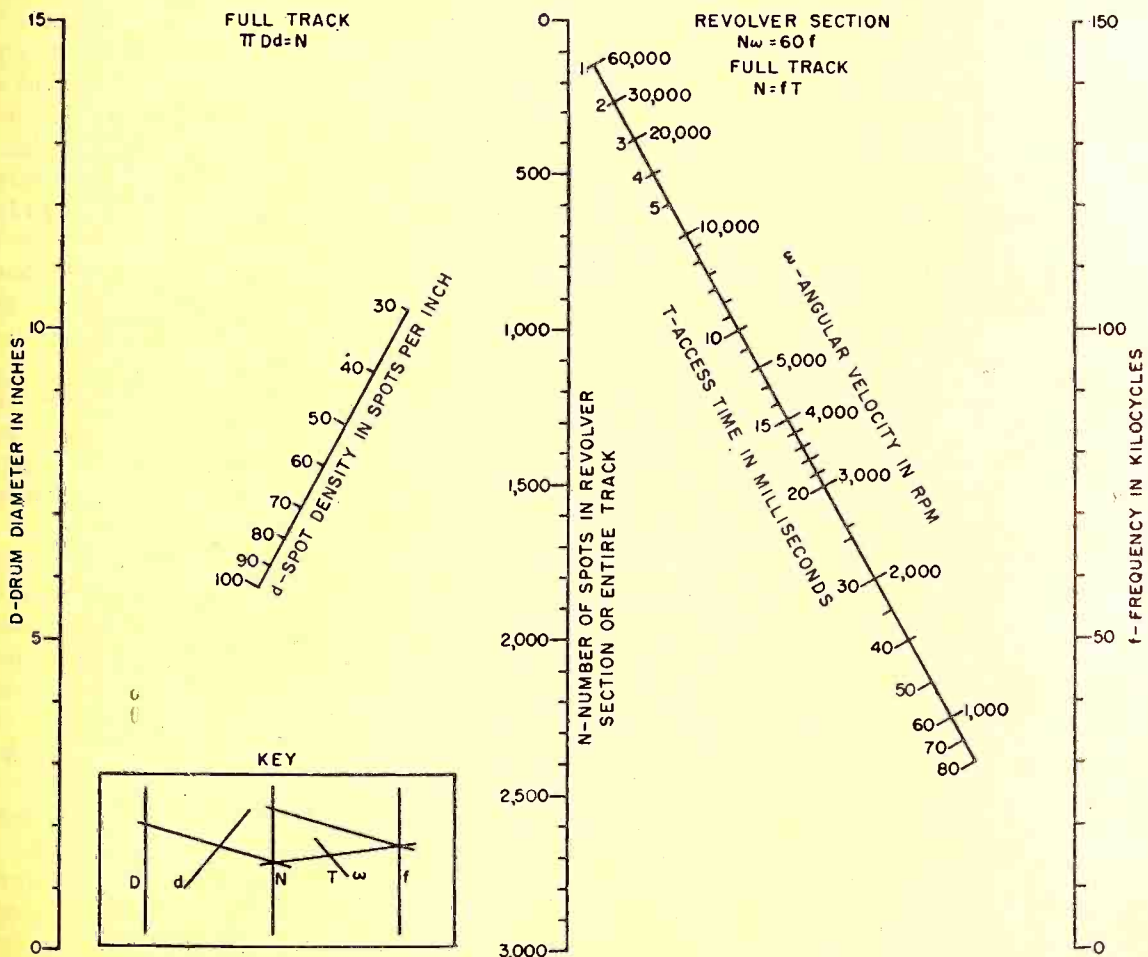
Example 1. It is required that 1,200 spots be stored on the full track. Assuming an operating frequency of 70 kc, a straight line through $N = 1,200$ and $f = 70$ kc gives $\omega = 3,500$ rpm and access time $T = 17$ milliseconds. Next, assume a reasonable value for spot density such as $d = 50$

By D. G. O'CONNOR

and project from $N = 1,200$ through this to read $D = 7.6$ inches for required drum diameter.

Example 2. An access time of $T = 8$ milliseconds is required when using a revolver section having $N = 720$ spots. Extend-

ing a line through these values gives $f = 90$ kc. Assuming 4,000 rpm as a reasonable angular velocity for a revolver, a line through this value and $f = 90$ kc gives $N = 1,350$ spots. This means that 720/1,350 or 8/15 of the complete track is used for the revolved information. Assuming $d = 40$ for spot density, project through this value from $N = 1,350$ to read $D = 10.7$ inches as drum diameter.



Nomograph for parameter relations on magnetic information-storing drums. In revolver-type drum applications, each bit of information is read by one head, erased by the next head, and rerecorded by the third head a short distance ahead. The recorded information thus revolves around the drum concurrently with rotation of the drum to reduce access time to a fraction of a revolution

AIR BREAKDOWN CHART

FOR RADAR PULSES

Chart gives approximate breakdown voltage between conductors in air in the major frequency ranges that are related to the mean free path of electrons in air. Chief use is design of high-voltage pulse circuit components for radar installations.

USE of high-power pulses in radar depends on the dielectric strength of air. The design of equipment to handle these pulses should be based on estimates of the breakdown voltage in the air gaps between conductors. The various configurations of the conductor contours make such estimates difficult, but a few simple rules and the accompanying chart are a great help.

The primary purpose of the chart is to show the variation of breakdown voltage with frequency. Breakdown by an alternating voltage is an effect of cumulative ionization by collision during successive cycles of alternation. At high frequencies, such that the electrons and ions oscillate in the field without reaching the electrodes, the free charges accumulate until the ionization and recombination rates reach equilibrium.

At low frequencies, such that the electrons and ions would oscillate further than the distance between electrodes, the free charges are partially collected during each cycle and hence do not accumulate. Consequently the breakdown gradient is greater at lower frequencies. Likewise, the breakdown gradient is greater in smaller distances, which also facilitate the clean-up. These effects are summarized by the three curves on the chart.

The transition between the

By **HAROLD A. WHEELER**

medium-frequency and high-frequency curves occurs at certain frequencies and pressures, as indicated for a few cases that have been tested. At high frequencies the gradient is constant (2.9 kv per mm at one atmosphere pressure).

Transition Frequencies

If the distance is of the order of 1,000 times the mean free path of electrons in the air, this transition between middle and lower curves occurs at frequencies of the order of 100 mc, as shown on the chart. This relation is independent of the pressure, although the value of the mean free path is inversely proportional to the pressure. In other words, the product of pressure times distance is proportional to the ratio of distance over mean free path. This is the reason why a single family of curves is valid over a great range of pressure and distance.

The transition between the upper and middle curves (not shown) occurs at frequencies about 1/100th as great, since the velocity of ions is less than that of electrons in about this ratio, and their mean free path is nearly the same.

In either case, the transition occurs at a value of pressure times distance which is inversely proportional to the frequency.

Uniform Gradient

The simplest case for consideration and formulation is a uniform voltage gradient between parallel plane conductors. Ordinary configurations have a peak gradient greater than the average, and the maximum gradient may be taken as a criterion of breakdown over a certain distance. This is valid at high frequencies; at lower frequencies the criterion is somewhere between the maximum and the average gradient, usually closer to the maximum.

A uniform gradient causes corona, just a well-defined spark. A maximum gradient greater than the average gradient causes corona below the sparking voltage, which dictates the final breakdown voltage. As the voltage is increased to the breakdown point. At high frequencies it is even possible to have a ball of fire (ball of fire) in a limited space separated from the electrodes.

At low frequencies, there can be no spark in a gas at a voltage less than a certain value (about 0.3 kv in air), because the electrons are collected before they can gather sufficient momentum. At high frequencies, this fails because most of the

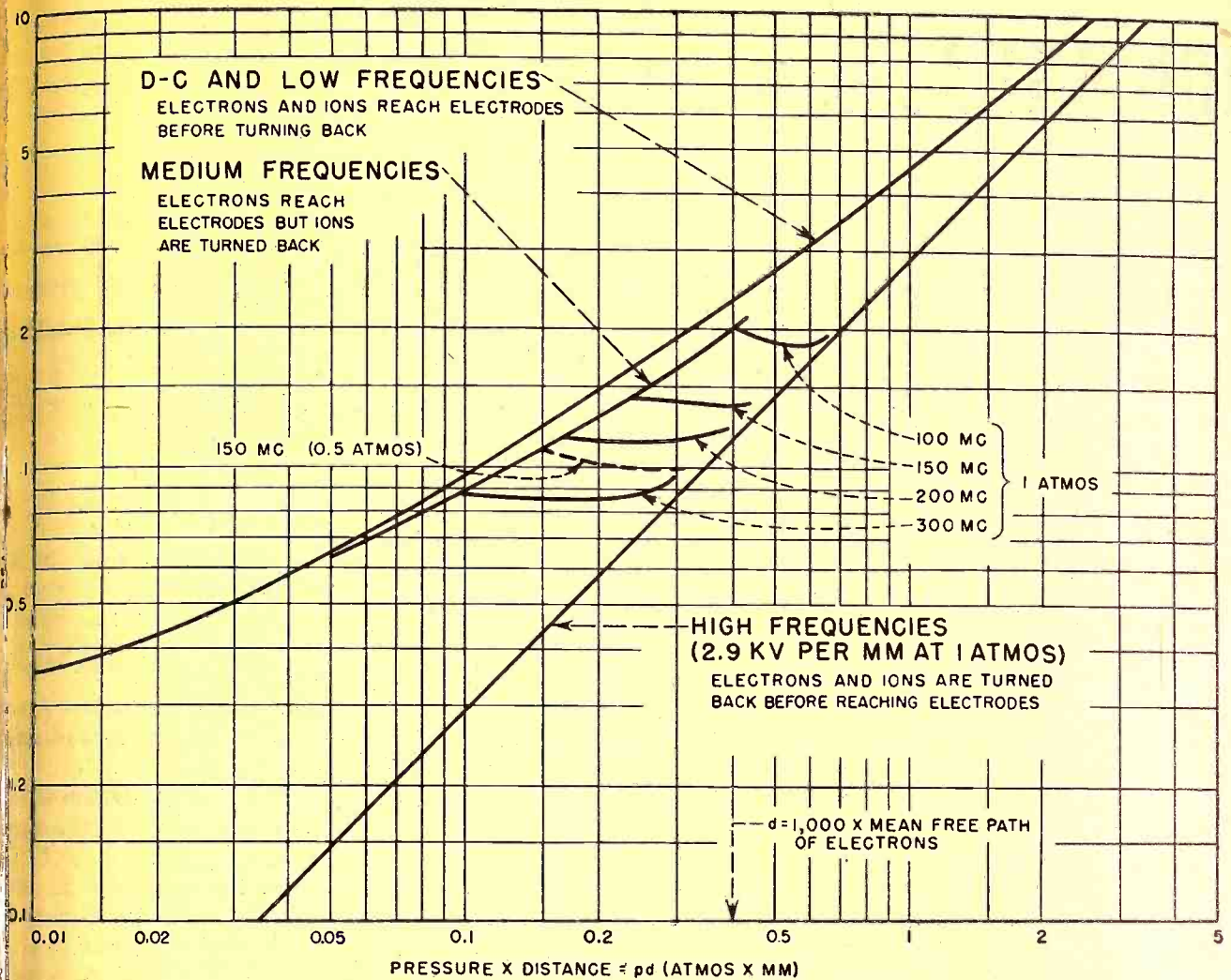


Chart giving breakdown voltage in air between parallel planes. For atmospheric pressure, horizontal scale represents distance in millimeters between the plane electrodes

ns oscillate without reaching electrode.

Experimental Basis

The chart is based on a steady alternating voltage (unmodulated c-w). Short pulses of direct voltage (of the order of one microsecond) occurring at much longer intervals (of the order of one millisecond) stop before equilibrium is reached, so their breakdown voltage is naturally somewhat greater than that of a steady direct voltage, the highest curve on the chart. Such short pulses of high-frequency voltage have been presumed to show a similar tendency relative to the direct curve, and there is some experimental evidence to this effect.

The chart is valid at lower

pressures, provided that the distance is many times the mean free path of electrons, which is true over the range plotted.

In general, there is a scarcity of reliable experimental evidence either to support or to contradict these curves. It is expected that they will be verified under controlled conditions by providing some continuous supply of electrons. This supply may come from corona or other localized discharge, ultra-violet rays, x-rays or gamma rays, but hardly from thermal agitation at ambient temperatures common in electronics equipment (usually under 100C). Therefore a somewhat higher breakdown voltage may be fairly certain if such sources are precluded by design. This is especially true of short

pulses such as mentioned above. However, cosmic rays arrive about once per hour per square millimeter, and cannot be stopped by reasonable shielding:

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GAIN-BANDWIDTH NOMOGRAPH

Equations involved in design of single-tuned amplifier circuits are incorporated in one large nomograph to speed up design calculations. Shows overall effect of varying the parameters when seeking the most economical tube arrangement for desired gain and bandwidth

THE design of vacuum-tube amplifiers involves determining the maximum gain and/or bandwidth using the most economical tube arrangement. The most practical first-approximation calculation for single-tuned circuits such as cascaded synchronously tuned i-f stages was found to be $G_m/2\pi C_i$, and the nomograph on the following page was therefore based on this ratio. The nomograph encompasses all of the interdependent equations used in amplifier design, hence shows the effect of variations in each parameter on the others.

Practical values of G_m and C_i that include the effect of the coupling networks can be found by taking approximately 85 percent of the maximum G_m and 160 percent of the value of C_i given in tube manufacturer's data. This makes the usable gain-bandwidth about 53 percent of the ideal, or roughly one-half. This relationship is found in Table I.

The nomograph solves the following equations:

$$\begin{aligned}
 Q &= f_o/B & (1) \\
 A &= G_m \times R_L & (2) \\
 AB &= A \times B & (3) \\
 AB &= G_m/2\pi C_i & (4) \\
 B &= 1/2\pi C_i R_L & (5) \\
 A_{max} &= 1/2\pi f_o C_{GP} R_L & (6)
 \end{aligned}$$

where $Q = R \omega C =$ circuit quality, $f_o =$ circuit resonant frequency, $B =$ 3-db bandwidth, $A =$ stage gain, $G_m =$ tube

By CHESTER W. YOUNG

transconductance, $R_L =$ total damping resistance, $C_i =$ total shunt capacitance, $A_{max} =$ maximum usable gain, and $C_{GP} =$ total effective grid-plate capacitance.

Since the bandwidth between two 3-db frequencies of a tuned circuit is equal to the 3-db frequency of a parallel or series R-C circuit, the nomograph can be used also for video types of circuits. Also, as Eq. 5 states that bandwidth is independent of L , the nomograph ignores L . Use

Table I—Examples of Ideal and Practical Tube Capacitances

| IDEAL | | | | |
|-----------|------------------------|-------------------------|---------------------|-----------------|
| Tube Type | C_o $\mu\mu f$ | C_p $\mu\mu f$ | C_i $\mu\mu f$ | G_m/C_i mc |
| 6AC7 | 11.0 | 5.0 | 16.0 | 562 |
| 6AK5 | 4.0 | 2.8 | 6.8 | 750 |
| PRACTICAL | | | | |
| Tube Type | C_{in} $\mu\mu f$ | C_{out} $\mu\mu f$ | C_i $\mu\mu f$ | G_m/C_i mc |
| 6AC7 | 17.0 | 8.0 | 25.0 | 312 |
| 6AK5 | 6.7 | 4.4 | 11.1 | 378 |

of this nomograph is best illustrated by an example.

If the known values are $f_o = 30$ mc, $B = 1$ mc, $C_i = 16 \mu\mu f$, $G_m = 5,000$, and $C_{GP} = 60 \mu\mu f$, find the values of Q , A , R_L and A_{max} .

Step 1: Align points $f_o = 30$ mc and $B = 1$ mc, and read $Q = 30$.

Step 2: Align points $C_i = 16 \mu\mu f$ and $G_m = 5,000$, and read $AB = 50$ mc.

Step 3: Align $AB = 50$ mc and $B = 1$ mc, and read $A = 50$.

Step 4: Align $A = 50$ and $G_m = 5,000$, and read $R_L = 100$ ohms.

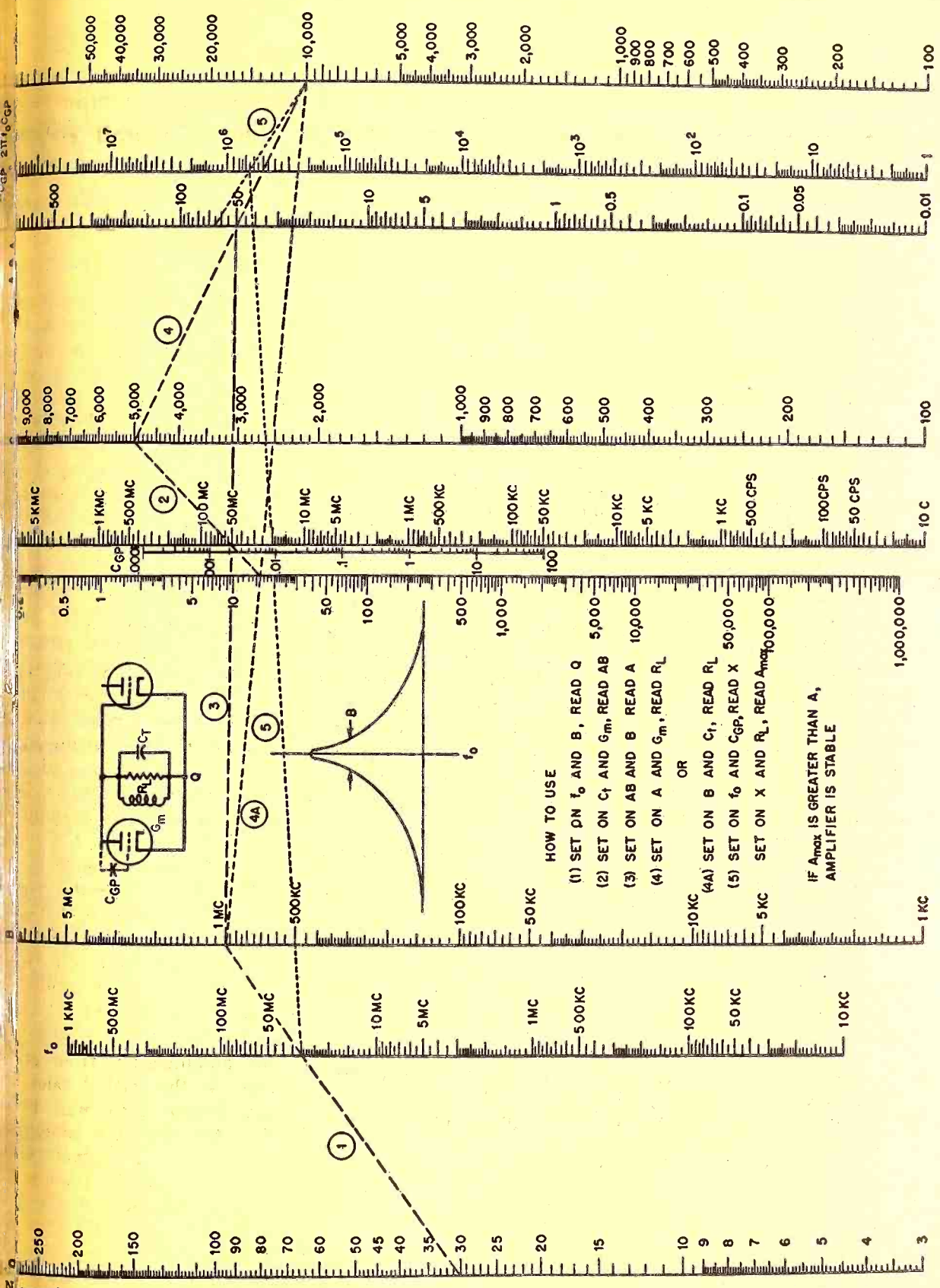
Step 4 (alternate): Since the loading resistance is directly related to bandwidth and capacitance by means of Eq. 5, it may be found by aligning $B = 1$ mc and $C_i = 16 \mu\mu f$, giving $R_L = 10,000$ ohms as before.

Step 5: To ascertain whether the value of $A = 50$ in Step 3 is a practical value of gain, a criterion of the maximum gain is determined by going back through the tube grid-plate capacitance causing oscillation. If the attenuation from plate to grid is set equal to the amplification from grid to plate as the critical value, then the desired gain must be less than the maximum usable gain. The value A_{max} is approximately 750, determined by dividing R_L by the reactance of C_{GP} and thinking of the attenuation as a negative gain. This holds true when the input and output impedance are

as in a multistage synchronous tuned i-f amplifier. The value of C_{GP} is determined by setting $f_o = 30$ mc and C_{GP}

$= 0.0082 \mu\mu\text{f}$ and reading $X = 6.5 \times 10^5$ ohms. Now align this value of X and $R_L = 10,000$ and read the maximum usable gain

as 65 on the A_{max} scale. This value is greater than the desired gain of 50, so the amplifier is deemed to be stable.



Nomograph for designing single-tuned amplifier circuits like that shown. Numbered dashed lines indicate order of steps in designing an amplifier for desired stage gain and bandwidth and checking its stability

BANDWIDTH NOMOGRAPH

FOR PULSE FILTER NETWORK

Gives minimum bandwidth required for adequate transmission of a periodic rectangular pulse, based on spectral distribution of pulse energy, for any selected efficiency of ideal and R-C filters. Law of diminishing returns applies to bandwidth increase.

By **B. L. ADAMS** and **T. M. STOUT**

WHEN A PULSE or other signal is applied to a filter with limited bandwidth, the output is a distorted version of the input because some of the frequency components of the signal are attenuated or eliminated. The importance of these components can be measured by the energy which they represent, so it is commonly stated that "such distortion is minimized by the selection of a frequency band sufficiently wide to include nearly all of the total energy of the frequency components."¹

This observation appears frequently in the literature and the principle is well understood. Quantitative application of this idea, however, appears to have been limited to simple cases involving periodic signals or to elegant attacks on the problem of

optimizing performance in the presence of noise.

Periodic Inputs

For a periodic input, the various harmonic components can be found by Fourier analysis; the Fourier series for a number of common periodic waves are readily available in the literature². The power represented by any harmonic can be found by squaring its magnitude, and the combined power of several components is found by addition. In the case of a square wave, for example, the magnitudes vary inversely with n , the order of the harmonic, where $n = 1, 3, 5, \dots$. From this information, one readily determines that the fundamental component of the square wave accounts for 81.1 percent of the total power and

that higher harmonic contribute as shown in the following table:

| Highest Harmonic Included | Percentage of Total Power |
|---------------------------|---------------------------|
| 1 | 81.1 |
| 3 | 92.2 |
| 5 | 95.2 |
| 7 | 96.7 |
| 9 | 97.6 |
| 11 | 98.1 |
| 13 | 98.4 |

Single-Pulse Input

For periodic inputs, the frequency components are distinct but form a continuous spectrum. The relative magnitudes are again determined by Fourier analysis, using the Fourier integral.

The actual signal energy in any portion of the frequency spectrum is found by squaring the amplitudes and integrating

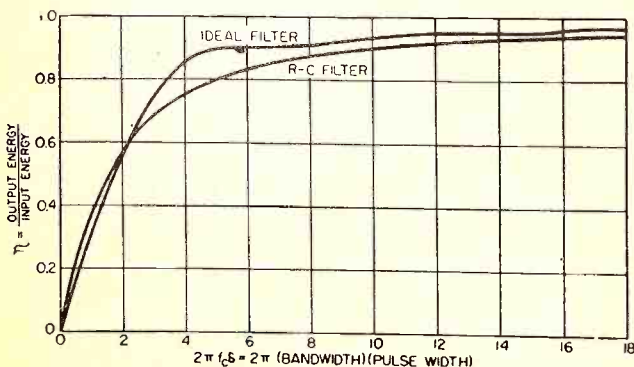


FIG. 1—Transmission efficiency for rectangular pulse input

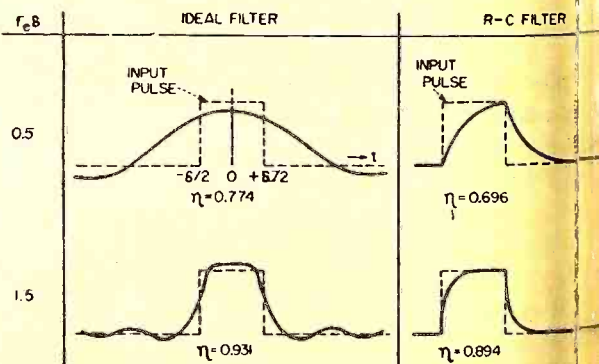


FIG. 2—Responses of filters for rectangular input pulse

pect to frequency over the re-
quired interval.

If the signal is an isolated
angular pulse of width δ , the
frequency spectrum is³

$$F(f) = \frac{\delta}{2\pi} \left[\frac{\sin \pi f \delta}{\pi f \delta} \right] \quad (1)$$

By squaring and integrating, the
fraction of the total energy in
the band between zero frequency
and an upper limit f_0 is found
to be

$$\frac{2}{\pi} \left[\frac{\cos 2\pi f_0 \delta - 1}{2\pi f_0 \delta} + \text{Si}(2\pi f_0 \delta) \right] \quad (2)$$

where $\text{Si}(2\pi f_0 \delta)$ is the sine in-
tegral, a function which has been
computed and tabulated^{4,5}.

Strictly speaking, an energy
distribution computed in this
way describes only the input sig-
nal to a network. When the net-
work is the so-called ideal filter,
however, whose gain is one for
 $f < f_0$ and zero for $f > f_0$, the
curves from Eq. 2 represent the
ratio of output to input energy.
Interpreted in this way, the
energy distribution can be re-
garded as defining an efficiency
of transmission which bears
a close relation to the fidelity of
signal reproduction.

Design of Practical Filters

For practical filters, this same
efficiency can be calculated from
either frequency or time in-
formation, by analytical or
graphical methods. For a simple
resistance-capacitance low-pass
filter whose cutoff frequency is
defined as $f_0 = 1/2\pi RC$, the ratio
of output to input energy is

$$1 - \frac{1}{2\pi f_0 \delta} \left[-e^{-2\pi f_0 \delta} \right] \quad (3)$$

Values computed from Eq. 2 and
Eq. 3 are plotted in Fig. 1. The two
curves are similar in shape and
intersect at $\eta = 0.57$, where f_0
is approximately equal to $1/\pi\delta$.

The close correspondence be-
tween the two curves is due in
part to the fortunate choice of
the -3 db or half-power point
in defining the cutoff frequency
of the R-C filter.

The relation between network

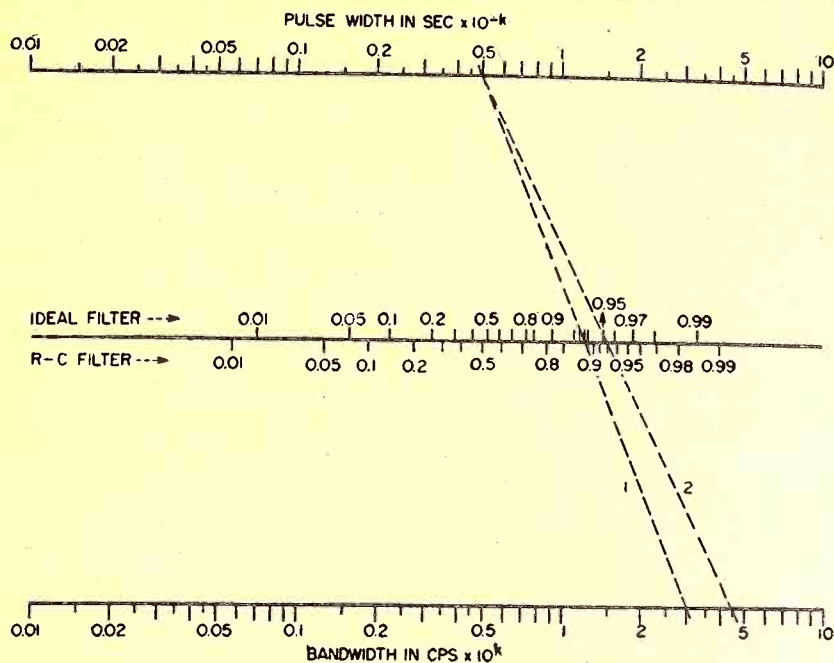


FIG. 3—Nomograph relating efficiency, bandwidth and pulse width. Multiplier k is zero when using seconds for pulse width and cycles per second for bandwidth; any other consistent units may be used, such as $k=3$ for milliseconds and kc or $k=6$ for microseconds and mc

efficiency and quality of pulse
reproduction is suggested in Fig.
2, which shows typical pulse re-
sponses for ideal and R-C filters.
From these pictures one might
conclude that 70–75 percent
efficiency is a minimum standard,
that 90–95 percent is preferable,
and that an even higher figure
might be better.

In selecting bandwidth, how-
ever, consideration should be
given to signal-to-noise ratio.
In the absence of detailed in-
formation, it is probably good
policy to use the minimum band-
width consistent with adequate
signal reproduction. In this con-
nection, Fig. 1 shows clearly a
law of diminishing returns in
increasing bandwidth. For a
given pulse width, an increase in
efficiency from 90 to 95 percent
requires doubling the band-
width; a further increase to 99
percent requires a further mul-
tiplication of bandwidth by five.

Bandwidth Nomograph

Calculations of network band-
width are simplified by the use of
the nomograph shown in Fig. 3.
A straight line drawn between
points on the upper and lower

scales determines the network
efficiency for the given pulse
width and bandwidth, for either
the ideal filter or R-C filter, de-
pending on which center scale is
used. A multiplier is included
on the pulse width and band-
width scales to emphasize that
any consistent units may be used,
such as seconds and cycles per
second, milliseconds and kilocy-
cles or microseconds and mega-
cycles.

Example of Use

As a sample problem, suppose
that a 0.5-microsecond pulse is
to be transmitted by an ideal
filter with an efficiency of 93
percent. Line 1 on the nomograph
gives the required bandwidth of
three megacycles. According to
line 2, somewhat greater band-
width (4.5 megacycles) is re-
quired with an R-C filter.

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MIXER HARMONIC CHART

Chart speeds identification or prediction of spurious frequencies resulting from beating of various harmonic terms in mixer output when one input frequency is variable in wide-band signals for tv, f-m and military communication

IN MANY APPLICATIONS involving the mixing of two frequencies to produce a third, a major difficulty often encountered is the generation of spurious frequencies by beating together of harmonics. When near coincidence with the required terms, these spurious frequencies cause audible modulation of the required frequency that cannot be removed by subsequent selective circuits.

When there are only two fixed frequencies, it is fairly simple to write down all the combination terms involved. If one of the input frequencies varies, however, a graphical method is to be preferred, as this enables the immediate identification or prediction of the various beats and facilitates the choice of frequency ratios free from modulation or spurious frequencies adjacent to the wanted terms.

It was in dealing with such a problem that the accompanying chart was devised. It is based on the fact that the expression for the value of any combination frequency is $F_s = mF_o \pm nF_z$, where m and n are the orders of the harmonics of the two frequency sources F_o and F_z respectively, F_z being the higher of the two frequencies.

To use this chart, trace upward from the ratio F_o/F_z of the two primary frequencies to the heavy difference line $F_z - F_o$ or the heavy sum line $F_z + F_o$, depending on which output component is being used. From this intersection, trace up and down to the nearest slant lines; from each one, trace left to read the F_s/F_z value for that spurious combination frequency. Alternatively, the spurious frequencies can be figured from the identifying notations on the two near-

By **THOMAS T. BROWN**

est lines. Where intersections of two slant lines are nearest to the desired intersection, a beat audio modulation equal to the frequency difference will be produced.

Some problems may require the use of an expanded region of the chart showing higher combination terms. This may readily be constructed to any scale without plotting the whole curve from the origin. Assuming that the boundary limits of the required region are F_{o1}/F_z for the lower frequency limit and F_{o2}/F_z for the upper limit, the corresponding limits on the abscissa are F_{s1}/F_z and F_{s2}/F_z . Now

$$F_s = mF_o \pm nF_z \quad (1)$$

$$F_o/F_z = [(F_s/F_z) \mp n]/m \quad (2)$$

Substituting the four known boundary limits in Eq. 2 gives four equations involving m and n . Substituting for these the harmonic orders of the combination frequencies which it is desired to plot, two points are obtained which are connected by a straight line. This procedure is repeated for the main sum or difference frequency ($m = n = 1$) and other desired pairs.

A preliminary scrutiny of the structure of the general chart will be found helpful in quickly showing what order of combination frequencies are likely to be encountered in the particular region concerned.

Example of Use

In the design of a repeater station for a vhf relay, it is common practice to receive the trans-

mission at a given frequency, retransmit at a slightly higher or lower frequency to reduce feedback difficulties. Rather than convert the input to the output frequency directly, it is convenient to convert down to a lower intermediate frequency which may then be amplified more easily and reconvert to the output frequency.

Assume an input frequency of 250 mc with a 3-mc bandwidth, and a required output frequency of 240 mc. A convenient intermediate-frequency value for F_i would be in the order of 50 mc. The problem is to choose local oscillator frequencies that will avoid radiating spurious frequencies and minimize intermodulation distortion.

Trying first 50 mc for F_i as a local oscillator value F_o , because 200 mc and F_o/F_z for this is 0.775 . Tracing upward, this is immediately seen to be a bad choice because the desired main difference frequency line $F_z - F_o$ intersects both the $4F_o - 3F_z$ and $5F_o - 6F_z$ lines at this point.

By inspection, the nearest value of F_o/F_z that it is in a space on the heavy $F_z - F_o$ line is 0.775 , which corresponds to an i-f value of about 55 mc. Tracing vertically up and down to the intersection of the ordinate with the $F_z - F_o$ line, we find that the nearest spurious frequencies occur at $F_s/F_z = 3.0$ and 0.12 . Their values are quickly figured as $F_s = 0.3 \times 250 = 83.5$ mc and $F_s = 0.12 \times 250 = 30$ mc. If the bandwidth of F_i is 3 mc, these 83.5-mc and 30-mc beats will be easily filtered out of a 55-mc i-f system by tuned circuits.

Now converting up again to F_o , be 55 mc and let F_i , be

desired 240-mc output frequency, so that $F_s = 240 - 55 = 185$ mc, the frequency required of the second local oscillator to get a sum-frequency output. Then F_o/F_s is 0.298. Tracing up from this value to

the sum line $F_s + F_o$, the two nearest spurious frequencies to this intersection are at $F_o/F_s = 1.4$ and 1.2 . For 1.4 , the output is $1.4 \times 185 = 259$ mc due to the combination $2F_s - 2F_o$. For 1.2 , we have both $4F_o$ and $3F_s -$

$6F_o$, giving $1.2 \times 185 = 222$ mc. Since the bandwidth is 3 mc, adequate selectivity should not be difficult to provide at 240 mc to discriminate against these 259-mc and 222-mc spurious components.

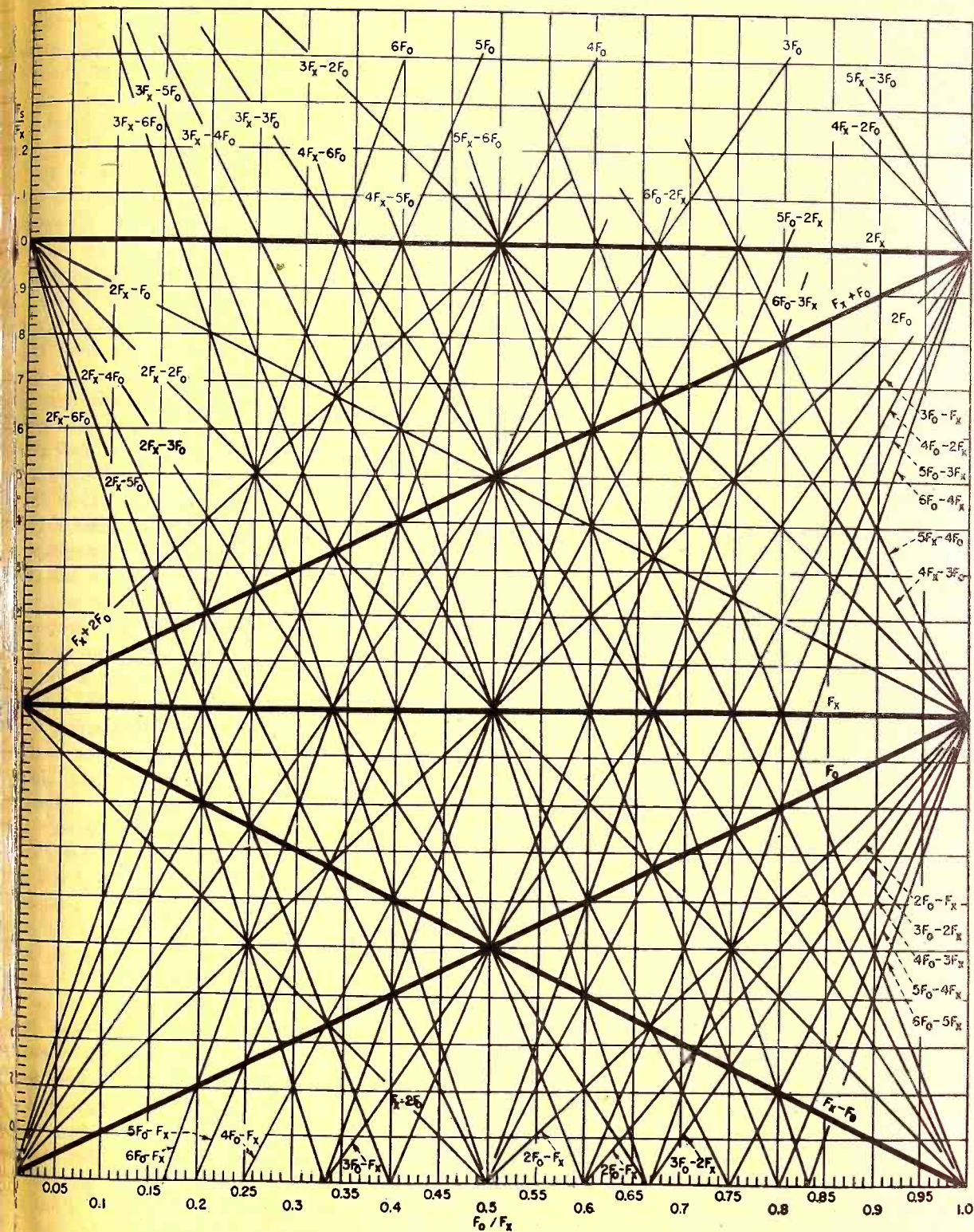


Chart with F_o and F_s as mixer input frequencies (with F_s the higher) and F_o as desired output frequency. Lines intersected when tracing straight up from value of F_o/F_s represent combination frequencies, values of which can be found either from labels on lines or from scale of ordinates. Only intersections near desired combination (sum or difference) need be considered. When F_s is fixed, ordinate scale can be marked to give frequency directly

VHF FIELD INTENSITIES

Nomograph shows fields in microvolts per meter for transmitter powers up to 500 watts, antennas up to 500 feet, over obstructions as high as 10,000 feet in the frequency range between 20 and 260 mc

By E. A. SLUSSER

IN PLANNING a new vhf point-to-point radio circuit, it is first necessary to make some estimate of the expected transmission between the two points in question in order to determine the feasibility of such a circuit.

Likewise, in planning a new vhf mobile system the expected coverage over flat land and into shadowed areas must be predetermined. These estimated transmission figures can be used to assist in the selection of equip-

ment and location of transmission sites. Such estimates are usually made by means of profile and transmission nomographs. Previous nomographs for estimating field intensities in the vhf frequency range have been made for small segments of the total band of frequencies, thus necessitating several nomographs to cover the entire band. This nomograph enables one to determine a given frequency in the band between 20 and 260 mc and estimate the field intensity for either transmission over flat land or transmission over a profile involving shadow losses. It assumes either horizontal or vertical polarization over land or water. It also assumes 5-watt transmitters and half-wave antennas elevated 40 feet above ground, but supplementary conversion data is given for other powers and antenna heights.

To use the nomograph it is necessary to draw an elevation profile of the intervening terrain between the two proposed transmission sites. An example is shown in Fig. 1. A triangle is constructed by drawing two lines from the station sites, X and Y, each tangent to the nearest obstruction that blocks the line-of-sight path. A baseline is also drawn to intersect the obstruction sites, and a vertical line is drawn through the apex of the triangle and intersecting the baseline.

The information taken from this figure includes: D_1 , which is always the shortest distance in miles from one of the station sites to the vertical line, which is the height in feet of the vertical line between the apex of the triangle and the intersection of the baseline and the total transmission distance D . This information, along with a given frequency F in the range, can be applied to the nomograph. The steps follow: (1) A point on graph

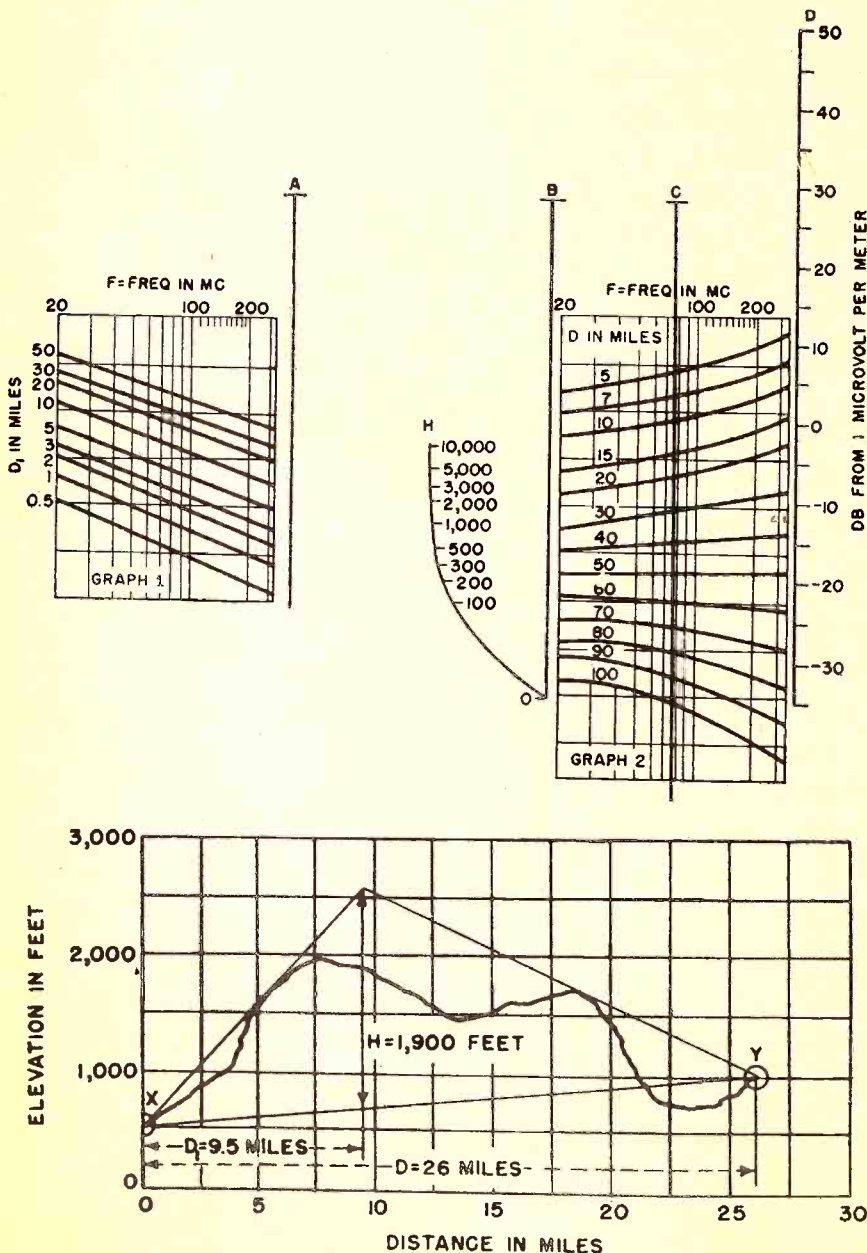


FIG. 1—Sample elevation profile used with nomograph

ated representing (F, D), this point is projected horizontally to a point on scale A. 2) H is determined and a line is constructed through H and the point on scale A. This line intersects B at some point. 3) A point representing the frequency and the total distance (D) is determined on graph and this point is projected horizontally to scale C. 4) A line is constructed passing through the points on scales C and B and intersecting scale D . 5) The estimated field intensity in db, referred to one microvolt per meter, is taken at the point where this line intersects scale D .

For estimating field intensity over smooth land, scale A is not used and H is taken as being the transmission estimates made by use of this nomograph based on standard conditions. The data that are obtained are in general agreement with experience for smooth or moun-

tainous terrain. The factors affecting vhf transmission are both natural (such as meteorological effects, type of soil and surrounding vegetation) and artificial (for example, antenna height, antenna gain, transmitter power and transmission-line loss). The latter items can be taken into consideration when making an estimate and a new equivalent field intensity (equivalent on the basis of a half-wave antenna) can be found.

A sample calculation can be made between locations X and Y by using the profile given in Fig. 1. Assume the following: at the transmitter end a 100-watt 150-mc transmitter using a three-element parasitic antenna having a gain of 6 db mounted on a 90-foot pole; on the receiving end another three-element 6-db-gain antenna mounted on a 30-foot pole; a combined transmission-line loss of 3 db at both ends. The answer is +14.5 db.

By comparing the estimated data with the receiver input level

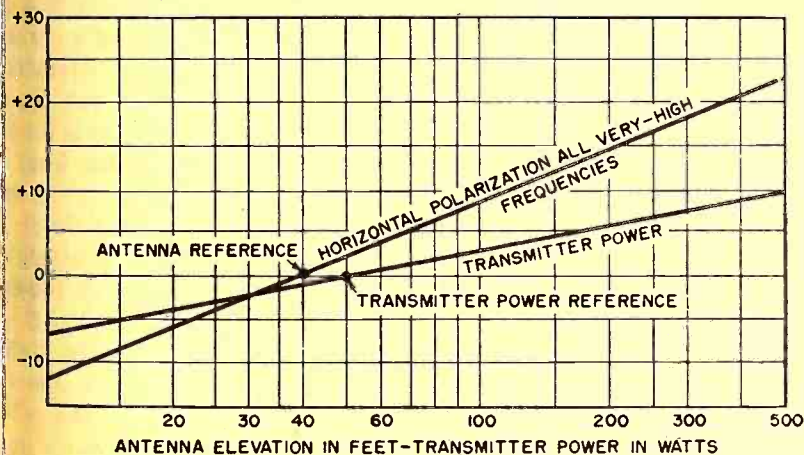


FIG. 2—Conversion graph for antenna elevation and transmitter power

Table I—Expected Circuit Performance With Average Receiver

| Frequency Range in Mc | Equivalent estimated field intensity in db referred to $1\mu\text{V}$ per meter | | |
|-----------------------|---|--------------|-----------------------|
| | Probably Unsatisfactory | Questionable | Probably Satisfactory |
| 20-40 | < -5db | -5 to +5db | > +5db |
| 40-70 | < 0 | 0 to +10 | > +10 |
| 70-100 | < +5 | +5 to +15 | > +15 |
| 100-120 | < +10 | +10 to +15 | > +15 |
| 120-160 | < +10 | +10 to +20 | > +20 |
| 160-220 | < +15 | +15 to +20 | > +20 |
| 220-260 | < +15 | +15 to +25 | > +25 |

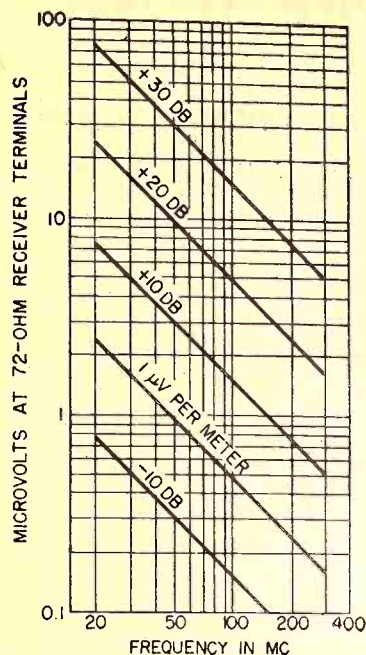


FIG. 3—Conversion graph for receiver input voltage

requirements one can determine whether or not the circuit will be probably satisfactory. For the average receiver the performance can be taken from Table I.

In making the above comparison one must take into consideration the amount of man-made noise present in the receiver area. The above figures are based on average noise conditions but in extremely noisy areas it may be necessary to increase the figures by about 20 db.

In order to compare the above data with receiver sensitivity, it may be desirable to convert field intensity, which is given in terms of db above one microvolt per meter, to microvolts appearing at the receiver terminals. This can be done by means of Fig. 3. This figure assumes a half-wave antenna connected to the receiver terminals (72 ohms input) by means of a zero-loss transmission line. The voltage (for half-wave antennas) appearing on the receiver terminals is $0.32LE$ where L is the length of the antenna in meters and E the field intensity in microvolts per meter.

For the previous example, +14.5 db equivalent field intensity at 150 mc corresponds to approximately 1.7 microvolts at the receiver terminals.

COMBINING SOUND LEVELS

Simple nomogram dispenses with the need for log tables, decibel tables or a slide rule when determining the total acoustical power resulting from the combination of two or more sounds

By W. B. CONOVER

TWO OR MORE SOUNDS combine to give a total sound whose acoustical power is the sum of the power involved in the individual components. Since sound levels are expressed in decibels, the sound level of each component must be converted to its corresponding power ratio, added to the power ratio of the other components, and the total power ratio reconverted to decibels to determine the total sound level.

A straightedge intersecting the outer scales of the nomogram at positions corresponding to the individual sound levels db_1 and db_2 intersects the center scale at db_T , which is the total sound

level. For example, individual sound levels of 8 and 10 decibels will be found to give a total of 12.1 decibels.

Any two equal sound levels combine to produce a sound which is 3 decibels higher than either of them separately. Thus 7.5 db and 7.5 db combine to yield 10.5 db; 0 db and 0 db give 3 db.

It is necessary to choose a con-

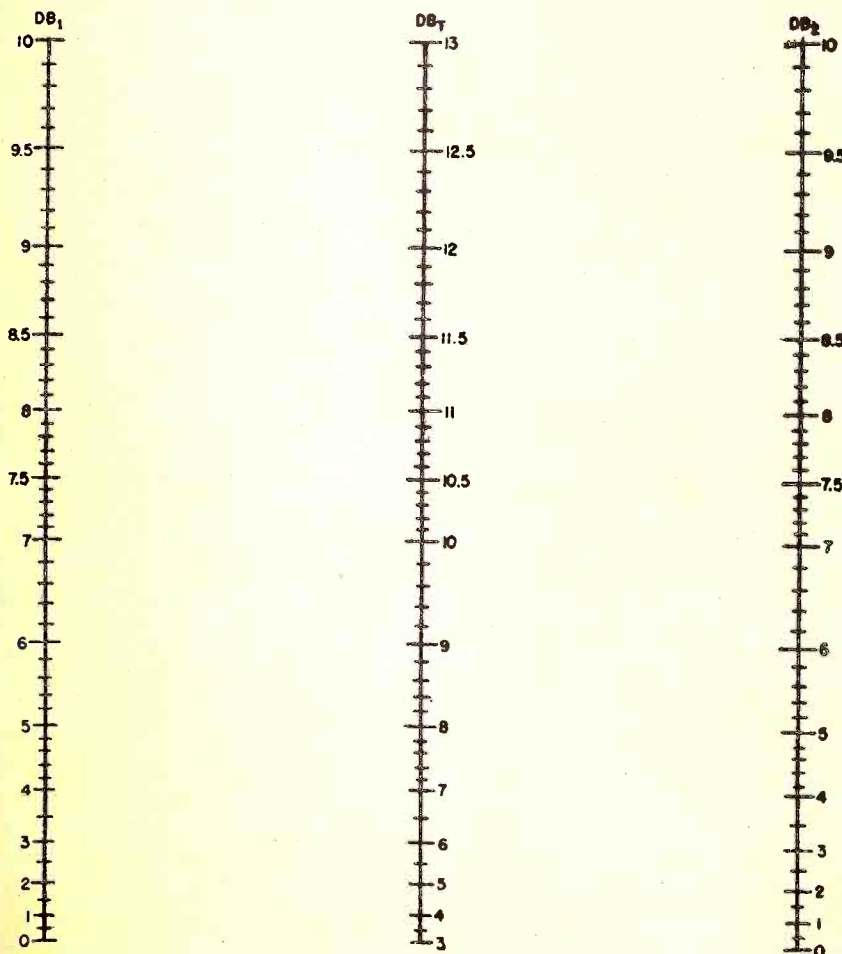
venient reference level such that the individual components be within 10 db of it. Thus, for a total of 62 db and 67 db, a reference level of 60 db is chosen. Since the components are 2 and 7 db above this reference, the resultant 8.2 db given by the nomogram is added to the reference, giving a total of 68.2 db.

When a difference of more than 10 db exists between two sound levels, the contribution of the smaller may be neglected.

Other Uses

One component of noise can be found when the other component and the total noise are known. This is useful in correcting sound-level meter readings for ambient noise. For example, if a sound-level meter shows 64.5 db in the neighborhood of a certain machine when it is operating and an ambient noise reading of 60 db when the machine is turned off. What is the noise level of the machine alone due to the machine alone? Choosing 60 db as the reference level, a straightedge is aligned with 0 db (60-60) on the db_1 scale, and 4.5 (64.5-60) on the db_T scale, giving a reading of 2.6 db on the db_2 scale. Adding this to the reference level of 60 db results in a noise level of 62.6 db for the machine alone.

When more than two sound levels are to be combined, the total of two components is determined and combined with a third component, the new total combined with a fourth component, and so on. This same procedure may be employed to determine in decibels, the rms value of complex voltage or current wave when its harmonics are expressed in decibels.



MINIMUM-LOSS MATCHING PADS

Simple nomograph gives the two resistance values needed in an L-type network for matching unequal impedances with minimum power loss, and also gives directly the amount of loss in db. Multiplying factors are easily used to extend ranges

A TWO-RESISTANCE network for matching two unequal impedances provides proper matching with a minimum of power loss. The accompanying nomograph solves for the resistance values needed.

Example 1. Match a 72-ohm line to a 52-ohm line with a minimum of power loss. Determine the loss in db.

By **JOSEPH C. BREGAR**

Solution. Adjust a straight-edge to connect 72 on the R_a scale and 52 on the R_b scale (R_a must be greater than R_b , and therefore $R_a = 72$ and $R_b = 52$). The intercept on the db loss scale

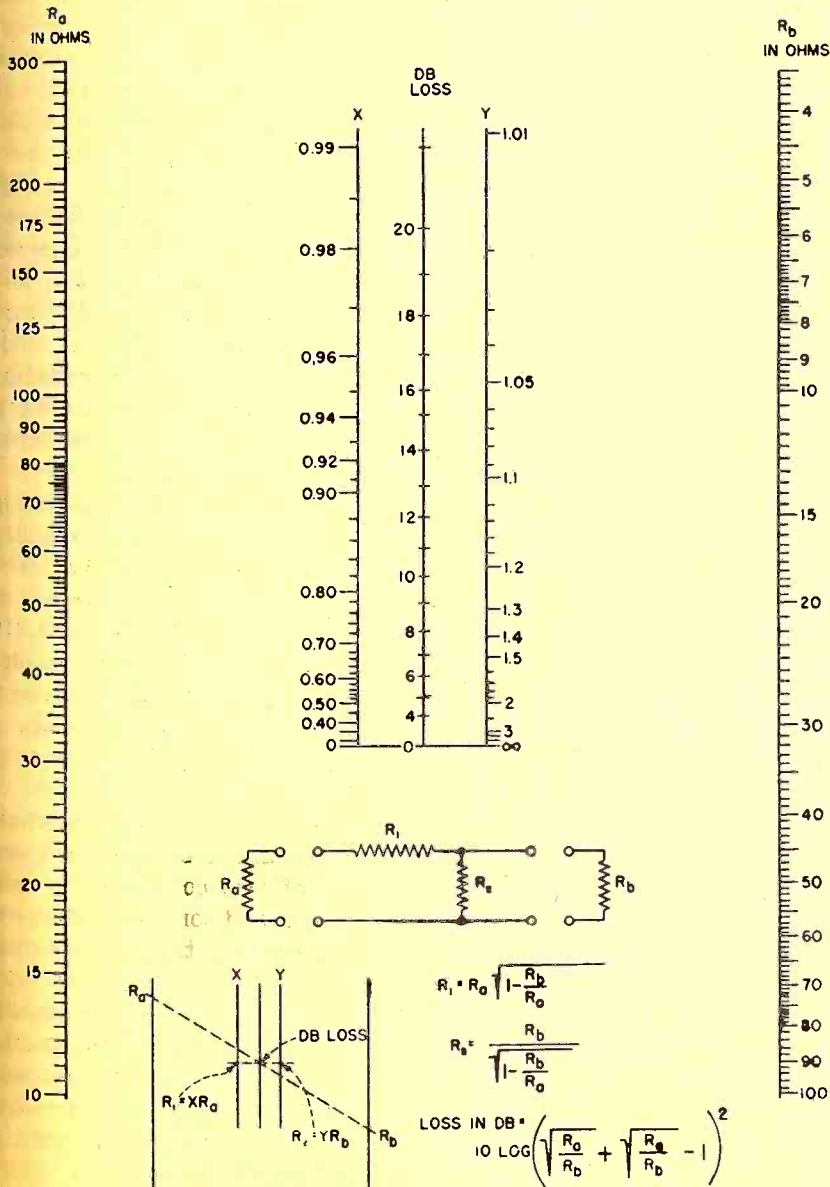
shows the matching-pad loss as 5.1 db. Next, adjust the straight-edge at right angles to the loss line and through the 5.1-db point, and read the X and Y values as $X = 0.53$ and $Y = 1.9$. The desired resistor values are then $R_1 = XR_a = 0.53 \times 72 = 38$ ohms, and $R_2 = YR_b = 1.9 \times 52 = 99$ ohms.

The scale ranges are chosen for common impedance values. The nomograph may be used for any values by the application of the same multiplier to the R_a and R_b scales. No multipliers are required for the loss scale or the X and Y values. The X and Y values are applied to the original problem values of R_a and R_b in determining R_1 and R_2 .

Example 2. Match a 3,000-ohm source to a 600-ohm load with a minimum of loss. Determine the loss.

Solution. A convenient scale factor is 1/10. Applied to the problem values, R_a becomes 300 and R_b becomes 60. Connect these points with a straightedge and read the pad loss as 12.5 db. Next, read the X and Y values as 0.89 and 1.12 respectively. Applying these values to the original problem impedances of 3,000 and 600 ohms gives $R_1 = 0.89 \times 3,000 = 2,700$ ohms and $R_2 = 1.12 \times 600 = 670$ ohms.

The matching of impedances of more than 30-to-1 ratio involves high power losses, and other types of coupling networks are employed. For impedance matching when power loss is unimportant and the ratio of impedances is more than 30-to-1, the X and Y values approach 1; then $R_a = R_1$ and $R_b = R_2$ for proper matching.



HIGH-PASS, LOW-PASS and BAND-PASS

Rearrangement of equations and accompanying charts permit design of multisection filters with only two or at most three settings of a reactance slide rule. Filter component values are specified as functions of midband frequency and terminating impedance

By C. J. MERCHANT

MUCH of the drudgery in designing high-pass and low-pass filters for audio frequencies may be eliminated by the simple expedient described here.

The formulas for L and C in a single constant- k high-pass T-section are $L = R/4\pi f_0$ and $C = 1/\pi f_0 R$ where f_0 is the cut-

off frequency and R is the terminating resistance. A simple rearrangement of these expressions gives $2\pi(f_0/R)L = \frac{1}{2}$ and $1/2\pi(f_0 R)C = 1$, or, in other words, L is the inductance whose reactance at the frequency f_0/R is equal to $\frac{1}{2}$ ohm, and in a similar manner C is the capacitance whose reactance at the frequency

$f_0 R$ is found to be equal to 1 ohm.

The method can be extended to other types of sections, and a multisection filter can be designed with only two settings of a reactance slide rule, once at f_0/R for the inductances and once at $f_0 R$ for the capacitances. In multisection filters the sharpest cutoff consistent with high attenuation outside the pass band is realized by using terminating m -derived half-sections with $m = 0.6$, a full m -derived section with $m = 0.8$, and two or more constant- k sections.

Figure 1 gives the values of the reactances in ohms in the sections, the coils being evaluated at f_0/R and the capacitors at $f_0 R$.

For example, to design a three-section low-pass filter of T-sections with $R = 500$ ohms and $f_0 = 1,000$ cps, find on the slide rule that $f_0/R = 1,000/500$ or 2 cps. Also on the slide rule find the inductance whose reactance at 2 cps is the value given in Fig. 1. Then determine C to be $1,000 \times 500$ or 500 kc. Find the capacitance whose reactance at 500 kc is the value given in Fig. 1. The complete filter and its attenuation characteristic are given in sections A and B of Fig. 2.

Low-pass or high-pass filters can be completely specified in terms of two quantities, the cutoff frequency and the terminating impedance. Band-pass filters introduce an additional

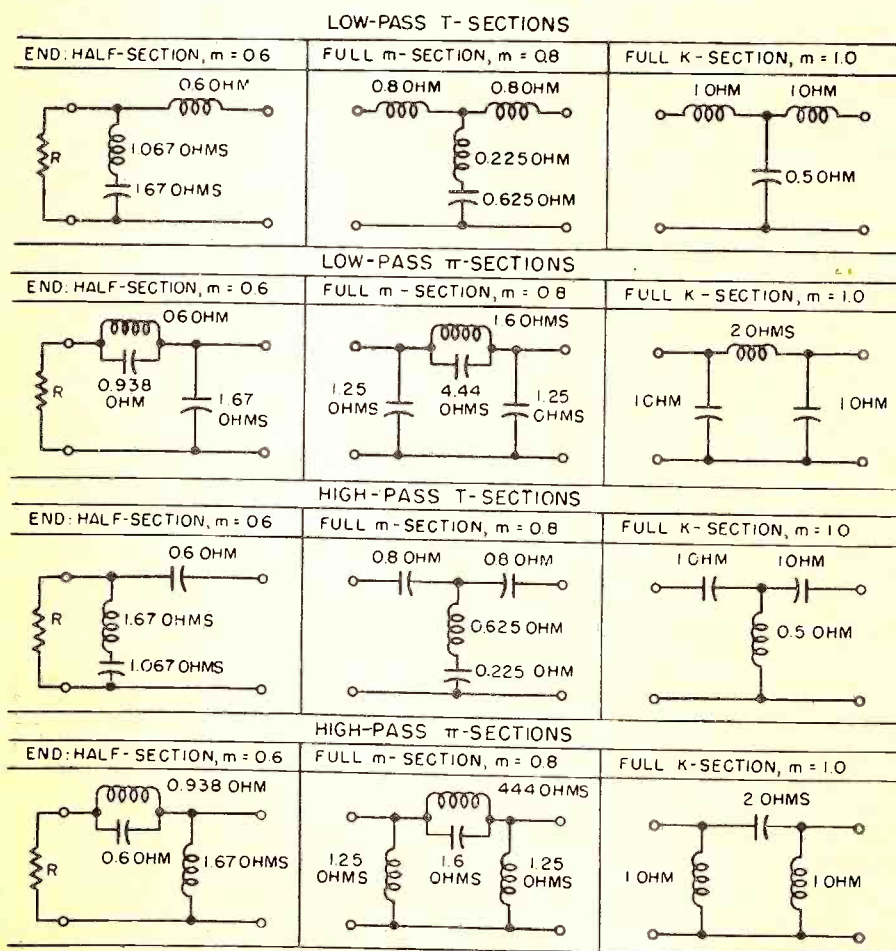


FIG. 1—Generalized impedance chart from which impedances are calculated by reactance slide rule if terminating impedance and cutoff frequency are given

FILTER DESIGN

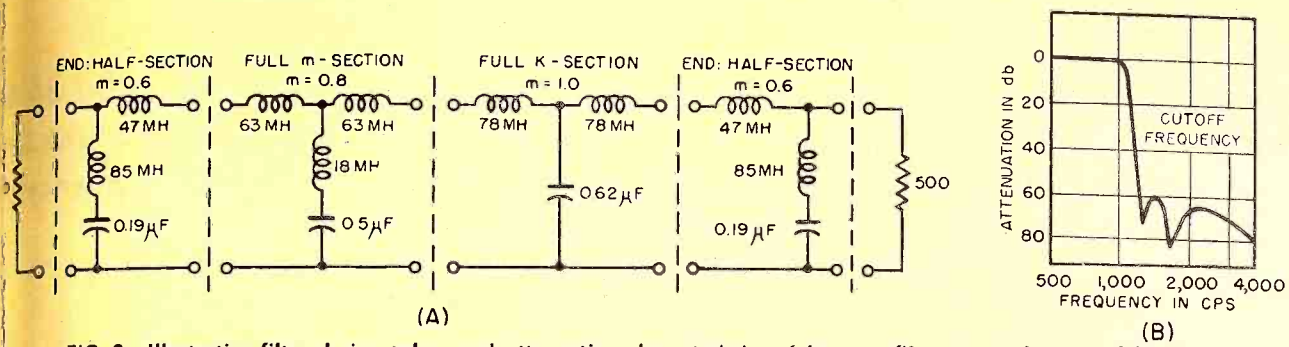


FIG. 2—Illustrative filter design values and attenuation characteristics of low-pass filter designed by use of Fig. 1

quantity, the bandwidth, and therefore require three quantities to specify their performance, but their calculation can be simplified by means of the technique used for low and high-pass filters.

The charts in Fig. 3 give the reactance constants, in ohms, of T and π band-pass sections in terms of the terminating impedance R , the upper cutoff frequency f_2 , and the midband frequency f_m , which is the geometric mean of the upper and lower cutoff frequencies and is given by $f_m = \sqrt{f_2 f_1}$.

For example, to design a band-pass filter of π -sections with cutoff frequencies at 770 cps and 1,300 cps and terminated in 1,000 ohms, find $f_m = \sqrt{770 \times 1,300} = 1,000$ cps first. Find $f_2/f_m = 1,300/1,000 = 1.30$. Then find $f_1/R = 1,000/1,000 = 1$ cps, and find the inductances whose reactances in ohms at 1 cps are the values given on the chart opposite $f_2/f_m = 1.30$. Then find $f_1/R = 1,000 \times 1,000 = 1$ mc and find the capacitances in like manner.

When f_2/f_m is greater than 1.1, the filter can be more economically designed by cascading low and high-pass sections whose pass bands overlap.

In specifying values for the equal filter design, elements appearing directly in parallel or in series after cascading should be combined.

BAND-PASS: T-SECTIONS

| (f_2/f_m) | END: HALF-SECTION, $m = 0.6$ | | | | | | FULL m -SECTION, $m = 0.8$ | | | | | | FULL K -SECTION, $m = 1.0$ | | | |
|-------------|------------------------------|-------|-------|----------------------|-------|-------|------------------------------|-------|-------|----------------------|-------|-------|------------------------------|-------|----------------------|-------|
| | X_L at $f = f_m/R$ | | | X_C at $f = f_m/R$ | | | X_L at $f = f_m/R$ | | | X_C at $f = f_m/R$ | | | X_L at $f = f_m/R$ | | X_C at $f = f_m/R$ | |
| | L_1 | L_2 | L_3 | C_1 | C_2 | C_3 | L_1 | L_2 | L_3 | C_1 | C_2 | C_3 | L_1 | L_2 | C_1 | C_2 |
| 1.05 | 6.12 | 20.4 | 22.1 | 6.12 | 22.1 | 20.4 | 8.15 | 4.23 | 4.98 | 8.15 | 4.98 | 4.23 | 10.2 | 0.049 | 10.2 | 0.049 |
| 1.10 | 3.16 | 9.87 | 12.7 | 3.16 | 12.7 | 9.87 | 4.21 | 2.04 | 2.78 | 4.21 | 2.78 | 2.04 | 5.26 | 0.095 | 5.26 | 0.095 |
| 1.15 | 2.14 | 6.49 | 9.20 | 2.14 | 9.20 | 6.49 | 2.86 | 1.31 | 2.04 | 2.86 | 2.04 | 1.31 | 3.57 | 0.140 | 3.57 | 0.140 |
| 1.20 | 1.63 | 4.72 | 7.40 | 1.63 | 7.40 | 4.72 | 2.17 | 0.935 | 1.73 | 2.17 | 1.73 | 0.935 | 2.72 | 0.183 | 2.72 | 0.183 |
| 1.25 | 1.33 | 3.70 | 6.48 | 1.33 | 6.48 | 3.70 | 1.78 | 0.736 | 1.53 | 1.78 | 1.53 | 0.736 | 2.22 | 0.225 | 2.22 | 0.225 |
| 1.30 | 1.11 | 3.03 | 5.80 | 1.11 | 5.80 | 3.03 | 1.48 | 0.588 | 1.41 | 1.48 | 1.41 | 0.588 | 1.88 | 0.265 | 1.88 | 0.265 |
| 1.35 | 0.984 | 2.56 | 5.42 | 0.984 | 5.42 | 2.56 | 1.31 | 0.506 | 1.34 | 1.31 | 1.34 | 0.506 | 1.64 | 0.304 | 1.64 | 0.304 |
| 1.40 | 0.876 | 2.22 | 5.12 | 0.876 | 5.12 | 2.22 | 1.17 | 0.438 | 1.30 | 1.17 | 1.30 | 0.438 | 1.46 | 0.342 | 1.46 | 0.342 |
| 1.45 | 0.792 | 1.96 | 4.95 | 0.792 | 4.95 | 1.96 | 1.06 | 0.385 | 1.27 | 1.06 | 1.27 | 0.385 | 1.32 | 0.380 | 1.32 | 0.380 |
| 1.50 | 0.720 | 1.75 | 4.71 | 0.720 | 4.71 | 1.75 | 0.96 | 0.340 | 1.25 | 0.96 | 1.25 | 0.340 | 1.20 | 0.417 | 1.20 | 0.417 |

BAND-PASS: π -SECTIONS

| (f_2/f_m) | END: HALF-SECTION, $m = 0.6$ | | | | | | FULL m -SECTION, $m = 0.8$ | | | | | | FULL K -SECTION, $m = 1.0$ | | | |
|-------------|------------------------------|-------|-------|----------------------|-------|-------|------------------------------|-------|-------|----------------------|-------|-------|------------------------------|-------|----------------------|-------|
| | X_L at $f = f_m/R$ | | | X_C at $f = f_m/R$ | | | X_L at $f = f_m/R$ | | | X_C at $f = f_m/R$ | | | X_L at $f = f_m/R$ | | X_C at $f = f_m/R$ | |
| | L_1 | L_2 | L_3 | C_1 | C_2 | C_3 | L_1 | L_2 | L_3 | C_1 | C_2 | C_3 | L_1 | L_2 | C_1 | C_2 |
| 1.05 | 0.045 | 0.049 | 0.163 | 0.049 | 0.045 | 0.163 | 0.236 | 0.201 | 0.123 | 0.201 | 0.236 | 0.123 | 20.4 | 0.098 | 20.4 | 0.098 |
| 1.10 | 0.079 | 0.101 | 0.316 | 0.101 | 0.079 | 0.316 | 0.490 | 0.360 | 0.238 | 0.360 | 0.490 | 0.238 | 10.5 | 0.190 | 10.5 | 0.190 |
| 1.15 | 0.109 | 0.154 | 0.467 | 0.154 | 0.109 | 0.467 | 0.763 | 0.490 | 0.350 | 0.490 | 0.763 | 0.350 | 7.14 | 0.280 | 7.14 | 0.280 |
| 1.20 | 0.135 | 0.212 | 0.613 | 0.212 | 0.135 | 0.613 | 1.07 | 0.578 | 0.461 | 0.578 | 1.07 | 0.461 | 5.44 | 0.367 | 5.44 | 0.367 |
| 1.25 | 0.154 | 0.270 | 0.750 | 0.270 | 0.154 | 0.750 | 1.36 | 0.653 | 0.562 | 0.653 | 1.36 | 0.562 | 4.44 | 0.450 | 4.44 | 0.450 |
| 1.30 | 0.172 | 0.330 | 0.900 | 0.330 | 0.172 | 0.900 | 1.70 | 0.709 | 0.675 | 0.709 | 1.70 | 0.675 | 3.76 | 0.531 | 3.76 | 0.531 |
| 1.35 | 0.184 | 0.391 | 1.02 | 0.391 | 0.184 | 1.02 | 1.98 | 0.746 | 0.763 | 0.746 | 1.98 | 0.763 | 3.28 | 0.609 | 3.28 | 0.609 |
| 1.40 | 0.195 | 0.450 | 1.14 | 0.450 | 0.195 | 1.14 | 2.28 | 0.769 | 0.855 | 0.769 | 2.28 | 0.855 | 2.92 | 0.685 | 2.92 | 0.685 |
| 1.45 | 0.202 | 0.510 | 1.26 | 0.510 | 0.202 | 1.26 | 2.60 | 0.787 | 0.943 | 0.787 | 2.60 | 0.943 | 2.64 | 0.760 | 2.64 | 0.760 |
| 1.50 | 0.212 | 0.572 | 1.39 | 0.572 | 0.212 | 1.39 | 2.94 | 0.800 | 1.04 | 0.800 | 2.94 | 1.04 | 2.40 | 0.834 | 2.40 | 0.834 |

FIG. 3—Generalized impedance tables from which filter impedances are quickly calculated if the upper cutoff frequency, midband frequency and terminating impedance of a band-pass filter are all known. These dimensionless impedance tables are obtained by specifying filter component values as functions of midband frequency and terminating impedance for various values of the ratio of upper to midband frequency

COAXIAL-STUB FILTER

Undesired signals in a coaxial transmission line can be attenuated up to 30 db by connecting two stubs to the line, one for rejection and the other to correct the line impedance. Graphs give approximate stub lengths for any interfering frequency range from 20 to 200 mc

By JAMES A. CRAIG

COAXIAL LINE stubs often can be effectively used in transmitter or receiver coaxial transmission lines to reduce or trap out specific spurious radiations or interfering signals. Stubs are well worth trying, since they are relatively inexpensive and can be depended upon to furnish up to 30-db additional attenuation to an undesired signal. Two stubs are used, one for rejection and one for correction, as shown in Fig. 1.

Receiver stubs are most easily fabricated from RG-58/U solid dielectric cable. Where stubs are to be used to suppress transmitter spurious radiations, a solid-dielectric cable should be used having the same power-handling capacity as is used between the transmitter and its antenna. The approximate length of the rejector stub for the undesired frequency can be determined from Fig. 2. A piece of

cable several inches longer than that called for should be connected into the transmission line as in Fig. 1, as close as practical to the transmitter or receiver. Use a pick or other sharp-pointed instrument to short-circuit the outer shield to the inner conductor at various points, starting from the outer end of the stub and working inward. Note at which point the short-circuit produces the greatest attenuation of the undesired signal and permanently short-circuit the cable there. Cut off the excess cable. This short-circuit may be best accomplished by collapsing the outer shield around the center conductor and soldering all around.

As Fig. 3 shows, the rejection

stub alone produces a certain amount of attenuation to the undesired signal. This is because it has been tuned to be a shorted half-wave section of line at the undesired frequency. In such a case, it presents close to zero impedance to this frequency at its point of connection to the main transmission line. However, at the desired frequency the rejection stub will not be a shorted half-wave section of line and will therefore present either a capacitive or inductive reactance to the line and thereby cause some degree of attenuation at the desired frequency. This effect can be overcome by adding a second stub called a correction stub, as shown in Fig. 1.

For various desired versus undesired frequency conditions, the length of the correction stub may vary from almost zero to one-half wavelength. The length

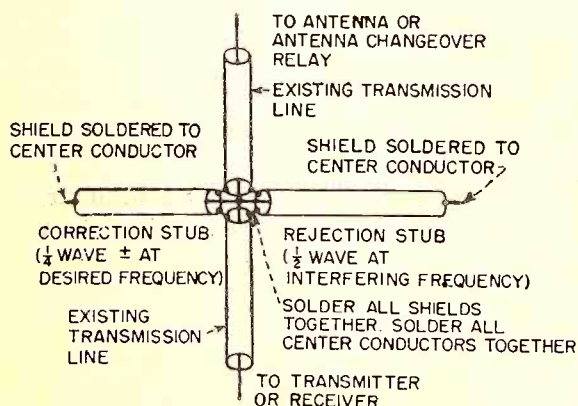


FIG. 1—Method of connecting stubs is same for both transmitting and receiving lines. Put stubs as close as possible to transmitter or receiver

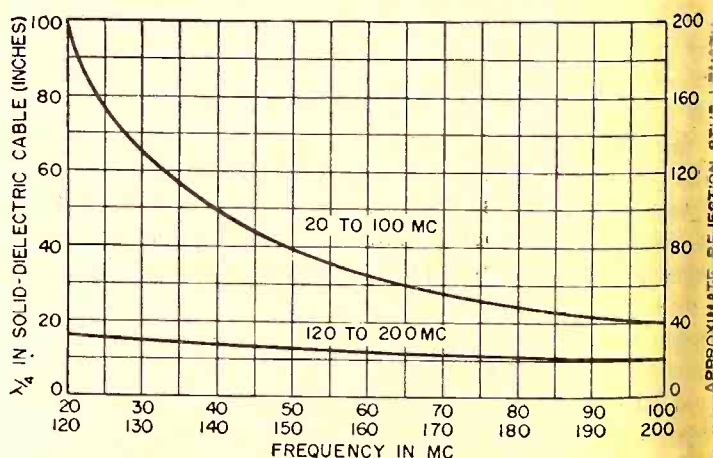
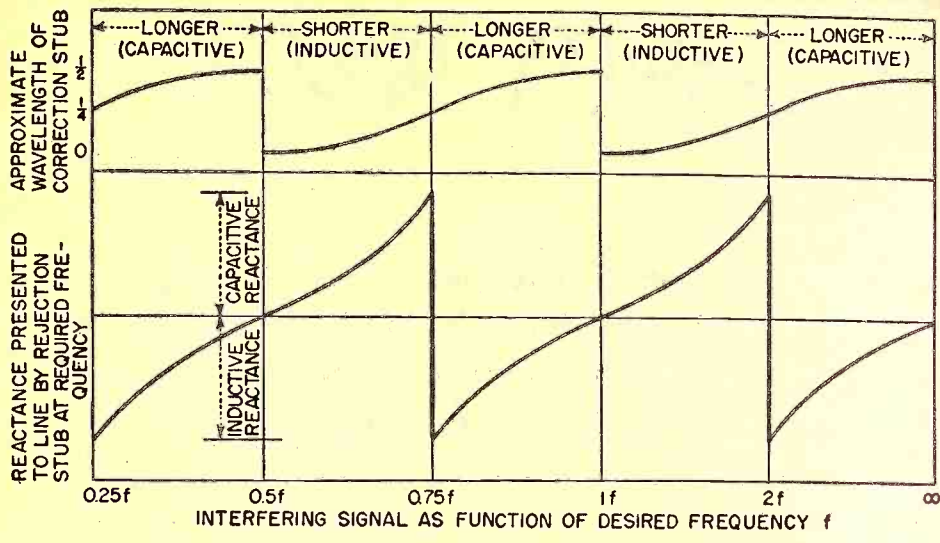
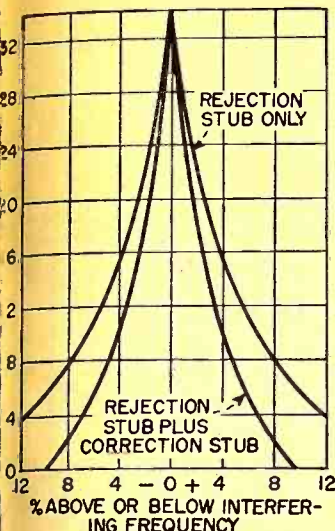


FIG. 2—Correction and rejection stub lengths. Use left-hand scale for connection with Fig. 4 to determine correction stub length, since it is longer or shorter than a quarter-wavelength at some frequencies



3—Attenuation characteristics of stubs

FIG. 4—Curves showing line characteristics with stubs in place, as function of ratio of interfering signal to desired signal

one-quarter wave in solid dielectric cable is also plotted in Fig. 3 to show that the correction stub will be some value between zero and a definite upper limit. In this case, the desired frequency should be used in determining the length of the correction stub. This stub is tuned and is permanently short-circuited as in the case of the rejection stub, except that the tuning is done to produce the least attenuation of the desired signal. If the correction stub were to be made exactly one-quarter wave long at the desired frequency, it would present infinite impedance (neither capacitive or inductive) to the desired signal. While being made shorter than a quarter wave it presents progressively less inductive reactance. While being made somewhat longer than a quarter wave it presents progressively less capacitive reactance to the line. The amount of reactance in either case depends upon how much longer or shorter than a quarter wave the correction stub is made. This length is automatically arrived at in the tuning procedure given above. Figure 4 shows whether the correction stub will be longer or shorter than the quarter-wave length shown in Fig. 2. To use Fig. 4, determine what relation-

ship the interfering frequency bears to the desired frequency. As an example, if the desired frequency f is 40 mc and the interfering signal is 25 mc, the interfering frequency would be between $0.5f$ and $0.75f$. The lower curve shows that in this range the reactance presented to the line by the rejection stub is capacitive, and the upper curve shows that the correction stub should present inductive reactance and hence be shorter than a quarter wave, or shorter than the value called for on Fig. 2. The correction stub is thus utilized to balance out the reactance presented to the line by the rejection stub at the desired frequency.

Correction Stub Details

It is not necessary or desirable to show how many inches shorter or longer than a quarter wave the correction stub should be in chart form, since the precise length will be automatically arrived at as the stub is short-circuited in the tuning process. However, the upper curves in Fig. 4 do give the approximate length of the correction stub in terms of wavelength. In the example given above, these curves show that the corrector stub will be less than $\frac{1}{4}$ wave long. In this case, it is advisable to start with

a quarter-wave length of cable and short it at various points in the vicinity of an eighth wave to find the exact point.

Had Fig. 4 indicated the need for a capacitive correction stub (greater than a quarter wave and less than a half wave), it would be advisable to start with a half-wave length of cable and probe through the predicted point. Figure 4 is to be used chiefly as an aid in predicting the length of the correction stub and to help in visualizing the line conditions with the stubs in place.

A word of caution is advisable in a few specific cases. If the interfering frequency is approximately $\frac{1}{2}$, $\frac{1}{4}$ or $\frac{3}{4}$ of the desired frequency, stubs cannot be used. In these cases, the rejection stub will prove to be a full wavelength or multiple of a full wavelength at the desired frequency and will therefore present high attenuation to the desired frequency as well as to the interfering frequency. On the other hand, if the interfering frequency is exactly twice the desired frequency a correction stub will not be necessary since the one-half wave rejection stub will be an exact quarter wave at the desired frequency and will present infinite impedance to the desired frequency.

SQUARE ROOT of a COMPLEX NUMBER

Tedious and time-consuming calculations required in finding the square root of a complex number in transmission line and filter calculations can be greatly simplified through the use of this graph

By ROBERT G. NISLE

IN designing certain types of electrical networks the need frequently arises for evaluating the square root of a complex number such as an impedance. If the impedance is expressed in polar coordinates any root can be quickly and easily found, but if the expression is originally given in rectangular coordinates, the required operations are tedious and time consuming. The impedance must first be converted from rectangular to polar form, the square root is then determined, and finally the result is reconverted into rectangular coordinates, thereby requiring three separate and distinct operations.

A method by which the square root of any complex number, expressed in rectangular coordinates, can be easily and quickly determined, also in rectangular coordinates, is given here. The errors to be expected are simply those which result from reading any graph and are negligible for most engineering purposes.

To Extend the Range

If it is necessary to consider ranges outside that covered by the graph, this can be done by multiplying the original complex number by some suitable scale factor (such as 0.01 or 100) so that the problem may be fitted into the range for which the

chart is drawn. The final result will then have to be multiplied by the reciprocal of this scale factor (for example, 100 or 0.01, respectively).

If the original complex number is

$$Z = a + jb$$

the problem before us is to determine

$$Z^{\frac{1}{2}} = x + jy$$

The double set of coordinates relate the quantities x , y , b , and $K = a/b$ so that when any two are known, their intersection determines a position or point on the chart from which the remaining two quantities may be determined. To use the chart, first determine $K = a/b$. Then, knowing K and b , find the intersection of these two coordinates on the vertical and horizontal axes. The point of intersection thus found will also be the point of intersection for the desired values of x and y , read off from the slanting scale.

It should be noted that $Z^{\frac{1}{2}}$ has two roots, a positive root and a negative root. Geometrically, these two possibilities are indicated in graphical form by means of vectors which are directed in opposite directions, or are 180 deg apart. The physical requirements of the problem must be considered when deciding which of the two roots is to be used.

Example 1: Assume that we

have an impedance

$Z = a + jb = 15 + j20$
and that it is required to determine

$$Z^{\frac{1}{2}} = x + jy$$

First determine $K = a/b = 0.75$. Locate the intersection of the coordinates, $K = 0.75$ and $b = 20$. At this point read $x = 4.46$ and $y = 2.25$. The desired result is then

$Z^{\frac{1}{2}} = x + jy = 4.46 + j2.25$
or its negative value,

$$Z^{\frac{1}{2}} = -x - jy = -4.46 - j2.25$$

Example 2: If the complex number is

$$Z = -15 + j20$$

the result is

$$Z^{\frac{1}{2}} = x + jy = 2.25 + j4.46$$

or, alternatively

$$Z^{\frac{1}{2}} = -x - jy = -2.25 - j4.46$$

Example 3: If the impedance is

$$Z = -15 - j20$$

the final result is

$$Z^{\frac{1}{2}} = -2.25 + j4.46$$

or

$$Z^{\frac{1}{2}} = 2.25 - j4.46$$

Example 4: If the impedance is

$$Z = 15 - j20$$

the final result is

$$Z^{\frac{1}{2}} = -4.46 + j2.25$$

or

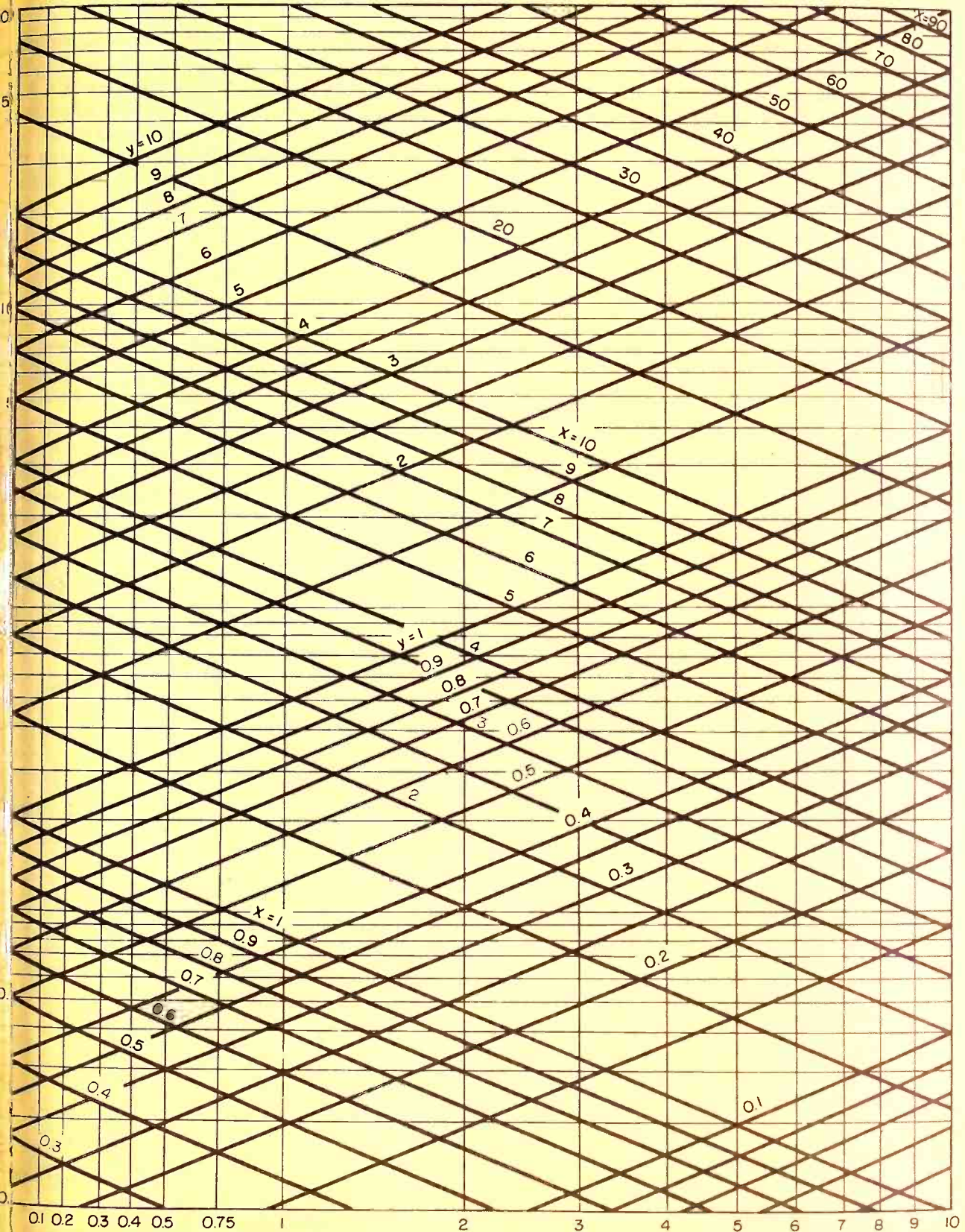
$$Z^{\frac{1}{2}} = 4.46 - j2.25$$

Example 5: If the impedance is

$$Z = 150 + j200$$

we find that $K = 0.75$, $b = 200$. We find that $x = 14.2$ and $y = 7.1$. The result is

$$Z^{\frac{1}{2}} = 14.2 + j7.1$$



UNIVERSAL EQUALIZER CHART

Modification of familiar Smith chart consolidates on one time-saving plot all positive-value solutions to the two general equations for series, shunt and bridged-T equalizers

THE single chart in Fig. 1 replaces as many as eleven conventional equalizer charts, yet gives all solutions containing positive resistances or conductances for the commonly used equalizer structures of Fig. 2. The chart is derived by applying to the two general forms of equalizer equations (Eq. 10 and

By **D. A. ALSBERG**

11 in Fig. 2) the bilinear transform

$$u + jv = (1 + \zeta)/(1 - \zeta) \quad (12)$$

where ζ is a complex number. This transforms the conventional rectangular grid of u and v

to a set of orthogonal circles, all of which pass through the point $\zeta = +1$, and the circle $u = 1$ is identical with the unit circle in the ζ plane. This grid of orthogonal circles representing the u and v coordinates is identical to the grid of the familiar Smith chart.

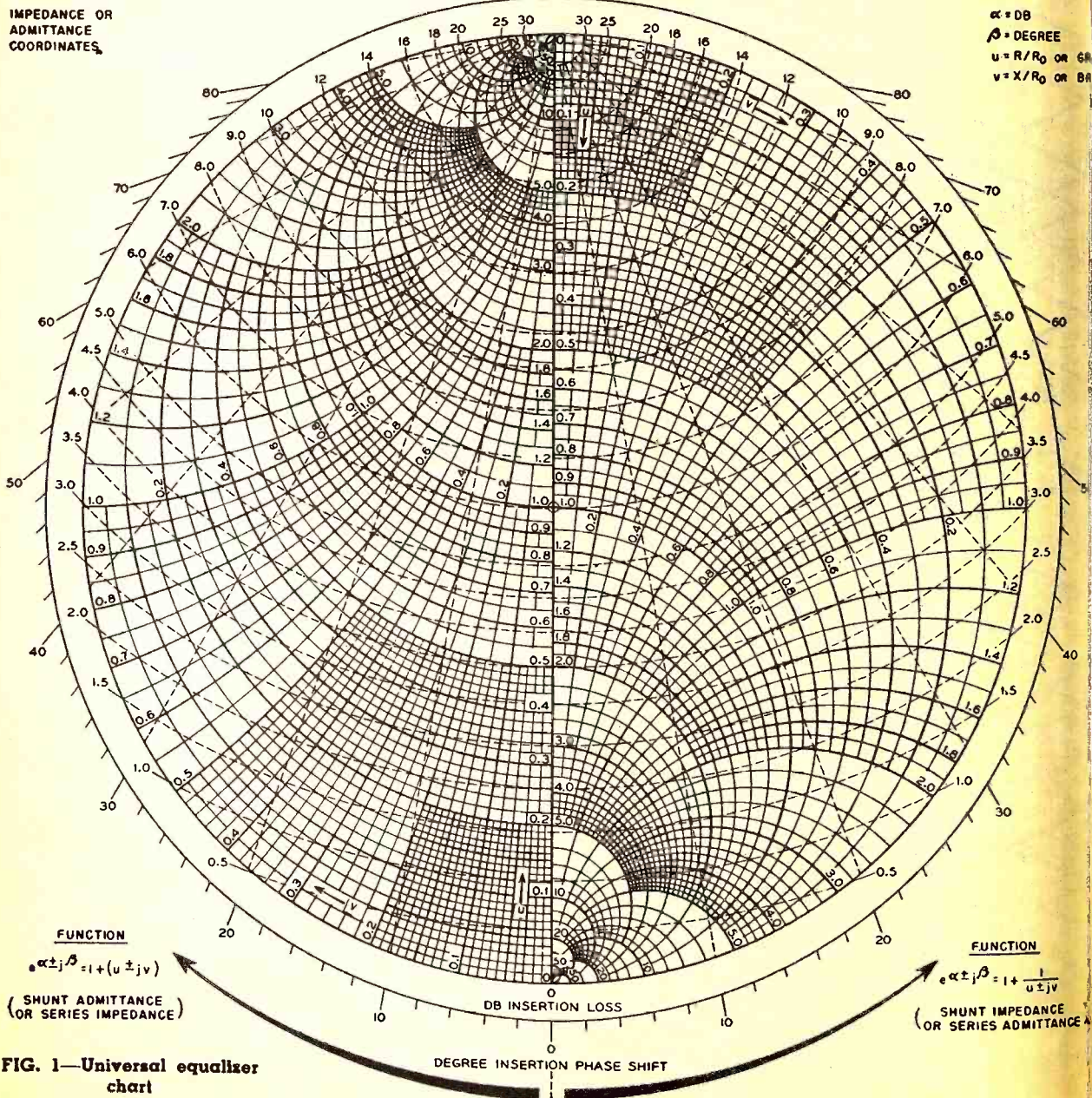


FIG. 1—Universal equalizer chart

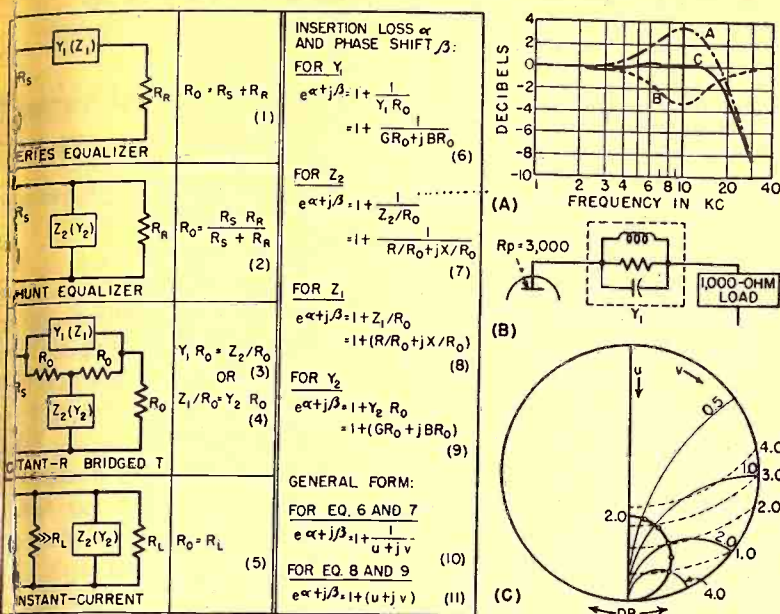


FIG. 2—Basic equalizer circuits, pertinent equations, and example

iving Eq. 10 in the ζ plane, lines of constant insertion become circles centered on point $\zeta = -1$ and whose loci defined by

$$(db) = -20 \log |(1 + \zeta)/2| \quad (13)$$

lines of constant phase shift radii through the point $\zeta = -1$ whose angle from the real axis in the ζ plane is equal to the phase shift.

The solution of Eq. 11 in the ζ plane is essentially the same as Eq. 10 except that the center for loss circles and phase shift is now the point $\zeta = +1$ and the loci of the loss circles are defined by

$$(db) = -20 \log |(1 - \zeta)/2| \quad (14)$$

Applications

Series and shunt equalizer circuits are useful when it is necessary to maintain constant impedance, such as in electron tube interstages. When the load must have constant impedance, the bridged-T equalizer is used. The constant-current equalizer is a special case of the shunt equalizer and is particularly useful in electron tube circuits which behave substantially like constant-current generators, such as pentodes. One common use is to compute the effect of shunting parasitic ca-

pacitances on the gain and phase of an electron tube stage. In this case the parasitic shunt reactance would be considered Z_2 .

While Eq. 1 to 9 have been written for a pure resistance R_o , R_o may be replaced in all these expressions by a complex impedance Z_o . Then the values u and v in the chart represent the real and imaginary components of the fraction Z/Z_o or the product YZ_o . The chart is also useful when measuring impedance using the insertion loss and phase principle.

Example of Use

Curve A in Fig. 2A represents an amplifier response curve. The objective is to flatten the response peak at 10 kc. A convenient place to perform the equalization is found in the plate circuit of a tube which has an internal plate resistance $R_p = 3,000$ ohms and works into a load of $R_L = 1,000$ ohms, as in Fig. 2B. The shape of curve A suggests use of a parallel-tuned circuit shunted by a resistance in the case of a series equalizer. With three independent elements in the equalizer, three independent parameters may be chosen. As first parameter we choose to tune the circuit to ω_1 ,

$= 10$ kc. As second parameter we choose to make the equalizer loss exactly 3.5 db at 10 kc, and as third parameter we decide to match exactly the excess gain of 1 db at $\omega_1 = 5$ kc.

Proceeding with the computation on a normalized admittance basis, at resonance the susceptance of the equalizer must be zero. Entering the chart as shown in Fig. 2C on the zero-susceptance line, we find the 3.5-db loss circle intercept at the 2.0 conductance circle. Thus the equalizer must contain a normalized conductance of $GR_o = 2.0$.

At 5 kc the loss was set to 1 db. We now find the intercept between the 2.0 conductance circle and the 1.0-db loss circle at a susceptance of 4.0. From resonance at ω_o ,

$$\omega_o CR_o - \frac{1}{\omega_o L/R_o} = 0 \quad (15)$$

From the solution of Eq. 10 at ω_1

$$\omega_1 CR_o - \frac{1}{\omega_1 L/R_o} = 4.0 \quad (16)$$

then

$$CR_o = \frac{4}{\left(\omega_1 - \frac{\omega_o^2}{\omega_1}\right)} = 4.25 \times 10^{-5} \quad (17)$$

$$L/R_o = 5.97 \times 10^{-6} \quad (18)$$

From Eq. 17 and 18 the net normalized susceptance of the network at any frequency may be determined. To find the loss associated with each of these susceptance values the equalizer chart is entered on the 2.0 conductance circle and the intercept with the computed susceptance circle is located, at which point the loss value is read. The result is plotted in curve B on Fig. 2A, and the resulting net transmission characteristic is plotted as curve C.

Assuming curve C to be adequately flat, the actual element values of the equalizer are found: From Eq. 1, R_o is 4,000 ohms. Substituting this in $GR_o = 2.0$ gives 2,000 ohms for $1/G$. From Eq. 17, C is 0.0106 μ f. From Eq. 18, L is 23.9 mh.

MICROWAVE DIFFRACTION CHARTS

The radius of the first Fresnel zone at various distances from the nearest terminal end of a microwave relay course can be determined from one nomogram. The adjusted distance required in Fresnel zone calculations is shown in the second alignment chart

By EARL D. HILBURN

MICROWAVE SIGNALS over line-of-sight courses are frequently observed to depart considerably from the free-space predictions.

Variations from free-space calculations are due to combinations of refraction and diffraction ef-

fects, as well as occasional absorption conditions due to rain, snow or fog. Of these factors, all but diffraction vary with weather conditions and combine to form the diurnal and seasonal variations noted in point-to-point relay services.

Although considerable information is available in the literature to enable the engineer to predict with fair accuracy the signal strength under given con-

ditions of temperature and percentage of water vapor in the atmosphere, the usual practice is to allow certain empirical margins of safety or fading factors based on long-term observations of relay signals at various frequencies. Diffraction effects like those associated with refraction, do not change with time or weather conditions but are determined by the choice of operating sites and the intervening terrain. As the course line clearance is readily determined, it frequently is a factor under the engineer's control, diffraction factors are of practical interest in most microwave relay calculations.

Fresnel Zone

From diffraction theory, when a wave strikes an intervening object a spherical wavefront radiates from the edge of the obstruction. The field intensity at any point beyond the obstruction is thus dependent upon the vector sum of the direct and scattered wavefronts reaching the receiver. A Fresnel zone may be defined as a circular zone centered on the direct path at such a radius that the distance from a point on this circle to the receiver point has a path length that is some multiple of a half wavelength longer than the direct path. Hence, according to Fresnel's zone theory, all the odd-numbered zones will send wavefronts to the receiver in opposite phase to all those from the even-numbered zones.

The effective field intensity at the receiver will rise and fall above and below the free-space value as the scattered wavefronts alternately reinforce and cancel

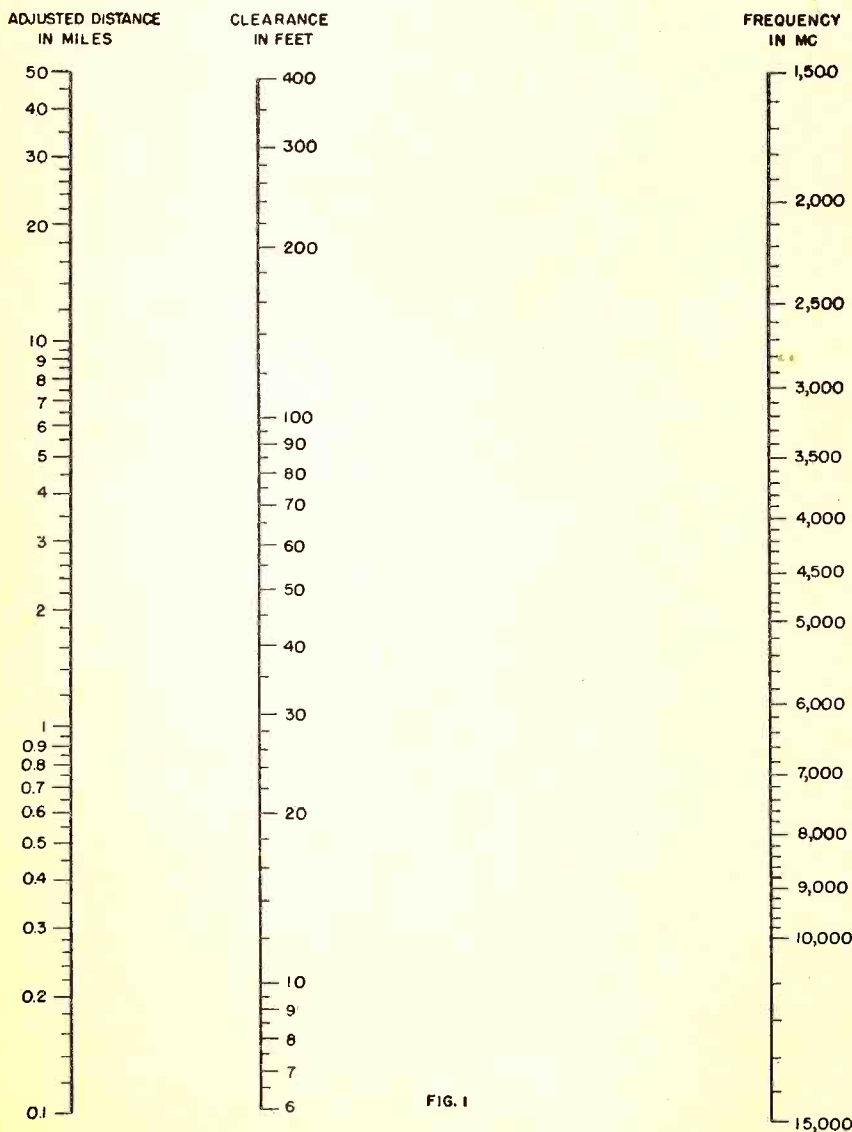


FIG. 1

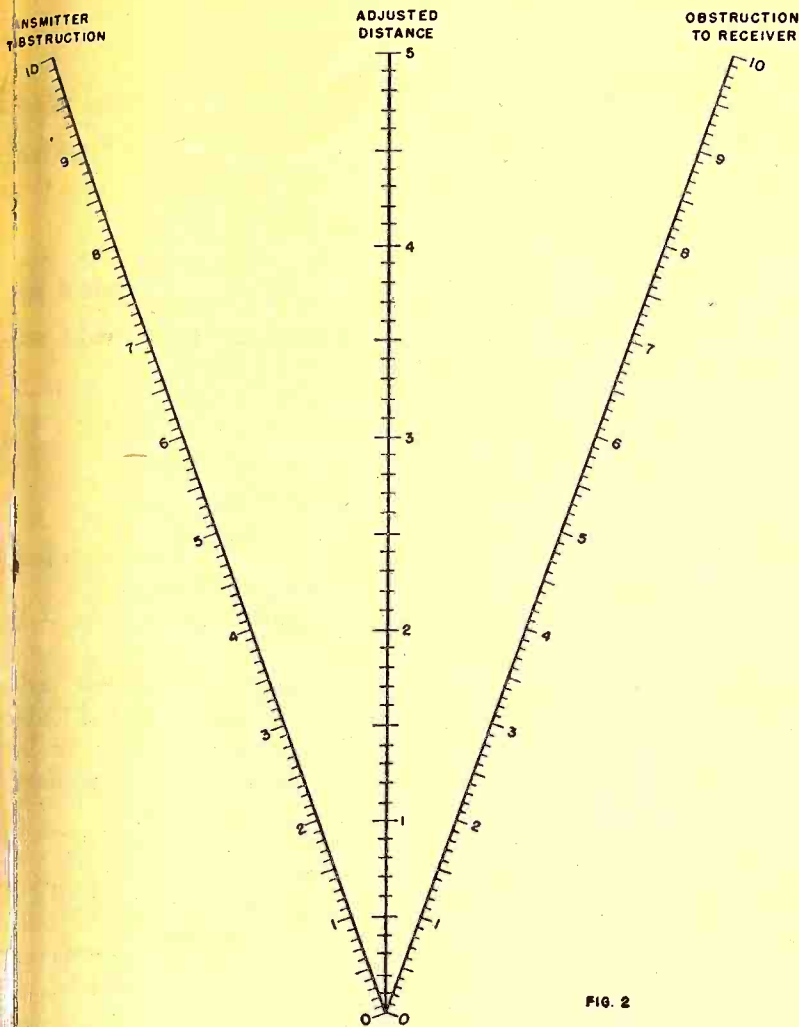


FIG. 2

direct wave. The energy reaching the receiver from a Fresnel zone is proportional to the area of that zone and inversely proportional to the distance from the receiver. As the width of the zone making up the zones decreases rapidly as the radius of the Fresnel circles increases, the first Fresnel zone is the only one of practical importance in diffraction studies of radio waves. It has been stated² that a good path for microwave transmission is one with full first-Fresnel-zone clearance. With an optimum path the signal strength at the receiver (excluding meteorological effects) is somewhat better than free space due to the fact that the phase shift along a line from the transmitting antenna to the top of the obstruction and from the top of the obstruction to the second antenna is

about one-half wavelength greater than the phase shift of the direct path and some signal reinforcement is obtained.

Figure 1 indicates directly the radius of the first Fresnel zone as a function of distance and operating frequency. The construction shown assumes a plane wave (that the spherical wave has expanded to the point where the front is flat over the diameter of the diffraction zones).

The results given by this chart hold true only if the obstruction is very close to one end of the course. For accurate results at any point along the path, the setting on the distance scale should be adjusted in terms of the results given by Fig. 2. This enables the retardation on both parts of the circuit to be taken into account. Figure 2 is a simple reciprocal nomogram and, as

the scales are linear, they may be multiplied by different decimal factors as required.

For example, to find the clearance required for a good microwave path, assume an operating frequency of 7,000 mc, a total course length of 11.5 miles and a principal obstruction 3 miles from the transmitter.

A line connecting 3 and 8.5 on the outside scales of Fig. 2 gives an adjusted distance of 2.2 miles. Connecting this point with 7,000 mc on Fig. 1 shows a required clearance of 40 feet at the point in question.

In addition to determining easily the requirements for a good optical path, these alignment charts permit making quantitative studies of signal intensity conditions under various diffraction conditions including grazing or even badly obstructed courses where the receiver may be in a shadow area.

The principal course obstruction should be plotted showing the projected area normal to the direct course between stations. The Fresnel zones should be drawn in as circles about the dot representing the course path, the radii being obtained from the charts. (While the nomograms show only the first zone radius, values for higher-order zones may be obtained by multiplying the indicated value by the square root of the number of the zone being considered.)

Having drawn the zone areas, with respect to the masking obstruction, the net field intensity may be obtained by integrating the area of the exposed zones. This can be accomplished graphically by means of the Cornu spiral.³ In this manner, the departure from free-space values may be accurately estimated for any course.

REFERENCES

- (1) Charles F. Meyers, "The Diffraction of Light, X-Rays and Material Particles", J. W. Edwards Co., 1949.
- (2) Kenneth Bullington, Radio Propagation at Frequencies Above 30 mc, *Proc. IRE*, 35, p 1,122, Oct. 1947.
- (3) C. R. Burrows and S. S. Atwood, "Radio Wave Propagation," Academic Press Inc., 1949.

SERVO POWER CALCULATIONS

Chart gives required shaft output power in watts for any combination of speed and torque of subfractional motors in tube-driven servo systems. Alternative slide rule method of finding power is also given

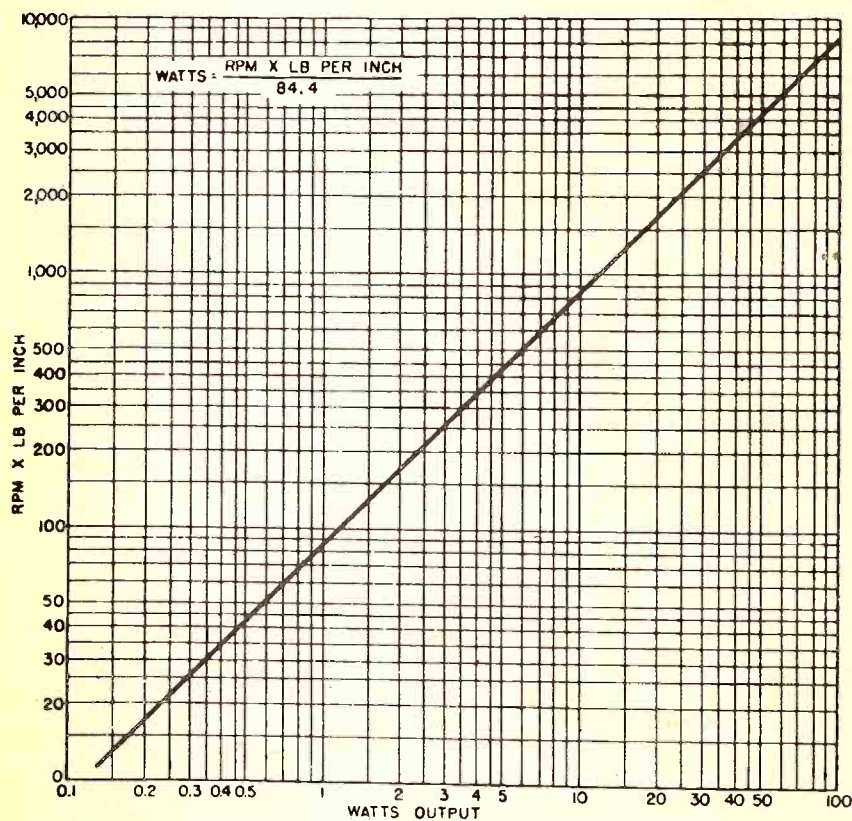
SERVO SYSTEM calculations must of necessity start with motor shaft output power to perform the specified work in a specified time. This involves the speed of shaft rotation and the torque required to perform the work. Since motors used in servo systems are usually sub-

By **OSCAR E. CARLSON**

fractional sizes, the horsepower unit is clumsy and awkward for expressing output power. Watts of output has become a common

means of expressing such power requirements.

The conversion of speed and torque requirements to a wattage equivalent is a simple arithmetical computation, but its very simplicity lends itself to even more simplified computation. The equations are

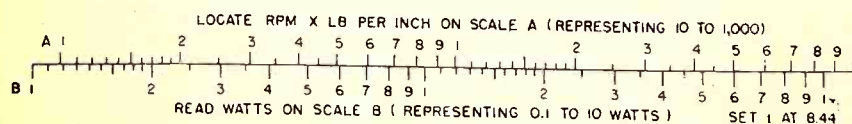


$$\text{Horsepower} = \frac{\text{rpm} \times \text{lb per in.}}{63,000}$$

$$\begin{aligned} \text{Watts} &= \frac{746 \times \text{rpm} \times \text{lb per in.}}{63,000} \\ &= \frac{\text{rpm} \times \text{lb per in.}}{84.4} \end{aligned}$$

This last equation may readily be laid out on a loglog chart that the rpm x lb per in. factor may be translated into watts quite simply. The accompanying chart does this.

As with most loglog coordinate charts, a slide rule may be utilized for these calculations without using the slider. Set the righthand 1 of the B scale under 8.44 in the righthand log cycle of the A scale, as shown below the chart. With the A scale now representing rpm x lb per in. from 10 to 1,000, the wattage may be read directly under the product on the B scale, with the scale reading from 0.1 to 100 watts. A multiplier of 10 or 100 may of course be used to make calculations up to 1,000 watts, so required.



STAGGER-TUNED I-F DESIGN

Chart gives overall bandwidth for 3 db and any fractions of 3 db, for i-f amplifiers having 1 to 500 synchronous or stagger-tuned stages and up to 5 elements per stage

THE BANDWIDTH reduction factor R is here plotted as a function of the number of single or multituned stages n in the amplifier. The family parameter m represents the number of tuning elements in the interstage coupling network when all stages are synchronously tuned; thus, $m = 1$ for a simple RLC tuned interstage, and $m = 2$ for a double-tuned interstage. For a stagger-tuned amplifier, n is the number of n -uples and m is the number of elements in the general n -uple.

Example 1: Assume an amplifier is to have 8 stages using identical single-tuned interstage couplings. (a) For what 3-db bandwidth must each stage be designed if the overall bandwidth is to be 6 mc? (b) What will be the 0.5-db bandwidth?

Solution. (a) From the curves for $n = 8$ and $m = 1$, $R = 0.3$. Dividing overall bandwidth of 6 mc by this value of R gives 20 mc as the required bandwidth of each stage. (b) If n' stages cascaded give a certain 3-db bandwidth, each stage must be

By **MATTHEW T. LEBENBAUM**

down by $3/n'$ db and n of them will be down $(3/n') n = x$ db at that bandwidth. To determine the x -db bandwidth then, the R factor is determined for a number of stages n' where $n' = n (3/x)$; here n is the actual number of stages and $x < 3$ db. In the case at hand, $n' = 8 \times (3/0.5) = 48$, and $R = 0.12$ from the chart. The 0.5-db down bandwidth then is 0.12×20 or 2.4 mc.

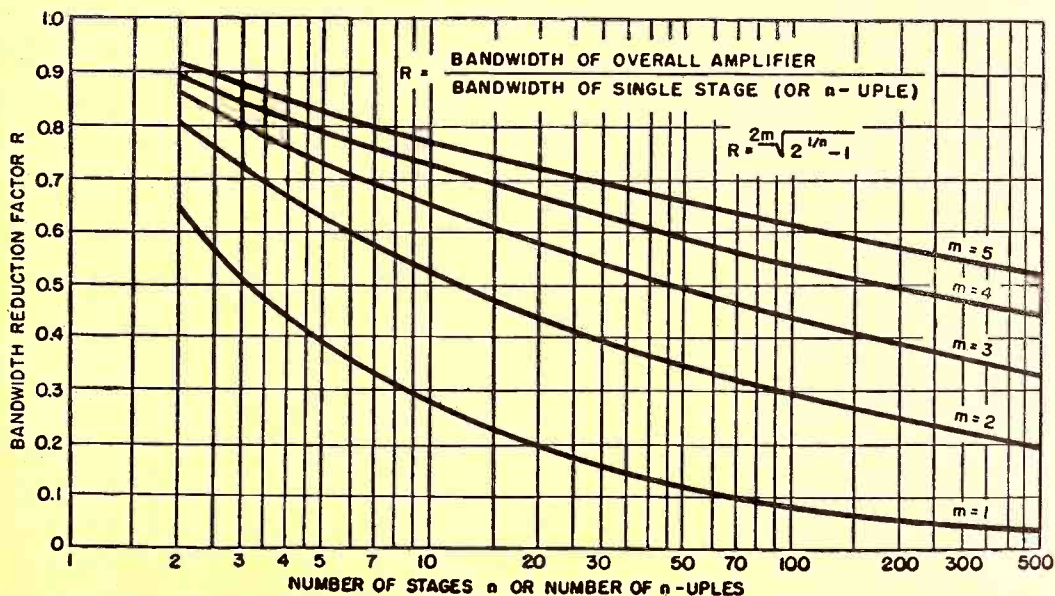
Example 2: An amplifier is to be built with an overall bandwidth of 20 mc and overall gain of 80 db; 6AK5 tubes are used with an assumed gain-bandwidth product ($g_m/2\pi C_T$) of 70 mc. (a) What is the minimum staggering required to achieve this result with 12 or less tubes? (b) If equally loaded double-tuned circuits were used (gain-bandwidth = $\sqrt{2} g_m/2\pi C_T$), how many stages would be required?

Solution. (a) Assume a value

of n , and determine R from the curve. This fixes the single-stage bandwidth required. From this, the gain per stage may be calculated from the gain-bandwidth product, and from this the overall gain. It will be found that it is impossible to achieve the desired gain with a synchronous single-tuned amplifier. Twelve stages arranged in six staggered pairs will not give the desired gain, either, but 9 stages arranged in triples or 8 in quadruples will. Possible systems are:

| n/m | Tubes | db gain |
|-------|-------|---------|
| 6/2 | 12 | 75.5 |
| 3/3 | 9 | 80.5 |
| 4/3 | 12 | 102 |
| 2/4 | 8 | 80 |

(b) 12 double-tuned interstages give $R = 0.49$ ($n = 12$, $m = 2$). The overall gain then is 91.6 db for the desired bandwidth. This illustrates the superiority of multituned coupling over the corresponding order of staggering (91.6 db versus 75.5 db for the same number of staggered-pair tubes). Increasing the staggering to triples makes staggering still better, 102 db.



COMPILED BY THE RESEARCH DEPARTMENT OF ELECTRONICS

product listings

OF THE 1954-1955

electronics

BUYERS' GUIDE

In the preparation of **ELECTRONICS BUYERS' GUIDE**, every effort was made to insure the completeness and accuracy of the Product Listings according to the information provided by the manufacturers.

The listings were compiled from information provided by more than 3,000 companies manufacturing electronic or allied products and include all products that will be available in the coming year, insofar as the companies themselves can determine. The completeness and accuracy of the listings are entirely due to the helpful cooperation of these manufacturers.

Products are arranged and indexed in a simple, easy-to-find, telephone-book style. Names of Manufacturers who are advertisers in the **BUYERS' GUIDE** are bold-faced in the listings and page numbers of their advertisements are shown. This makes it possible to obtain complete information on products quickly and easily by referring to the advertising pages.

Several new product headings have been added. Due to lack of sufficient information, only manufacturers who were known are included under these new headings. Listings include an index of registered trade names and an alphabetical listing of all companies engaged in the manufacture of electronic components, complete equipment or allied products.

NOTE: This punch-out tab is for your convenience in locating the Product Listings in this issue. Simply push out and fold under. It will then serve as a tab mark to indicate where the listings start.

PUSH OUT
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Alphabetical Listings Of All COMPONENTS—COMPLETE UNITS—ALLIED PRODUCTS Used in Electronic Equipment for All Purposes

The complete electronic and allied product lines of more than three thousand manufacturers are arranged and indexed in a simple, easy-to-use, telephone book style in the following listings.

Products are listed alphabetically by generic names followed by descriptive or type names where necessary, as **ADAPTERS—Battery**.

For example: To find the manufacturers of ionization tubes you would turn to the generic product heading **TUBES** and listed alphabetically under that you would find **TUBES—Ionization**.

The only exceptions are **INSULATING COMPOUNDS; INSULATION MATERIALS; INSULATION PARTS; METALS; PLASTIC MATERIALS; and TUBE PARTS**. Products falling in these classifications are arranged alphabetically under those six headings. A breakdown of electrical measuring

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Cross references are provided wherever necessary to cover names, other than the standard ones, that are sometimes used.

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In compiling the listings for this year's **ELECTRONICS BUYERS' GUIDE** extreme care has been taken to ascertain those products which are in production, or available within a reasonable time and, unrestricted for general industrial use.

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an Nuys, Calif.
Stage Engineering Corp., 7 University Rd., Cam-
38, Mass.
Dept. of General Electric Co., 4855 Electric Ave.,
Liskee 1, Wis.

ADAPTERS

Gyro Corp., 3030 Nebraska Ave., Santa Monica,
Calif.
Aviation Corp., Pacific Division, 11600 Sherman
N. Hollywood, Calif.
LABORATORIES, 6135 Magnolia Ave., River-
Calif. ADV. PG. 369.
E CO., THE, P. O. Box 72, Winchester, Mass.
PG. 509.
Laboratories, Inc., 364 Glenwood Ave., East
3, N. J.
ed Engineering Corp., 300 N. Sierra Madre
Pasadena 15, Calif.

Corp., 2700 Southport Ave., Chicago 14, Ill.
LECTRIC CO., 67 N. Second St., Beech Grove,
ADV. PG. 190.
Scientific Co., 2829 Seventh St., Berkeley 10,
Calif.

PIONEER DIV., BENDIX AVIATION CORP.,
Bro, N. J. ADV. PG. 105-108.
Instruments, 383 N. Foothill Blvd., Pasadena 8,
Calif.

MEC LABORATORY, INC., 21-09 43rd Ave.,
Island City 1, N. Y. ADV. PG. 616.
Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.

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& Co., Inc., G. M., Pasadena 1, Calif.
CORP., Metuchen, N. J. ADV. PG. 640.
MFG. CORP., Metuchen, N. J. ADV. PG. 640

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Instrument Co., 1315 S. Clarkson St., Denver
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Development Labs., Inc., 17 Pollack Ave.,
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Electronics, Inc., 8060 Wheeler St., Detroit
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KEARFOTT CO., INC., 1150 McBride Ave., Little Falls,
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Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
MAXSON CORP., W. L., 460 W. 34th St., New York 1,
N. Y. ADV. PG. 250.

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Pacific Scientific Co., 1430 Grande Vista Ave., Los
Angeles 23, Calif.

PICKERING & CO., 309 Woods Ave., Oceanside, N. Y.,
ADV. PG. 278.

REEVES INSTRUMENT CORP., 215 E. 91st St., New
York, N. Y. ADV. PG. 597.

Schaevitz Engineering, P. O. Box 505, Camden 1, N. J.
SERVOMECHANISMS, INC., 500 Franklin Ave., Garden
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Statham Laboratories, Inc., 12401 W. Olympic Blvd.,
Los Angeles 64, Calif.

U. S. Time Corp., 500 Fifth Ave., New York 36, N. Y.
White-Rodgers Electric Co., Armament Dept., 1209 Cass
Ave., St. Louis 6, Mo.

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AEROLITE ELECTRONICS CORP., 507 26th St., Union
City, N. J. ADV. PG. 615.

Cable Electric Products Inc., Providence, R. I.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44,
Pa. ADV. PG. 465.

J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brook-
lyn, N. Y. ADV. PG. 666.

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J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brook-
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KULKA ELECTRIC MFG. CO., 633 S. Fulton Ave., Mount
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Mcrcse Co., Frank W., 1300 Soldiers Field Rd., Boston
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COAXIAL CONNECTOR CO., 37 North 2nd Ave., Mt.
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EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia
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GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV.
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INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater,
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International Testing Service, 321 N. Hamilton St.,
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J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brook-
lyn, N. Y. ADV. PG. 666.

Jowil Electronics, Inc., 7945 Germantown Ave., Phila-
delphia 18, Pa.

McShan Development Corp., 71 Murray St., New York 7,
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MAGNAVOX CO., Component Sales, Industrial & Defense
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Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Superex Electronics Corp., 23 Atherton St., Yonkers, 10, N. Y.
SWITCHCRAFT, INC., 1320 N. Halsted St., Chicago 22, Ill. ADV. PG. 491.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.

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ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. ADV. PG. 426.
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RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
 S-C Laboratories, Inc., 37 George St., Newark 5, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

ADHESIVES

Ambroid Co., 305 Franklin St., Boston 10, Mass.
 American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
 American Monomer Corp., 511 Lancaster St., Leominster, Mass.
 American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
 Armstrong Cork Co., Lancaster, Pa.
 Biggs Co., Carl H. 2255 Barry Ave., West Los Angeles 64, Calif.
 Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.
 Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y. ADV. PG. 168.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Goodyear Tire & Rubber Co., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 Hardman Co., Inc., H. V., 571 Cortland St., Belleville, N. J.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Industrial Development & Mfg. Corp., P. O. Box 48, Needham, Mass.
 Javex, P. O. Box 646, Redlands, Calif.
 Marbon Corp., Gary, Ind.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Moyne Co., C. P., 8157 Monticello Ave., Skokie, Ill.
 Paisley Products, Inc., 630 W. 51st St., New York 19, N. Y.
 Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.
 Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N. Y.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Snyder Chemical Corp., Bethel, Conn.
 Stevenson, Bro. & Co., 110 Race St., Philadelphia 6, Pa.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S. E. 10, England.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

ADHESIVES — Waterproof & Corrosion Proof Compounds

American Monomer Corp., 511 Lancaster St., Leominster, Mass.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Moyden Co., C. P., 8157 Monticello Ave., Skokie, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S. E. 10, England.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
 United Technical Laboratories, Box 425-V, Morristown, N. J.

U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

AIR CLEANERS—Electronic

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill.
RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.
 Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.

ALARM SYSTEMSSee **CONTROLS, Alarm System****ALTERNATORS**See **CONVERTERS and INVERTERS****ALUMINUM OXIDE**See **INSULATION MATERIALS****AMMETERS**See **AMMETERS—RF**See **INSTRUMENTS—Electrical Measuring****AMPLIFIERS—Audio Frequency**

A.R.F. Products, Inc., 7627 Lake St., River Forest, Ill.
 Acme Teletronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7, Ill. ADV. PG. 464.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.
AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 98, 99.
 Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
 Ansley Mfg. Co., Arthur, Doylestown, Pa.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Atlas Coil, Inc., Cottage St., Derby, Conn.
 Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y.
 Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 58.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Berndt-Baci, Inc., Auricon Div., 6914 Romaine St., Hollywood 38, Calif.
 Bliss Electronic Corp., Box 123, Sussex, N. J.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Bright Radio Labs, Inc., 24-28 45th St., Long Island City 3, N. Y.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
 British Radio Electronics Ltd., 1833 Jefferson Place, Washington 6, D. C.
 Brociner Electronics Laboratory, 344 E. 32nd St., New York 16, N. Y.
 Brook Electronics, Inc., Box 491, Elizabeth, N. J.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Calbest Engineering & Electronics Co., 828 Highland Ave., Hollywood 38, Calif.
 Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Dalmatronic Co., 534 Laurel St., San Carlos, Calif.
 Daystrom Instrument Co., Archbald, Pa.
 Diiks Co., The, Seymour, Conn.
DOLLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 368.
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 Duotone Co., Inc., Keyport, N. J.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Engineering & Mfg. Co., 627 W. Alexandrine Ave., Detroit 1, Mich.

ELECTRONIC MEASUREMENTS CO., Lewis St. & M Ave., Eatontown, N. J. ADV. PG. 431.
 Electro-Voice, Inc., Buchanan, Mich.
 El Meco Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 Engineering Research Associates, Div. of Remington Rand, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
 Erco Radio Labs, Inc., E. Stewart Ave., Garden City, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 10, N. Y.
 Executone, Inc., 415 Lexington Ave., New York 17, N. Y.
 Fairchild Recording Equipment Corp., 154th St. & Ave., Whitestone, N. Y.
 Farmers Engineering & Mfg. Co., Irwin, Pa.
FEDERAL MFG. & ENGINEERING CO., 211 Steuben Brooklyn 5, N. Y. ADV. PG. 642.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Fidelity Amplifier Co., 703 Willow St., Chicago 14, Ill.
 Fisher Radio Corp., 21-21 Forty-Fourth Drive, Island City 1, N. Y.
FLUKE MFG. CO. INC., JOHN, 1111 W. Nickerson Seattle 99, Wash. ADV. PG. 652.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Freed Electronics & Controls Corp., 200 Hudson New York 13, N. Y.
 Galbraith & Son Electric Corp., C. C., 450 Avenue of Americas, New York 11, N. Y.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Gates Radio Co., Quincy, Ill.
GENERAL COIL PRODUCTS CORP., 43 Roselle Mineola, N. Y. ADV. PG. 653.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Gosnet Co., 801 S. Main St., Burbank, Calif.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive Burbank, Calif. ADV. PG. 637.
 Gotham Television Corp., 123 W. 64th St., New York 23, N. Y.
 Grason-Stadler Co., Engineering Service Dept., Hampshire St., Cambridge 39, Mass.
 Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 1, N. Y.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76
 Heintz & Kaufman Equipment Div. of The Robert D. Co., 50 Drumm St., San Francisco 11, Calif.
 I.D.E.A., 7900 Pendleton Pike, Indianapolis 26, Ind.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th New York 3, N. Y. ADV. PG. 657.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
INTERELECTRONICS CORP., 2432 Grand Concourse, York 58, N. Y. ADV. PG. 655.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KAY-LAB, INC., 1090 Morena Blvd., San Diego Calif. ADV. PG. 231.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
 L & O Research & Development Corp., 134 N. W. Ave., Wayne, Pa.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Lake Mfg. Co., 2323 Chestnut St., Oakland 7, Calif.
LANGVIN MANUFACTURING CORP., 37 W. 65th New York 23, N. Y. ADV. PG. 152, 153.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Th Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lesa, Via Bergamo 21, Milan, Italy.
 Loge Sound Engineers, J. M., 2171 W. Washburn Blvd., Los Angeles 18, Calif.
 M. P. Engineering Co., Fairfield 3, Conn.
 McIntosh Laboratory, Inc., 320 Water St., Binghamton, N. Y.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG.
MAGNECOR, INC., 225 W. Ohio St., Chicago 10, Ill. ADV. PG. 220.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver New York 4, N. Y.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Maurer, Inc., J. A., 37-01 31st St., Long Island 1, N. Y.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago 41, Ill.
 Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.
 Model Engineering & Mfg. Inc., Huntington, Ind.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
NATIONAL CO., INC., 61 Sherman St., Malden, Mass. ADV. PG. 395.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.

- AIR ASSOCIATES, INC.**, Teterboro, N. J. ADV. PG. 83.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 98, 99.
Atlas Coil, Inc., Cottage St., Derby, Conn.
Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y.
Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
Basset, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Berndt-Bach, Inc., Auricon Div., 6914 Romaine St., Hollywood 38, Calif.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
British Radio Electronics Ltd., 1833 Jefferson Place, Washington 6, D. C.
Brook Electronics, Inc., Box 491, Elizabeth, N. J.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
Cossor (Canada), Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
Farmers Engineering & Mfg. Co., Irwin, Pa.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
Gates Radio Co., Quincy, Ill.
Holl Audio Inc., 5014 N. Encinta Ave., Temple City, Calif.
I.D.E.A., 7900 Pendleton Pike, Indianapolis 26, Ind.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
Jowit Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 152, 153.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
Lesi, Via Bergamo 21, Milan, Italy.
M P Engineering Co., Fairfield 3, Conn.
McIntosh Laboratory, Inc., 320 Water St., Binghamton, N. Y.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Maurer, Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
Pedersen Electronics Co., Mount Diablo Blvd., Lafayette, Calif.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 278.
Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Sargent-Raymont Co., 1401 Middle Harbor Rd., Oakland 20, Calif.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
Stromberg-Carlson Co., Rochester 3, N. Y.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.
Transistor Components Co., 301 Oakwood Ave., East Aurora, N. Y.
Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
Weingarten Electronic Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.
Western Sound & Electric Labs., Inc., 805 S. 5th St., Milwaukee 4, Wis.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.
- AMPLIFIERS—Audio Subminiature**
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
Atlas Coil, Inc., Cottage St., Derby, Conn.
Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
Autocrat Electronics Co., 5024 Elm St., Skokie, Ill.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
Daystrom Instrument Co., Archbald, Pa.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.
Electronic Research Associates, Inc., 715 Main St., North Caldwell, N. J.
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.
Fortiphone Ltd., 247 Regent St., W1, London, England.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 152, 153.
LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.
Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
Mercury Electronic Co., Box 450, Red Bank, N. J.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
Paravox, Inc., 2056 E. Fourth St., Cleveland 15, Ohio.
Phebcos, Inc., 3640 Woodland St., Baltimore 15, Md.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
Special Products Co., 9118 Brookville Road, Silver Spring, Md.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
Symphony Radio & Television Co., 925 South Western Ave., Los Angeles 6, Calif.
Tech Laboratories, Inc., Bergen & Edsall Bldgs., Palisades Park, N. J.
- AMPLIFIERS—Audio Input Systems**
Amplifier Corp., 740 Belleville Ave., New Bedford, Mass.

TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
Telephonics Corp., Park Ave., Huntington, N. Y.
TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.
Transistor Components Co., 301 Oakwood Ave., East Aurora, N. Y.
Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass.
Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

AMPLIFIERS—d-c

Acme Electronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
Allegany Instrument Co., Inc., Cumberland, Md.
American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.
Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
Atlas Coil, Inc., Cottage St., Derby, Conn.
Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
AVION INSTRUMENT CORP., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J. ADV. PG. 490.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Boeing Airplane Co., Seattle Div., Seattle 14, Wash.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
Central Sales & Mfg. Co., 2 Richwood Place, Denville, N. J.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
COMPUTER CO. OF AMERICA, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Daystrom Instrument Co., Archbald, Pa.
Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. ADV. PG. 434, 435.
Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif.
Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio.
Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
Hanover Developments, 401 E. 74th St., New York 21, N. Y.
Hathaway Instruments Co., 1315 S. Clark St., Denver 10, Colo.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.
Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.

LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
LISTON-BECKER INSTRUMENT CO., INC., 649 Hope St., Springdale, Stamford, Conn. ADV. PG. 674.
Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Magnetic Research Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
Mercury Electronic Co., Box 450, Red Bank, N. J.
MID-CENTURY INSTRUMENT CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y.
National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
Phebcos, Inc., 3640 Woodland St., Baltimore 15, Md.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Photon Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
Pye, Ltd., Cambridge, England.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
Research Electronics Laboratory, Roslyn, Pa.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.
Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
Tektronix, Inc., P. O. Box 831, Portland, Ore.
U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

AMPLIFIERS—Decade

Allegany Instrument Co., Inc., Cumberland, Md.
Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 58.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Coast Coil Co., 5332 W. Washington Blvd., Los Angeles 16, Calif.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.
Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.
Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.

AMPLIFIERS—Differential

Allegany Instrument Co., Inc., Cumberland, Md.
American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.
Atlas Coil, Inc., Cottage St., Derby, Conn.
Boehme, Inc., H. O., 915 Broadway, New York 10
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
Daystrom Instrument Co., Archbald, Pa.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
Hanover Developments, 401 E. 74th St., New York 21, N. Y.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
Kuljian Corp., Electronics Div., 1200 N. Broad Philadelphia 21, Pa.
L & O Research & Development Corp., 134 N. Wayne, Pa.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Lesa, Via Bergamo 21, Milan, Italy.
Miller Instruments, Inc., William, 325 N. Halstead Pasadena 8, Calif.
Otis Elevator Co., Electronic Div., 35 Ryerson Brooklyn, N. Y.
Owen Laboratories, 412 Woodward Blvd., Pasadena 8, Calif.
Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.

AMPLIFIERS—f-m & a-m Antenna

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44, Princeton, N. J. ADV. PG. 618.
Atlas Coil, Inc., Cottage St., Derby, Conn.
Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
Connecticut Telephone & Electric Corp., 70 Bristol St., Meriden, Conn.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Electro-Voice, Inc., Buchanan, Mich.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Gates Radio Co., Quincy, Ill.
Gonset Co., 801 S. Main St., Burbank, Calif.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637.
KINGS ELECTRONICS CO., 40 Marbledale Rd., New York 17, N. Y. ADV. PG. 199.
Pickard & Burns, Inc., Needham, Mass.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

AMPLIFIERS—Facsimile

Acme Electronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
Hogan Laboratories, Inc., 155 Perry St., New York 11, N. Y.
PRESS WIRELESS LABORATORIES, INC., 25 Pleasant Place, West Newton 65, Mass. ADV. PG. 92.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 662.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

AMPLIFIERS—i-f

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
Atlas Coil, Inc., Cottage St., Derby, Conn.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.

NEW YORK INDUSTRIES CORP., 460 W. 34th St. New York 1, N. Y. ADV. PG. 201.

Audio Products Co., P. O. Box 368, Westfield, N. J.
(Canada) Ltd., 301-303 Windsor St., Halifax, Canada.

Instrument Co., Archbald, Pa.
of New York, Inc., 44-31 Douglaston Pkwy., Flushing, N. Y.

STATE LABORATORIES, 2608 Merrick Rd., Flushing, N. Y. ADV. PG. 478.

Electronics, Inc., 415 W. Pike St., Philadelphia 4, Pa.

COIL PRODUCTS CORP., 43 Roselle St., Roselle, N. Y. ADV. PG. 653.

RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

Products for Industries, Inc., Old Country Road, Roseton, N. Y.

Corp. of America, 186 Granite St., Manchester, N. H.

Research Associates, 2221 Warwick Ave., San Monica, Calif.

Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

Corp., 462 N. Parkside Ave., Chicago 44, Ill.

Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.

Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.

LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.

RD ELECTRIC PRODUCTS CO., INC., 67 Thirty-ninth St., Brooklyn 32, N. Y. ADV. PG. 569.

Equipment Labs., Brightwater Place, Massachusetts, N. Y.

Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.

VOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.

CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.

ment Engineering, Ltd., Arnprior, Ontario, Canada.

Radio Mfg. Co., 2794 Market St., Salem, Ore.

CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.

Mercury Television Mfg. Corp., 5955 Van Nuys Van Nuys, Calif.

F. W., Div., General Instrument Corp., 165 St., Chicopee, Mass.

Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Electronics, Inc., 7 Industrial Place, Summit, N. J.

ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

Radio Co., 2 Fifth Ave., New York 11, N. Y.

ERS—Keying

OCIATES, INC., Teterboro, N. J. ADV. PG. 83.

Inc., H. O., 915 Broadway, New York 10, N. Y.

(Canada) Ltd., 301-303 Windsor St., Halifax, Canada.

DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.

of New York, Inc., 44-31 Douglaston Pkwy., Flushing, N. Y.

Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.

Radio Co., Quincy, Ill.

Corp. of America, 186 Granite St., Manchester, N. H.

WIRELESS LABORATORIES, INC., 25 Prospect St., West Newton 63, Mass. ADV. PG. 92.

CONIC CO. P., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.

Telephones & Cables Ltd., Connaught House, London, W. C. 2, England.

Material Corp., P. O. Box 142, Mamaroneck, N. Y.

ERS—Klystron AFC

ny-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.

GYROSCOPE CO., DIV. OF THE SPERRY CORP., New York, N. Y. ADV. PG. 331, 332.

ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.

ERS—Logarithmic

strument Co., Inc., 133 W. 14th St., New York 1, N. Y.

vision, Inc., 973 E. San Carlos Ave., San Jose, Calif.

Inc., P. O. Box 192, Glenside, Pa.

Co., Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.

Electronics, Inc., 415 W. Pike St., Philadelphia 18, Pa.

INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

Research Corp., 160 Charlemont St., Newton 10, Mass.

struments, Inc., Needham, Mass.

Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.

CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.

Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
THOMPSON PRODUCTS INC., ELECTRONICS DIV., 2196 Clarkwood Ave., Cleveland 3, Ohio. ADV. PG. 60.

AMPLIFIERS—Magnetic

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65.

ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. ADV. PG. 426.

Allied Mfg. Corp., 605-07 61st St., West New York, N. J.

ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.

BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.

BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.

California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.

CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.

CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.

Control Engineering Corp., Providence Highway, Norwood, Mass.

D & R Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.
Daystrom Instrument Co., Archbald, Pa.

Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.

Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.

El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

Fidelity Instrument Corp., 1320 W. Market St., York, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 146.

General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.

GYROMECHANISMS, INC., Halesite, N. Y. ADV. PG. 544.

Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.

HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603.

INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.

INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. ADV. PG. 628.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.

Jobbins Electronic Enterprises, Menlo Park, Calif.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.

Kemtron Electron Products, Inc., 5 Prince Place, Newbury Port, Mass.

KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 253-256.

KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 301.

LEACH RELAY DIV. OF LEACH CORP., 5915 Avalon Blvd., Los Angeles 3, Calif. ADV. PG. 378.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.

Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.

LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-fourth St., Brooklyn 32, N. Y. ADV. PG. 569.

LIBRASCOPE, INC., 1607 Flower St., Glendale 1, Calif. ADV. PG. 531.

MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.

MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 212.

Magnetic Controls, Inc., 119 W. 63rd St., New York 23, N. Y.

Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.

Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.

MAGNETICS, INC., P. O. Box 230-A, Butler, Pa. ADV. PG. 28.

MAGNETICS RESEARCH CO., 142 King St., Chappaqua, N. Y. ADV. PG. 651.

MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Mercury Electronic Co., Box 450, Red Bank, N. J.

Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.

Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.

Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.

Notthelfer Winding Labs., 9 Albermarle Ave., Trenton 3, N. J.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

Phebo, Inc., 3640 Woodland St., Baltimore 15, Md.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.

Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.

PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.

Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.

Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.

Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.

SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.

Southwestern Industrial Electronics Co., 2331 Post Oak Rd., P. O. Box 130258, Houston 19, Texas.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.

Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

STERLING TRANSFORMER CORP., 297 N. Seventh St., Brooklyn 7, N. Y. ADV. PG. 662.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.

Transformer Engineers, 161 E. California, Pasadena 1, Calif.

TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417.

UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

VARI-L CO., INC., 432 Fairfield Ave., Stamford, Conn. ADV. PG. 192.

VICKERS ELECTRIC DIVISION, Vickers, Inc., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.

Walland-Pierce Corp., 1928 Pacific Coast Highway, Long Beach, Calif.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

AMPLIFIERS—Medical Instrument

Allegany Instrument Co., Inc., Cumberland, Md.
American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.

Atlas Coil, Inc., Cottage St., Derby, Conn.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

Daystrom Instrument Co., Archbald, Pa.
Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.

EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.

Electrodyn Co., Endicott St., Norwood, Mass.
Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.

ELECTRONIC TUBE CORP., 1800 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.

El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.

Engineering Research Associates, Div. of Remington Rand, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.

Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

GLENCO CORP., Metuchen, N. J. ADV. PG. 640.

Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
Hanover Developments, 401 E. 74th St., New York 21, N. Y.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.

Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.

Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago 41, Ill.

Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.

Plotron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.

Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.

R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.

SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.

Senotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.

AMPLIFIERS—Microwave
AMPLIFIERS—Microwave Radar
See MICROWAVE ACCESSORIES

AMPLIFIERS—Musical Instrument

Alamo Electronic Corp., 1415 N. Brazos St., San Antonio 7, Texas.
Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
Autocrat Electronics Co., 5024 Elm St., Skokie, Ill.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago 41, Ill.
Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.
Trutone Electronics, Inc., 812-14 N. Highland Ave., Los Angeles 38, Calif.
Vaico Mfg. Co., 4700 W. Walton St., Chicago 51, Ill.
Webster Electric Co., 1900 Clark St., Racine, Wis.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

AMPLIFIERS—Narrow-Band i-f

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Daystrom Instrument Co., Archbald, Pa.
De Mornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
Gonset Co., 801 S. Main St., Burbank, Calif.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
Jowit Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne, Ind. ADV. PG. 181.
Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

AMPLIFIERS—Null

Atlas Coil, Inc., Cottage St., Derby, Conn.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby Pa. ADV. PG. 174, 175.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
Delttron, Inc., P. O. Box 192, Glenside, Pa.
Devtronic, Inc., 221 N. Hermitage Ave., Trenton, N. J.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.

DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Electro-Measurements, Inc., 4312 S. E. Stark St., Portland 15, Ore.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

AMPLIFIERS—Peak Limiting

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
Delttron, Inc., P. O. Box 192, Glenside, Pa.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
Gates Radio Co., Quincy, Ill.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
LANGEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 152, 153.
LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 139.
Schuttig & Co., Inc., 5005 Calvert Rd., College Park, Md.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.

AMPLIFIERS—Photocell

Acme Electronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
Allegany Instrument Co., Inc., Cumberland, Md.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Daystrom Instrument Co., Archbald, Pa.
De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
Devtronic, Inc., 221 N. Hermitage Ave., Trenton, N. J.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Electrical Service Co., 1271 Mission St., San Francisco, Calif.
Electrodyn Co., Endicott St., Norwood, Mass.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 53, Ill.
El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
FEDERAL MFG. & ENGINEERING CORP., 211 Steubenville St., Brooklyn 5, N. Y. ADV. PG. 642.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF ITT, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-2.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
Gates Radio Co., Quincy, Ill.
GENERAL MAGNETICS, INC., 135 Bloomfield Blvd., Bloomfield, N. J. ADV. PG. 146.
Hoffman Engineering Corp., Anoka, Minn.
Hogan Laboratories, Inc., 155 Perry St., New York 11, N. Y.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 18, Mich.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
Kuljian Corp., Electronics Div., 1200 N. Broad Philadelphia 21, Pa.
Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
Lesa, Via Bergamo 21, Milan, Italy.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., York 55, N. Y. ADV. PG. 212.
Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
Pacific Mercury Television Mfg. Corp., 5955 Van Ness Blvd., Van Nuys, Calif.
Photobell Company, 116 Nassau St., New York 38, N. Y.
Photocon Research Products, 421 N. Foothill E. Pasadena, Calif.
Photoswitch Inc., 77 Broadway, Cambridge 42, Mass.
Photron Instrument Co., 6516 Detroit Ave., Cleveland 10, Ohio.
Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. ADV. PG. Inside Back & Back Cover.
RADIO SONIC CORP., 111 Bleeker St., New York 13, N. Y. ADV. PG. 631.
Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 55.
Rockwell Engineering Co., 4063 N. New Jersey St., Indianapolis 5, Ind.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
Simpson Mfg. Co., Inc., Mark, 32-38 49th St., Long Island City 3, N. Y.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
Transistor Components Co., 301 Oakwood Ave., Aurora, N. Y.
VICKERS ELECTRIC DIVISION, VICKERS, INC., Locust St., St. Louis 3, Mo. ADV. PG. 38.
WORNER ELECTRONIC DEVICES, Rankin, Illinois. ADV. PG. 522.

AMPLIFIERS—Power

Acme Electronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 11, Ill. ADV. PG. 464.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
Atlas Coil, Inc., Cottage St., Derby, Conn.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus, Ohio.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
British Industries Corp., 164 Duane St., New York 13, N. Y.
Brociner Electronics Laboratory, 344 E. 32nd St., New York 16, N. Y.
Brook Electronics, Inc., Box 491, Elizabeth, N. J.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Calbest Engineering & Electronics Co., 828 Highland Ave., Hollywood 38, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
COMPUTER CO. OF AMERICA, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Cook Laboratories Inc., 114 Manhattan St., Stamford, Conn.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
DAVIES LABORATORIES, INC., 4705 Queensbury Riverdale, Md. ADV. PG. 658.
Daystrom Instrument Co., Archbald, Pa.
Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.

Airplane & Marine Instruments, Inc., 15 William
 New York 5, N. Y.
 of New York, Inc., 44-31 Douglaston Pkwy.,
 Douglaston, N. Y.
TRONIC MEASUREMENTS CO., Lewis St. & Maple
 Eatontown, N. J. ADV. PG. 431.
 Laboratories, Inc., 730 Boulevard, Kenilworth,
 N. J.
 Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Recording Equipment Corp., 154th St. & 7th
 Whitestone, N. Y.
 Engineering & Mfg. Co., Irwin, Pa.
AL TELEPHONE & RADIO CO., A DIV. OF IT&T,
 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Radio Corp., 21-21 Forty Fourth Drive, Long
 Island City 1, N. Y.
MFG. CO., INC., JOHN, 1111 W. Nickerson St.,
 Little 99, Wash. ADV. PG. 652.
 Electronics, Inc., 415 W. Pike St., Philadelphia
 Pa.
 and Son Electric Corp., C. C., 450 Avenue of the
 Americas, New York 11, N. Y.
 Radio Co., Quincy, Ill.
 Electric Co., Radio & Television Dept., Electronics
 Syracuse, N. Y.
 Radio Inc., 5014 N. Encinta Ave., Temple City,
 Calif.
DIV. OF LEACH CORP., 4441 Santa Fe Ave.,
 Angeles 58, Calif. ADV. PG. 628.
 Corp. of America, 186 Granite St., Manchester,
 N. H.
ELECTRONICS CORP., 2432 Grand Concourse, New
 York 58, N. Y. ADV. PG. 655.
 International Research Associates, 2221 Warwick Ave.,
 Santa Monica, Calif.
LAB, INC., 1090 Morena Blvd., San Diego 10, Calif.
 ADV. PG. 231.
ELECTRONICS CO., 40 Marbledale Rd., Tuck-
 er, N. Y. ADV. PG. 199.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts
 Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
 Research & Development Corp., 134 N. Wayne
 Ave., Wayne, Pa.
MIN MANUFACTURING CORP., 37 W. 65th St.,
 New York 23, N. Y. ADV. PG. 152, 153.
 Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
CORD ELECTRIC PRODUCTS CO., INC., 67 Thirty-
 Fifth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Via Bergamo 21, Milan, Italy.
 Laboratory, Inc., 320 Water St., Binghamton,
 N. Y.
CORD, INC., 225 W. Ohio St., Chicago 10, Ill.
 ADV. PG. 220.
ATIC AMPLIFIERS, INC., 632 Tinton Ave., New
 York 55, N. Y. ADV. PG. 212.
 Precision Controls, Inc., 119 W. 63rd St., New
 York 23, N. Y.
 Mfg. Div., Maguire Industries, Inc., Mt. Carmel,
 Ohio
 Electronics Co., Box 450, Red Bank, N. J.
 Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Inter-Communication Systems, Inc., 1130 N.
 Milwaukee Ave., Chicago 22, Ill.
TRONIC CORP., THE, 196 Albion Ave., Paterson 2,
 N. J. ADV. PG. 628.
 Elevator Co., Electronic Div., 35 Ryerson St.,
 Lynn, N. Y.
 Electronics, Inc., 643 Milwaukee Ave., Chi-
 cago 22, Ill.
WIRELESS LABORATORIES, INC., 25 Prospect
 Place, West Newton 65, Mass. ADV. PG. 92.
CORP. OF AMERICA, Engineering Products Div.,
 Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Borg Corp., 3515 W. Addison St., Chicago 18,
 Ill.
 Co., Ltd., 2101 Bryant St., San Francisco 10,
 Calif.
CO., INC., Middletown, Conn. ADV. PG. 557.
 Raymont Co., 1401 Middle Harbor Rd., Oakland
 Calif.
 Inc., Herman Hosmer, 385 Putnam Ave., Cam-
 bridge 39, Mass.
MECHANISMS, INC., 500 Franklin Ave., Garden
 City 3, N. Y. ADV. PG. 374.
 Mfg. Co., Inc., Mark, 32-28 49th St., Long
 Island City 3, N. Y.
 Eastern Industrial Electronics Co., 2831 Post Oak
 P. O. Box 13058, Houston 19, Texas.
 Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers,
 N. Y.
 and Telephones & Cables Ltd., Connaught House,
 London, W.C. 2, England.
 Mfg. Corp., 8538 Warner Drive, Culver City,
 Calif.
 Carlsson Co., Rochester 3, N. Y.
 Luster Products Co., 443-5 Broadway, New York
 10, N. Y.
LOGY INSTRUMENT CORP., 533 Main St.,
 Boston, Mass. ADV. PG. 127-131.
 son-Meissner Mfg. Divs., Mt. Carmel, Ill.
FORMER SPECIALTY CO., INC., Bala Cynwyd, Pa.
 ADV. PG. 591.
 Electronics, Inc., 812-14 N. Highland Ave.,
 Los Angeles 38, Calif.
ES ELECTRIC DIVISION, VICKERS, INC., 1825
 St. Louis 3, Mo. ADV. PG. 38.
RT CO., 145 W. Hazel St., Inglewood 3, Calif.
 ADV. PG. 467.
 Electro-Acoustic Labs., 204 S. Beverly Drive,
 Beverly Hills, Calif.

AMPLIFIERS—Printed Circuit

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box
 C-3, Solana Beach, Calif. ADV. PG. 159.
 Brociner Electronics Laboratory, 344 E. 32nd St., New
 York 16, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th
 St., New York 1, N. Y. ADV. PG. 201.
 California Bent Glass Corp., Torrance, Calif.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Y E.
 Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342,
 574, 607, 659.
CENTRONICS CORP., 21-04 122 St., College Point,
 N. Y. ADV. PG. 598.
 Daystrom Instrument Co., Archbald, Pa.
 Digital Products, Inc., 7643 Fay Ave., La Jolla, Calif.
DUBROW DEVELOPMENT CO., 235 Penn St., Burling-
 ton, N. J. ADV. PG. 536.
 Electronic Products Corp., 1418 N. Highland Ave.,
 Hollywood 28, Calif.
 El Mec Laboratories, Inc., 730 Boulevard, Kenil-
 worth, N. J.
 Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 Federal Telecommunication Labs., A Div. of IT&T, 500
 Washington Ave., Nutley 10, N. J.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave.,
 Belleville, N. J. ADV. PG. 279.
 Insuline Corp. of America, 186 Granite St., Manchester,
 N. H.
INTERELECTRONICS CORP., 2432 Grand Concourse,
 New York 58, N. Y. ADV. PG. 655.
 Jowil Electronics, Inc., 7945 Germantown Ave., Phila-
 delphia 18, Pa.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10,
 Calif. ADV. PG. 231.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
MAGANAVOX CO., Component Sales, Industrial & Defense
 Products, Fort Wayne, Ind. ADV. PG. 181.
 Mercury Electronic Co., Box 450, Red Bank, N. J.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
 Pacific Mercury Television Mfg. Corp., 5955 Van Nuys
 Blvd., Van Nuys, Calif.
 Phecco, Inc., 3640 Woodland St., Baltimore 15, Md.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG.
 471.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38,
 Station J, Buffalo 8, N. Y. ADV. PG. 529.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG.
 622.
 Sickles, F. W., Div., General Instrument Corp., 165 Front
 St., Chicopee, Mass.
 Square Root Mfg. Corp., 391 Saw Mill River Rd.,
 Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chi-
 cago 39, Ill.
 Summit Electronics, Inc., 7 Industrial Place, Summt,
 N. J.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long
 Island City 1, N. Y. ADV. PG. 538.
TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG.
 449.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 U M & F Manufacturing Corp., 10929 Vanowen St.,
 North Hollywood, Calif.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif.
 ADV. PG. 467.
 Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City
 27, Mo.

AMPLIFIERS—Recording

Acme Electronix Div. of NEA Service, Inc., W. Third &
 Lakeside, Cleveland 13, Ohio.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
ALDEN ELECTRONIC & IMPULSE RECORDING EQUIP-
MENT CO., Box 125, Westboro, Mass. ADV. PG. 441.
 Allegany Instrument Co., Inc., Cumberland, Md.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly
 Hills, Calif.
 Amplifier Corp. of America, 396 Broadway, New York 13,
 N. Y.
 Atlas Coil, Inc., Cottage St., Derby, Conn.
 Audio & Video Products Co., 730 Fifth Ave., New York
 19, N. Y.
 Authorized Manufacturers Service Co., Inc., 919 Wyckoff
 Ave., Brooklyn 27, N. Y.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box
 1759, Fort Lauderdale, Fla.
 Berndt-Bach, Inc., Auricon Div., 6914 Romaine St.,
 Hollywood 38, Calif.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14,
 N. Y.
 British Industries Corp., 164 Duane St., New York 13,
 N. Y.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave.,
 Burbank, Calif. ADV. PG. 448.
 Consolidated Engineering Corp., 300 N. Sierra Madre
 Villa, Pasadena 15, Calif.
 Daystrom Instrument Co., Archbald, Pa.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass.
 ADV. PG. 85.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington,
 N. J. ADV. PG. 536.
 Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 Fairchild Recording Equipment Co., 154th St. & Seventh
 Ave., Whitestone, N. Y.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben
 St., Brooklyn 5, N. Y. ADV. PG. 642.

Fisher Radio Corp., 21-21 Forty-Fourth Drive, Long
 Island City 1, N. Y.
 Gates Radio Co., Quincy, Ill.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56,
 N. Y.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver
 10, Colo.
 Holl Audio Inc., 5014 N. Encinta Ave., Temple City,
 Calif.
 Insuline Corp. of America, 186 Granite St., Manchester,
 N. H.
INTERELECTRONICS CORP., 2432 Grand Concourse, New
 York 58, N. Y. ADV. PG. 655.
 International Research Associates, 2221 Warwick Ave.,
 Santa Monica, Calif.
 International Testing Service, 321 N. Hamilton St.,
 Saginaw, Mich.
 Jersey City Technical Laboratory, 880 Bergen Ave.,
 Jersey City 6, N. J.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave.,
 Cambridge 39, Mass. ADV. PG. 40, 41.
LANGVIN MANUFACTURING CORP., 37 W. 65th St.,
 New York 23, N. Y. ADV. PG. 152, 153.
 M P Engineering Co., Fairfield 3, Conn.
 McIntosh Laboratory, Inc., 320 Water St., Binghamton,
 N. Y.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave.,
 P. O. Box 707, North Hollywood, Calif.
MAGNECORD, INC., 225 W. Ohio St., Chicago 10, Ill.
 ADV. PG. 220.
 Newcomb Audio Products Co., 6824 Lexington Ave.,
 Hollywood 38, Calif.
 Photron Instrument Co., 6516 Detroit Ave., Cleveland 2,
 Ohio.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect
 Place, West Newton 65, Mass. ADV. PG. 92.
PRESTO RECORDING CORP., Paramus, N. J. ADV.
 PG. 139.
RADIO CORP. OF AMERICA, Engineering Products Div.,
 Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
REEVES INSTRUMENT CORP., 215 E. 91st St., New
 York N. Y. ADV. PG. 597.
 Rek-O-Kut Co., 38-01 Queens Blvd., Long Island City 1,
 N. Y.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cam-
 bridge 39, Mass.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike,
 New Hyde Park, N. Y. ADV. PG. 69-72.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long
 Island City 3, N. Y.
 SOS Cinema Supply Corp., 602 W. 52nd St., New York
 19, N. Y.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long
 Island City 1, N. Y. ADV. PG. 538.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Phila-
 delphia 44, Pa.
 Trutone Electronics, Inc., 812-14 N. Highland Ave., Los
 Angeles 38, Calif.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

AMPLIFIERS—r-f
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 174, 175.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman
 Way, North Hollywood, Calif.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak
 Lane, Bristol 1, Pa. ADV. PG. 592.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th
 St., New York 1, N. Y. ADV. PG. 201.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
 Livingston, N. J. ADV. PG. 572.
 Communications Co., Inc., 300 Greco Ave., Coral Gables
 34, Fla.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner
 Blvd., Dallas 10, Texas.
 Daystrom Instrument Co., Archbald, Pa.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington,
 N. J. ADV. PG. 536.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
 Douglaston, N. Y.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City,
 N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie,
 Ill.
 Gates Radio Co., Quincy, Ill.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1,
 N. Y. ADV. PG. 371.
 Gosnet Co., 801 S. Main St., Burbank, Calif.
 Granco Products, Inc., 36-17 20th Ave., Long Island
 City, N. Y.
 Industrial Television, Inc., 369 Lexington Ave., Clifton,
 N. J.
 Instruments for Industries, Inc., Old Country Road,
 Mineola, N. Y.
 International Research Associates, 2221 Warwick Ave.,
 Santa Monica, Calif.
 Jerrold Electronics Corp., 26th & Dickinson Sts.,
 Philadelphia 46, Pa.
 Jowil Electronics, Inc., 7945 Germantown Ave., Phila-
 delphia 18, Pa.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O.
 Box 1320, Palo Alto, Calif.

KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne, Ind. ADV. PG. 181.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Model Engineering & Mfg. Inc., Huntington, Ind.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
TELETRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 Westbury Electronics, Inc., 40 Urban Ave., Westbury, N. Y.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wilcox-Gay Corp., Charlotte, Mich.
 Wuderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

AMPLIFIERS—Servo

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Arma Corp., Old Country Rd., Garden City, N. Y.
 Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. J. ADV. PG. 490.
 Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
 Bristol Co., The, Waterbury 20, Conn.
 Computing Devices of Canada Ltd., P. O. Box 508, Ottawa, Ontario.
 Courter Electric Products, Inc., Boyne City, Mich.
 Daystrom Instrument Co., Archbald, Pa.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
DEOLCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 Dumont-Airplane & Marine Instruments, Inc., 15 William St., New York 5, N. Y.
 Edo Corp., College Point, N. Y.
 Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif.
 Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Feedback Controls, Inc., 503 Rhode Island Ave., N. E. Washington 2, D. C.
 Fisher Radio Corp., 21-21 Forty-Fourth Drive, Long Island City 1, N. Y.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 146.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
INPPA ELECTRONIC CORP., Roseland, N. J. ADV. PG. 580.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 253-256.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
 Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
 L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.
LINK AVIATION, INC., Binghamton, N. Y. ADV. PG. 507.
MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 563.

MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 212.
 Magnetic Research Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
MID-CENTURY INSTRUMENTAL CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 Radiation, Inc., Melbourne, Fla.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
 Richardson Scale Co., Clifton, N. J.
 Robineite Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
 Rockwell Engineering Co., 4063 N. New Jersey St., Indianapolis 5, Ind.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Schaevitz Engineering, P. O. Box 505, Camden 1, N. J.
 Seaboard Electric Co., 417 Canal St., New York 13, N. Y.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.
 Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
 Servo-Tek Products Co., Inc., 1086 Goffle Rd., Hawthorne, N. J.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 Tallier & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
TRANSCOIL CORP., 107 Grand St., New York 13, N. Y. ADV. PG. 37.
 Transistor Components Co., 301 Oakwood Ave., East Aurora, N. Y.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.

AMPLIFIERS—Strain Gage

Allegany Instrument Co., Inc., Cumberland, Md.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Atlas Coil, Inc., Cottage St., Derby, Conn.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Daystrom Instrument Co., Archbald, Pa.
EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 Electronic Engineering Associates, Ltd., 1048 Brittan Ave., San Carlos, Calif.
 Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 Ellis Associates, Box 77, Pelham, N. Y.
 Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
FIELD'S INSTRUMENT DIV. OF ROBERT-SHAW CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FURST ELECTRONICS, 3324 A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
 General Devices, Inc., P. O. Box 253, Princeton, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 146.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hanover Developments, 401 E. 74th St., New York 21, N. Y.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HEILAND RESEARCH CORP., 150 E. 5th Ave., Denver 9, Colo. ADV. PG. 95.

INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Miller Instruments, Inc., William, 325 N. Halstead, Pasadena 8, Calif.
 Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
 Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 Photon Instrument Co., 6516 Detroit Ave., Cleveland, Ohio.
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
 Radiation, Inc., Melbourne, Fla.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.
 Southwestern Industrial Electronics Co., 2831 Post Rd., P. O. Box 13058, Houston 19, Texas.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Tallier & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Yellow Springs Instrument Co., Inc., P. O. Box Yellow Springs, Ohio.

AMPLIFIERS—Sweep

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CLEGG LABORATORIES, INC., 142 S. Livingston, Livingston, N. J. ADV. PG. 572.
 Daystrom Instrument Co., Archbald, Pa.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
H-LAB., 53 Industrial Rd., Berkeley Heights, N. J. ADV. PG. 661.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jowl Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Cybernetes Co., 1100 Raymond Blvd., Newark, N. J.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.

AMPLIFIERS—Television

Adler Communications Laboratories, 1 Le Fevre Rd., New Rochelle, N. Y.
 American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.
 Blonder-Tongue Laboratories, Inc., 526-536 North Westfield, N. J.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 1, N. Y.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Daystrom Instrument Co., Archbald, Pa.
 Dumont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Electro-Voice, Inc., Buchanan, Mich.
 Federal Telecommunication Labs., A Div. of IT&T, Washington Ave., Nutley 10, N. J.
 Gates Radio Co., Quincy, Ill.
 General Precision Laboratories, Inc., 63 Bedford Pleasantville, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.
H-LAB., 53 Industrial Rd., Berkeley Heights, N. J. ADV. PG. 661.
 International Telemeter Corp., Ampli-Vision Div., Stoner Ave., Los Angeles 25, Calif.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
 Jowl Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 Cybernetes Co., 1100 Raymond Blvd., Newark, N. J.
 Linear Equipment Labs., Brightwater Place, Massachusetts, N. Y.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver New York 4, N. Y.
 Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pye, Ltd., Cambridge, England.

CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
Standard Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
SPENCER-KENNEDY LABS, INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
STANDARD APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
STROMBEY, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
STRONG INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
Stratton, Inc., 460 North Ave., New Rochelle, N. Y.
Stratton Electronics, Inc., 812-14 N. Highland Ave., Los Angeles 38, Calif.

AMPLIFIERS—Transistor

Transistor Div. of NEA Service, Inc., W. Third & 15th, Cleveland 13, Ohio.
LAB DIV. OF GLOBE-UNION, INC., 914Y E. Wisconsin Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 343, 607, 659.
Transit Telephone & Electric Corp., 70 Britannia St., New Haven, Conn.
Transit Instrument Co., Archbald, Pa.
TRANS-DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Transonic Research Associates, Inc., 715 Main St., North Plainfield, N. J.
TRANS STATE LABORATORIES, 2608 Merrick Rd., New Rochelle, N. Y. ADV. PG. 478.
TRANS TELEPHONE & RADIO CO., A DIV. OF IT&T, 100 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
Trans-Telephone Ltd., 247 Regent St., W1, London, England.
Trans-Telco, 53 Industrial Rd., Berkeley Heights, N. J. ADV. PG. 661.
TRANS-AIRE, INC., 300 Winona Ave., Burbank, Calif. ADV. PG. 205.
TRANS-CONTROL CO., Straight Path & Arlington St., Wyandanch, N. Y. ADV. PG. 47.
Trans Corp. of America, 186 Granite St., Manchester, N. H.
TRANSBORATORIES, INC., Genesee, Pa. ADV. PG. 639.
TRANS-AMPLIFIERS, INC., 632 Tinton Ave., New Rochelle, N. Y. ADV. PG. 212.
Trans Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
Trans, Inc., 21 N. 3rd St., Minneapolis, Minn.
Trans Mercury Television Mfg. Corp., 5955 Van Nuys St., Van Nuys, Calif.
Trans, Inc., 2056 E. Fourth St., Cleveland 15, Ohio.
TRANS & ELECTRONICS CO., INC., P. O. Box 38, Buffalo 8, N. Y. ADV. PG. 529.
Trans Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
Trans Corp., Saw Mill River Rd., P. O. Box 200, Roseton, N. Y.
Trans Products, Inc., Alamo Downs, Box 85-D, San Antonio, Rt. 4, Texas.
Trans Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Trans Electronics, Inc., 7 Industrial Place, Summit, N. J.
Trans Components Co., 301 Oakwood Ave., East Rutherford, N. Y.
Trans Products, Inc., Snow & Union Sts., Brighton, Mass.
Trans F Manufacturing Corp., 10929 Vanowen St., Hollywood, Calif.

AMPLIFIERS—Ultrasonic

TRANS ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
TRANS INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fairport, N. J. ADV. PG. 426.
TRANS-URG ULTRASONIC LABORATORY, 94 Green St., Wrentham Plain 30, Mass. ADV. PG. 571.
Trans, Inc., Cottage St., Derby, Conn.
Trans Marine Div., National-Simplex Bludworth, Inc., 100 11th St., New York 38, N. Y.
TRANS ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
TRANS ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
Trans (Canada) Ltd., 301-303 Windsor St., Halifax, Nova Scotia, Canada.
Trans Instrument Co., Archbald, Pa.
Trans, Inc., P. O. Box 192, Glenside, Pa.
Trans, College Point, N. Y.
TRANS CORP., Metuchen, N. J. ADV. PG. 640.
TRANS ELECTRONICS CORP., 2432 Grand Concourse, New Rochelle, N. Y. ADV. PG. 655.
Trans National Testing Service, 321 N. Hamilton St., Ann Arbor, Mich.
Trans National Electronics Corp., 137 Hudson St., New Rochelle, N. Y.
TRANS, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
TRANS WHITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
Transvator Co., Electronic Div., 35 Ryerson St., New York, N. Y.
TRANS-SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
Trans Laboratories, 1240 Main St., Hartford 3, Conn.

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Telephonics Corp., Park Ave., Huntington, N. Y.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.
Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill.
VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.

AMPLIFIERS—Vibration Pickup

Advanced Electronics, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
Atlas Coil, Inc., Cottage St., Derby, Conn.
AUDIO PRODUCTS CORP., 2265 Westwood Blvd., Los Angeles 64, Calif. ADV. PG. 653.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
Erwood, Inc., 1782 Berteau Ave., Chicago 13, Ill.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
Gates Radio Co., Quincy, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
Phatron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

AMPLIFIERS—Wideband

Airmec Ltd., High Wycombe, Buckinghamshire, England.
American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.
Andersen Laboratories, Inc., 39 Talcott Rd., West Hartford 10, Conn.
ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 571.
Atlas Coil, Inc., Cottage St., Derby, Conn.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
Beva Laboratory, P. O. Box 478, Trenton 9, N. J.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
Daystrom Instrument Co., Archbald, Pa.
Deltron, Inc., P. O. Box 192, Glenside, Pa.
Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Dumont-Airplane & Marine Instruments, Inc., 15 William St., New York 5, N. Y.
Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.
ELECTRICAL & PHYSICAL INSTRUMENT CORP., 42-19 27th St., Long Island City 1, N. Y. ADV. PG. 558.
Electro-Mechanical Research, Inc., Ridgefield, Conn.
El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Gonset Co., 801 S. Main St., Burbank, Calif.
Hanover Developments, 401 E. 74th St., New York 21, N. Y.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
Instruments for Industries, Inc., Old Country Road, Mineola, N. Y.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
International Telemeter Corp., Ampli-Vision Div., 2000 Stoner Ave., Los Angeles 25, Calif.
Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.
Linear Equipment Labs., Brightwater Place, Massapequa, N. Y.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
McIntosh Laboratory, Inc., 320 Water St., Binghamton, N. Y.
Mercury Electronic Co., Box 450, Red Bank, Ill. J.
Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
Miller Instruments, Inc., William, 253 N. Halstead Ave., Pasadena 8, Calif.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
NEW LONDON INSTRUMENT CO., P. O. Box 139, New London, Conn. ADV. PG. 451.
ORTHO CORP. THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
SPENCER-KENNEDY LABS, INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
Technical Measurement Corp., P. O. Box 1947, New Haven, Conn.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
Tektronix Inc., P. O. Box 831, Portland 7, Ore.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
Transitron, Inc., 154 Spring St., New York 12, N. Y.
U. S. Electronic Co., 262 Canner St., New Haven 11, Conn.
VOLKERS & SCHAFFER MFG. CORP., P. O. Box 996, Schenectady, N. Y. ADV. PG. 484.
WHITE ELECTRON DEVICES, INC., ROGER, 12 W. Island Rd., Ramsey, N. J. ADV. PG. 646.

ANALOGS

See MACHINE—Electronic Computing

ANALYZERS—Audio Amplifier

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Daystrom Instrument Co., Archbald, Pa.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
 Magma Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

ANALYZERS—Capacitor

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 BRUNO NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Electro-Tech Equipment Co., 308 Canal St., New York 13, N. Y.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
 GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
 KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.

ANALYZERS—Circuit

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pasaden, N. J. ADV. PG. 645.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
 Davstrom Instrument Co., Archbald, Pa.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Hall, Inc., F. Sumner, Amityville, N. Y.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
 Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

ANALYZERS—Coincidence

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Beva Laboratory, P. O. Box 478, Trenton 9, N. J.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Nuclear Specialty Co., Center Moriches, N. Y.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.

ANALYZERS—Frequency

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 658.
 Endeveco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420-421.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 PANORAMIC RADIO PRODUCTS, INC., 10 Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
 Western Electro-Acoustic Labs., 204 S. Beverly Drive, Beverly Hills, Calif.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

ANALYZERS—Gas

Applied Physics Corp., 362 W. Colorado St., Pasadena 1, Calif.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 Bristol Co., The, Waterbury 20, Conn.
 BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Gow-Mac Instrument Co., 100 Kings Rd., Madison, N. J.
 Instrument Development Labs., Inc., 163 Highland Ave., Needham Heights, Mass.
 Johnson-Williams, Ltd., 2526 Third St., Palo Alto, Calif.
 King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 LISTON-BECKER INSTRUMENT CO., INC., 649 Hope St., Springfield, Stamford, Conn. ADV. PG. 674-675.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
 Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
 Tailor & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
 VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 466.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Warren Electronics, Inc., Bound Brook, N. J.

ANALYZERS—Harmonic

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 658.
 Donner Scientific Co., 2829 Seventh St., Berkeley 10, Calif.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Endeveco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

ANALYZERS—Intermodulation

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 31.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

ANALYZERS—Magnetic

Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Computing Devices of Canada Ltd., P. O. Box 508, Ottawa, Ontario.
 Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 T.L.G. Electric Corp., 31 W. 27th St., New York 1, N. Y.

ANALYZERS—Microwave Radar
See MICROWAVE ACCESSORIES**ANALYZERS—Noise**

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 658.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

ANALYZERS—Servo

BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 28.
 Bristol Co., The, Waterbury 20, Conn.
 DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.

ANALYZERS—Spectrum

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
 C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Century Metalcraft Corp., Electronic Div., 14806 Oxley St., Van Nuys, Calif.
 Computing Devices of Canada, Ltd., P. O. Box 508, Ottawa, Ontario.
 De Mornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Donner Scientific Co., 2829 Seventh St., Berkeley 10, Calif.
 Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
 F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 GAROD RADIO CORP., 79 Washington St., Brooklyn, N. Y. ADV. PG. 371.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

AVE ASSOCIATES INC., 22 Cummington St.,
15, Mass. ADV. PG. 613.

Optica, S.P.A., Snow & Union Sts., Brighton 35,

tern Engineering, Inc., Manchester, N. H.

OMIC RADIO PRODUCTS, INC., 10 S. Second Ave.,
ernon, N. Y. ADV. PG. 660.

ner Corporation, The, Main Ave., Norwalk,

AD ELECTRONICS CORP., 100 Metropolitan Ave.,
yn 11, N. Y. ADV. PG. 54-56.

CHNIC RESEARCH & DEVELOPMENT CO., INC.,
illary St., Brooklyn 1, N. Y. ADV. PG. 244,

an, Inc., Melbourne, Fla.

Instrument Development Labs., 2337 W. 67th
Chicago 36, Ill.

SONIC CORP., 111 Bleeker St., New York 12,
ADV. PG. 631.

CORP. OF AMERICA, 20-20 Jericho Turnpike,
Hyde Park, N. Y. ADV. PG. 69-72.

d Telephones & Cables Ltd., Connaught House,
ch, London, W.C. 2, England.

IA ELECTRIC PRODUCTS, INC., 1740 Broadway,
ork 19, N. Y. ADV. PG. 699-706.

T, INC., 404 Main St., Waltham 54, Mass.
PG. 474, 475.

Laboratories, Inc., Harvard, Mass.

ay Corp., Charlotte, Mich.

ZERS—Surface Analyzers & Comparators

ociates, Inc., 33 University Rd., Cambridge 38,

Lomb Optical Co., 614 St. Paul St., Rochester

ELECTRONICS CO., 3405 Perkins Ave., Cleveland

io, ADV. PG. 406, 407.

INSTRUMENT DIV. OF ROBERTSHAW-FULTON

OLS CO., 2920 N. Fourth St., Philadelphia 33,
ADV. PG. 610.

Research Laboratory, Menlo Park, Calif.

ZERS—Ultrasonic

ELECTRONICS CO., 3405 Perkins Ave., Cleveland

io, ADV. PG. 406, 407.

LABORATORIES, INC., 142 S. Livingston Ave.,
nton, N. J. ADV. PG. 572.

Scientific Co., 2829 Seventh St., Berkeley 10,

rcuits, Inc., 401 E. Green St., Pasadena, Calif.

VICES PRODUCTS CORP., 38-15 Bell Blvd.,
N. Y. ADV. PG. 277.

nal Electronics Corp., 137 Hudson St., New

3, N. Y.

OMIC RADIO PRODUCTS, INC., 10 S. Second Ave.,
ernon, N. Y. ADV. PG. 660.

ERAMICS CORP., Metuchen, N. J. ADV. PG.

ZERS—Vibration

Electronics, Inc., 94 Silas Deane Highway,
Hill, Conn.

neering Corp., 701 W. Broadway, Glendale 4,

ELECTRONICS CO., 3405 Perkins Ave., Cleveland

io, ADV. PG. 406, 407.

ed Engineering Corp., 300 N. Sierra Madre

Padadena 15, Calif.

INIC TUBE CORP., 1200 E. Mermaid Ave., Phila-

18, Pa. ADV. PG. 426.

Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.

L ELECTRIC CO., Apparatus Sales Div., 1 River

henetady 5, N. Y. ADV. PG. 1-20.

RADIO CO., 275 Massachusetts Ave., Cam-

39, Mass. ADV. PG. 177-180.

CORP., Metuchen, N. J. ADV. PG. 640.

Electronics, Inc., 415 W. Pike St., Philadel-

o, Pa.

TRIC CO., 25 Maple Ave., Pine Brook, N. J.

PG. 420, 421.

HITE INSTRUMENT CO., 580 Massachusetts Ave.,
idge 39, Mass. ADV. PG. 40, 41.

ts Co., 1100 Raymond Blvd., Newark, N. J.

& Co., Ltd., Beckenham, Kent, England.

IC RADIO PRODUCTS, INC., 10 S. Second Ave.,
ernon, N. Y. ADV. PG. 660.

ic, Hermon Hosmer, 385 Putnam Ave., Cam-

39, Mass.

R GYROSCOPE CO., DIV. OF SPERRY CORP.,
eck, N. Y. ADV. PG. 331, 332.

a Telephones & Cables Ltd., Connaught House,
rn, London, W.C. 2, England.

Corp., 7466 W. Irving Park Rd., Chicago 34, Ill.

ZERS—Video

LABORATORIES, INC., 142 S. Livingston Ave.,
nton, N. J. ADV. PG. 572.

Instrument Co., Archbald, Pa.

Scientific Co., 2829 Seventh St., Berkeley 10,

Electronics, Inc., 415 W. Pike St., Philadel-

o, Pa.

TRIC CO., 25 Maple Ave., Pine Brook, N. J.

PG. 420, 421.

INSTRUMENTS, LTD., 23 Beaver St., New

3, N. Y. ADV. PG. 150.

OME, INC., 88 Merrick Rd., Amityville, N. Y.

PG. 303.

TRUMENT CO., 728 Garden St., Carlstadt,

ADV. PG. 540.

United Technical Laboratories, Box 425-V, Morristown,

N. J.

WESTON ELECTRICAL INSTRUMENT CORP., 641 Fre-

linghuysen Ave., Newark 5, N. J. ADV. PG. 530.

ANALYZERS—Wave

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill.

ADV. PG. 584.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,

Livingston, N. J. ADV. PG. 572.

DAVIES LABORATORIES, INC., 4705 Queensbury Rd.,

Riverdale, Md. ADV. PG. 658.

DUBROW DEVELOPMENT CO., 235 Penn St., Burling-

ton, N. J. ADV. PG. 536.

Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.

GENERAL RADIO CORP., 275 Massachusetts Ave., Cam-

bridge 39, Mass. ADV. PG. 177-180.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto,

Calif. ADV. PG. 29-36.

INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St.,

New York 3, N. Y. ADV. PG. 657.

KROHN-HITE INSTRUMENT CO., 580 Massachusetts

Ave., Cambridge 39, Mass. ADV. PG. 40, 41.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New

York 4, N. Y. ADV. PG. 150.

Muirhead & Co., Ltd., Beckenham, Kent, England.

PANORAMIC RADIO PRODUCTS, INC., 10 S. Second

Ave., Mt. Vernon, N. Y. ADV. PG. 660.

RADIO SONIC CORP., 111 Bleeker St., New York 12,

N. Y. ADV. PG. 631.

Sierra Electronic Corp., San Carlos, Calif.

Standard Telephones & Cables Ltd., Connaught House,

Aldwych, London, W.C. 2, England.

ANNEALERS—Glass

Forster-Teichmann Co., Clark Bldg., Pittsburgh, Pa.

Haydu Brothers, P. O. Box 1226, Plainfield, N. J.

Metro Engineering Associates, Easthampton, Mass.

PIONEER MACHINE WORKS, 6136 Adam St., West

New York, N. J. ADV. PG. 656.

STEINER-IVES CO., Springfield Rd., Union, N. J. ADV.

PG. 405.

ANTENNA DRAG UNITS

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box

1759, Fort Lauderdale, Fla.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.

ANTENNA FAIRLEADS

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box

1759, Fort Lauderdale, Fla.

Camfield Mfg. Co., 718 N. Seventh St., Grand Haven,

Mich.

Clarke Instrument Div., National Electrical Machine

Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.

Diamond Instrument Co., 40 North Ave. at Broadway,

Wakefield, Mass.

Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.

Molded Insulation Co., 335 E. Price St., Philadelphia 44,

Pa.

Roflan Co., Corner Route 1 & Camp Meeting Rd., Tops-

field, Mass.

Stamford Metal Specialty Co., 429 W. Broadway, New

York 12, N. Y.

ANTENNA FEED SYSTEMS

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave.,

Linden, N. J. ADV. PG. 428.

Allied Research & Engineering Co., 1041 N. Las Palmas,

Hollywood, Calif.

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill.

ADV. PG. 584.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper

Darby, Pa. ADV. PG. 174, 175.

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box

1759, Fort Lauderdale, Fla.

Bone Engineering Corp., 701 W. Broadway, Glendale 4,

Calif.

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.

BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island

City 1, N. Y. ADV. PG. 151.

Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.

Communication Products Co., Inc., Marlboro, N. J.

EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia

44, Pa. ADV. PG. 465.

Electro Precision Products, Inc., 139-30 34th Rd.,

Flushing 54, N. Y.

Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.

GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO.,

Endicott St., Norwood, Mass. ADV. PG. 57.

Gates Radio Co., Quincy, Ill.

GENERAL COIL PRODUCTS CORP., 43 Roselle St.,

Mineola, N. Y. ADV. PG. 653.

General Precision Laboratories, Inc., 63 Bedford Rd.,

Pleasantville, N. Y.

Gonset Co., 801 S. Main St., Burbank, Calif.

Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena,

Sightmaster of California Co., Gillespie Airport, Santee,

Calif.

TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV.

PG. 516.

Technical Materiel Corp., P. O. Box 142, Mamaroneck,

N. Y.

TECHNICRAFT LABORATORIES, INC., Thomaston-Water-

bury Rd., Thomaston, Conn. ADV. PG. 461.

Terpening Co., L. H., 16 W. 61st St., New York, N. Y.

Wickes Engineering & Construction Co., P. O. Box 590,

Camden 1, N. J.

Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ANTENNA PEDESTALS—Gear Driven Radar

Atlas Metal Stamping Co., Castor & Kensington Aves.,

Philadelphia 24, Pa.

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.

Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.

Century Metalcraft Corp., Electronic Div., 14806 Oxnard

St., Van Nuys, Calif.

Conrad & Moser, 2 Borden Ave., Long Island City 1,

N. Y.

Daystrom Instrument Co., Archbald, Pa.

ECLIPSE PIONEER DIV., BENDIX AVIATION CORP.,

Teterboro, N. J. ADV. PG. 105-108.

Electro-Mechanical Div. of General Riveters, Inc., 785

Hertel Ave., Buffalo 7, N. Y.

GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO.,

Endicott St., Norwood, Mass. ADV. PG. 57.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Phila-

delphia 30, Pa.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,

New York 4, N. Y.

Maryland Electronic Mfg. Corp., College Park, Md.

P. M. Industries, Inc., Stamford, Conn.

PRESS WIRELESS LABORATORIES, INC., 25 Prospect

Place, West Newton 65, Mass. ADV. PG. 92.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Wal-

tham 54, Mass. ADV. PG. 26.

REEVES INSTRUMENT CORP., 215 E. 91st St., New

York, N. Y. ADV. PG. 597.

Rostan Corp., 5660 59th St., Maspeth 78, N. Y.

ANTENNA REFLECTORS—Radar Parabolic

AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave.,

Quincy 69, Mass. ADV. PG. 418.

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV.

PG. 584.

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.

Camfield Mfg. Co., 718 N. Seventh St., Grand Haven,

Mich.

Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.

Century Metalcraft Corp., Electronic Div., 14806 Ox-

nard St., Van Nuys, Calif.

Conrad & Moser, 2 Borden Ave., Long Island City 1,

N. Y.

Dalmo Victor Co., 1414 El Camino Real, San Carlos,

Calif.

Daystrom Instrument Co., Archbald, Pa.

Diamond Instrument Co., 40 North Ave. at Broadway,

Wakefield, Mass.

DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave.,

New Rochelle, N. Y. ADV. PG. 601.

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago

51, Ill.

Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.

GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO.,

Endicott Street, Norwood, Mass. ADV. PG. 57.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Phila-

delphia 30, Pa.

Keller Products Co., 41 Union St., Manchester, N. H.

Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Daystrom Instrument Co., Archbald, Pa.
ECLIPSE PIONEER DIV., BENDIX AVIATION CORP.,
 Teterboro, N. J. ADV. PG. 105-108.
 Electro-Mechanical Div. of General Riveters, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 LaPointe Electronics Inc., Rockville, Conn.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Philco Corp., Accessory Div., A & Alleghany Ave., Philadelphia 34, Pa.
 Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
 Trio Mfg. Co., Griggsville, Ill.

ANTENNA TOWERS & SUPPORTS

Alpar Mfg. Co., P. O. Box 152, Redwood City, Calif.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
 Baker Manufacturing Co., Evansville, Wis.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Blaw-Knox Div. of Blaw Knox Co., Farmers Bank Bldg., Pittsburgh 22, Pa.
 Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif.
 Channel Master Co., Ellenville, N. Y.
 Dresser-Stacey Co., Ideco Div., 875 Michigan Ave., Columbus 8, Ohio.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
 I. E. Manufacturing, 321 N. Hoyle Ave., Chicago 12, Ill.
 Kenwood Engineering Co., Inc., 265 Colfax Ave., Kenilworth, N. J.
 LaPointe Electronics Inc., Rockville, Conn.
 Lehigh Structural Steel Co., 17 Battery Place, New York 4, N. Y.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
 National Electric Products Co., 140 Stanwix St., Pittsburgh 22, Pa.
 Philco Corp., Accessory Div., A & Alleghany Ave., Philadelphia 34, Pa.
 Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.
 Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
 Rohn Mfg. Co., 116 Limestone, Bellevue, Peoria, Ill.
 Rostan Corp., 5660 59th St., Maspeth 78, N. Y.
 South River Metal Products Co., 377-379 Turnpike, South River, N. J.
 Stainless, Inc., Third St., North Wales, Pa.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
 Tel-A-Ray Enterprises Inc., Box 332, Henderson, Ky.
 Tele-Ex-Pand Corp., Fourth & Pine Sts., P. O. Box 392, Berwick, Pa.
 Truscon Steel Division of Republic Steel Corp., Youngstown, Ohio.
 Vesto Co., Inc., 20th & Clay, North Kansas City, Mo.
 Walnut Machine Co., 1529 S. Walnut St., South Bend 14, Ind.
WINCHAPPER CORP., E. 7th & Division Sts., Sioux City, Iowa. ADV. PG. 257.
 Wind Turbine Co., E. Market St. & Penna R. R., West Chester, Pa.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ANTENNA TUNING UNITS

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 143, 149.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.
 Engineering Research Associates, Div. of Remington Rand, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
 Gates Radio Co., Quincy, Ill.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.

Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
 Maryand Electronic Mfg. Corp., College Park, Md.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
 Q.R.K. Electronic Products, 445 N. Circle Drive, Fresno, Calif.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City 1, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

ANTENNAS—Airborne Radar Spinner

Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bore Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
 Canoga Corp., 5955 Supulveda Blvd., Van Nuys, Calif.
 Dalmo Victor Co., 1414 El Camino Real, San Carlos, Calif.
 Daystrom Instrument Co., Archbald, Pa.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Electro-Mechanical Div. of General Riveters, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
TORNGREN CO., INC., C. W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.

ANTENNAS—Aircraft Type

AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 583.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 251.
 Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
DALE PRODUCTS, INC., Box 136, Columbus, Neb. ADV. PG. 134, 135.
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Electro Craft Industries Inc., 68 Jackson St., Stamford, Conn.
 Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
MAXSON CORP., W. L., 460 W. 34th St., New York 13, N. Y. ADV. PG. 250.
 Mitchell Industries, Inc., P.O. Box 17, Mineral Wells, Texas.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.

PRODUCTION RESEARCH CORP., Thornwood, N. Y. ADV. PG. 578.
 Rufan Co., Corner Route 1 & Camp Meeting Rd., field, Mass.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Stamford Metal Specialty Co., 429 W. Broadway, York, 12 N. Y.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. PG. 516.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Island City 1, N. Y. ADV. PG. 538.
THOR CERAMICS, INC., 225 Belleville Ave., B field, N. J. ADV. PG. 424.
TORNGREN CO., INC., C.W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.
 Transco Products, Inc., 12210 Nebraska Ave., Angeles 25, Calif.
 Wells & Winegard, 3000 Scotten Blvd., Burlington, Iowa.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 White Industries, Inc., 421 W. 54th St., New York 1, N. Y.
 Wilcox Electric Co., 1400 Chestnut St., Kansas Mo.
 Z & W Machine Products, Inc., Electronics Div., 516 St. Clair Ave., Cleveland 3, Ohio.

ANTENNAS—All Wave Receiving

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P.O. 1759, Fort Lauderdale, Fla.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. Y.
 Channel Master Co., Ellenville, N. Y.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burlington, N. Y.
 Consolidated Wire & Associated Companies, 1638 Clinton St., Chicago 16, Ill.
 Cornell-Dubilier Electric Corp., South Plainfield, N. Y.
 Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
 Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop Chicago 7, Ill. ADV. PG. 196.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn 1, N. Y. ADV. PG. 666.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 LaPointe Electronics Inc., Rockville, Conn.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 National Electronic Mfg. Corp., 186 Granite St., Chester, N. H.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass. ADV. PG. 1130 Wisconsin Ave., Chicago 14, Ill.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. PG. 516.
 Telrex, Inc., Ashbury Park, N. J.
TORNGREN CO., INC., C. W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.
 Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif.
 Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.
 Ward Products Corp., Div. of The Gabriel Co., Euclid Ave., Cleveland 15, Ohio.
 Wind Turbine Co., E. Market St. & Penna. R. R., Chester, Pa.

ANTENNAS—Auto

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. 1759, Fort Lauderdale, Fla.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. Y.
 Camburn, Inc., 32-40 57th St., Woodside, N. Y.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Connecticut Telephone & Electric Corp., 70 Britannia Meriden, Conn.
 Cornell-Dubilier Electric Corp., South Plainfield, N. Y.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
GENERAL CEMENT MFG. CO., ELECTRONICS DIV., Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn 1, N. Y. ADV. PG. 666.
 Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
 Miller Television Co., 2840 Naomi St., Burbank, Calif.
 National Electronic Mfg. Corp., 186 Granite St., Chester, N. H.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 1, N. Y.
 Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls 2, N. Y.
 Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 13, Ohio.
 Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
 Snyder Mfg. Co., Philadelphia 40, Pa.

Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

ANTENNAS—Broadcast Station Radiators

Alpar Mfg. Co., P. O. Box 152, Redwood City, Calif.
Federal Telecommunications Labs., A Div. of IT&T, 500 W. Washington Ave., Nutley 10, N. J.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., 801 S. Main St., Norwood, Mass. ADV. PG. 57.
Industrial Steel Co., 17 Battery Place, New York 4, N. Y.
Lingo Son, Inc., John E., 28th St. & Buren Ave., Can., N. J.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
Stainless, Inc., Third St., North Wales, Pa.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
TORNEN CO., INC., C. W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.
WINCHARGER CORP., E. 7th & Division Sts., Slough City, Iowa. ADV. PG. 257.
Wind Turbine Corp., E. Market St. & Penna. R. R., West Chester, Pa.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ANTENNAS—Directional Antenna Coupling & Plug Units

Allied Research & Engineering Co., 1041 N. LaS Palmas, Hollywood, Calif.
American Radio Hardware Co., Inc., 152 S. MacQuesten Mt. Vernon, N. Y.
PND CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 54.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
OCA MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
DUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City, N. Y. ADV. PG. 151.
G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
Lambert Mfg. Co., 32-40 57th St., Woodside, N. Y.
Lambert Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
Master Co., Ellenville, N. Y.
Marm Antenna Corp., 100 Prospect Ave., Burbank, Calif.
National Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
Nassau Corp., 126 Eleventh Ave., New York 11, N. Y.
Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
Precision Products, Inc., 139-30 34th Rd., Flushing 54, N. Y.
Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., 801 S. Main St., Norwood, Mass. ADV. PG. 57.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 2.
801 S. Main St., Burbank, Calif.
SOLID CIRCUITS, INC., 115 Roosevelt Ave., Bellemeade, N. J. ADV. PG. 279.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
States Co., 19 New Park Ave., Hartford 6, Conn.
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
Weston Laboratories, Inc., Harvard, Mass.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
WINCHARGER CORP., E. 7th & Division Sts., Slough City, Iowa. ADV. PG. 257.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

ANTENNAS—Dummy Loads

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 519.
EOGAR MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
DUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
DALE PRODUCTS, INC., Box 136, Columbus, Neb. ADV. PG. 134, 135.
De Mornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
Electro Precision Products, Inc., 139-30 34th Rd., Flushing 54, N. Y.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
Federal Telecommunications Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
Gates Radio Co., Quincy, Ill.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St., Boston 15, Mass. ADV. PG. 410.
JONES ELECTRONICS CO., INC., M. C., 185 N. Main St., Bristol, Conn. ADV. PG. 565.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
LAPP INSULATOR CO., INC., Radio Specialties Div., 31 Gilbert St., Le Roy, N. Y. ADV. PG. 414, 415.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
States Co., 19 New Park Ave., Hartford 6, Conn.
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
Weston Laboratories, Inc., Harvard, Mass.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

ANTENNAS—Fixed Station Antenna Systems

Alpar Mfg. Co., P. O. Box 152, Redwood City, Calif.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
Communication Products Co., Inc., Marlboro, N. J.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.

GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., 801 S. Main St., Norwood, Mass. ADV. PG. 57.
Gonset Co., 801 S. Main St., Burbank, Calif.
LaPointe Electronics Inc., Rockville, Conn.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
Maryland Electronic Mfg. Corp., College Park, Md.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
Pye, Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
Radio Specialty Mfg. Co., 2023 S.E. 6th Ave., Portland 14, Ore.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
Stainless, Inc., Third St., North Wales, Pa.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ANTENNAS—f-m Receiver

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
Hy-Lite Antennae Inc., 242 E. 137th St., New York 51, N. Y.
Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
LaPointe Electronics Inc., Rockville, Conn.
Miller Television Co., 2840 Naomi St., Burbank, Calif.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
Philon Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.
Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Stephens Mfg. Co., 8538 Warner Drive, Culver City, Calif.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
Tel-A-Ray Enterprises Inc., Box 332, Henderson, Ky.
Television Laboratories, Inc., Mill St., Wauconda, Ill.
Tennalab, Quincy, Ill.
Telrex, Inc., Asbury Park, N. J.
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.
Wind Turbine Corp., E. Market St. & Penna. R. R., West Chester, Pa.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ANTENNAS—f-m Transmitter

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., 801 S. Main St., Norwood, Mass. ADV. PG. 57.
Gates Radio Co., Quincy, Ill.
Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.

TORNGREN CO., INC., C. W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

ANTENNAS—Ground Plane

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls 2, N. Y.
Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
Pye, Ltd., Cambridge, England.
RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

ANTENNAS—Indoor

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
Camburn, Inc., 32-40 57th St., Woodside, N. Y.
Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
Channel Master Co., Ellenville, N. Y.
Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland, Ohio.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
GENERAL CEMENT MFG. CO., Electronic Div., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
LaPointe Electronics Inc., Rockville, Conn.
Miller Television Co., 2840 Naomi St., Burbank, Calif.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
Philco Corp., Accessory Div., A & Alleghany Ave., Philadelphia 34, Pa.
Polytron Corp., 191 Main St., Tarrytown, N. Y.
Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio.
Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.
Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
Spirling Products Co., 60 Grand St., New York, N. Y.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
Tele-Clear Corp., 185 N. Wabash Ave., Chicago 1, Ill.
Telrex, Inc., Asbury Park, N. J.
Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.
Ultrasonic Corp., 640 Memorial Drive, Cambridge 39, Mass.
Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.

ANTENNAS—Loop

Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 583.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 251.
Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
COILCRAFT, INC., Cary, Ill. ADV. PG. 534.

Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
HEPPNER MFG. CO., P. O. BOX 612, Round Lake, Ill. ADV. PG. 226.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau St., Brooklyn 22, N. Y. ADV. PG. 624.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
Melssner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
Polytron Corp., 191 Main St., Tarrytown, N. Y.
Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
Rolan Electric Co., 8020 S. Park Ave., Chicago 19, Ill.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
Superex Electronics Corp., 23 Atherton St., Yonkers, N. Y.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
Television Laboratories, Inc., Mill St., Wauconda, Ill.
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
United Technical Laboratories, Box 425-V, Morristown, N. J.

ANTENNAS—Marine

Aero Marine Radio Corp., 135 W. 16th St., New York 11, N. Y.
Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
Hudson American Corp., 25 W. 43rd St., New York 36, N. Y.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
Jefferson Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
Omega Laboratories, P. O. Box 33, Arlington 74, Mass.
Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.
Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls 2, N. Y.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
TORNGREN CO., INC., C. W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

ANTENNAS—Microwave

See MICROWAVE ACCESSORIES

ANTENNAS—Radar Receiving & Transmitting

Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
Dalmo Victor Co., 1414 El Camino Real, San Carlos, Calif.
Daystrom Instrument Co., Archbald, Pa.
Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.

Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
General Precision Laboratories, Inc., 63 Bedford Pleasantville, N. Y.
I-T-E Circuit Breaker Co., 19th & Hamilton Philadelphia 30, Pa.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
Kennedy & Co., D. S., Cohasset, Mass.
KINGS ELECTRONICS CO., 40 Marbledale Rd., T. Hoe, N. Y. ADV. PG. 199.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver New York 4, N. Y.
Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
National Aeronautical Corp., 180 S. Main St., Annapolis, Pa.
RADIO CORP. OF AMERICA, Engineering Products Camden, N. J. ADV. PG. Inside Back & Back Cover.
RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., 1000 South St., Woburn, Mass. ADV. PG. 26.
Redel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
Selector Industries, Inc., 3100 Ocean Parkway, Lynbrook 35, N. Y.
Sightmaster of California Co., Gillespie Airport, San Diego, Calif.
Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
Terpening Co., L. H., 16 W. 61st St., New York 100, N. Y.
Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
TORNGREN CO., INC., C. W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.
Trans-American Precision Instrument Corp., 34-17 Broadway, Flushing 54, N. Y.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
Wheeler Laboratories, Inc., Great Neck, N. Y.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

ANTENNAS—Railroad

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Communication Products Co., Inc., Marlboro, N. J.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF 88 Kingsland Rd., Clifton, N. J. ADV. PG. 162.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
Industrial Products Co., Div. of Danbury-Knudson, Danbury, Conn.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
Pye, Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Camden, N. J. ADV. PG. Inside Back & Back Cover.
Railway Communications, Inc., Smith Rd. & Glenview, Raytown, Mo.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
TORNGREN CO., INC., C. W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 6, Calif.

ANTENNAS—Rotary Beam

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Fretco, Inc., 406 N. Craig St., Pittsburgh 13, Pa.
Hy-Lite Antennae, Inc., 242 E. 137th St., New York 17, N. Y.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 595.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
Telrex Inc., Asbury Park, N. J.
Tennalab, Quincy, Ill.
TORNGREN CO., INC., C. W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.
Wind Turbine Co., E. Market St. & Penna. R. R., Chester, Pa.

ANTENNAS—Telescopic

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Camburn, Inc., 32-40 57th St., Woodside, N. Y.
Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
Gates Radio Co., Quincy, Ill.

Site Antennae, Inc., 242 E. 137th St., New York 51, N. Y.
 Line Corp. of America, 186 Granite St., Manchester, N. H.
MISSION CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 Peiss Products Industries, 812 N. Pulaski St., Chicago 11, Ill.
 Phon Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.
 Prax Products Div., Chisholm-Ryder Co., Inc., Highland College Aves., Niagara Falls 2, N. Y.
 Reco Mfg. Co., 7850 Garfield Blvd., Cleveland 25, Ohio.
 Ren Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
 S-F Products Co., 60 Grand St., New York, N. Y.
 Stord Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 Tex-Pand Corp., Fourth & Pine Sts., P. O. Box 6, Berwick, Pa.
 W. Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.

ANTENNAS—Television

Ac Tool & Specialties Co., 224 N. Loomis St., Chicago 7, Ill.
 Alldco, Inc., Mineral Wells, Texas.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
 B&T, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 19, Fort Lauderdale, Fla.
 Br Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Cairn, Inc., 32-40 57th St., Woodside, N. Y.
 CasMachine Co., 691 Antoinette St., Detroit 2, Mich.
 Chel Master Co., Ellenville, N. Y.
 Clear Beam Antenna Co., 100 Prospect Ave., Burbank, Calif.
CIROLO ELECTRONICS CO., INC., 1925 New York St., Huntington Station, N. Y. ADV. PG. 647.
 Corn-Dubilier Electric Corp., South Plainfield, N. J.
 Dal Electronics, Box 1247, Burbank, Calif.
 Del Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
 Duff Laboratories, Inc., Allen B. Duff Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Finco Co., 4612 St. Clair Ave., Cleveland 3, Ohio.
 Finco, Inc., 406 N. Craig St., Pittsburgh 13, Pa.
 H&S, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
HEAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Elm St., Rockford, Ill. ADV. PG. 380.
 G. Co., 801 S. Main St., Burbank, Calif.
 H. Antennae, Inc., 242 E. 137th St., New York 51, N. Y.
 Manufacturing, 321 N. Hoynes Ave., Chicago 12, Ill.
 Line Corp. of America, 186 Granite St., Manchester, N. H.
MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn 1, N. Y. ADV. PG. 666.
 Radio Electronics Inc., Rockville, Conn.
 L&S and Son, Inc., John E., 28th St. & Buren Ave., New York, N. Y.
 Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
 Marlin Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mic Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.
 MHI Television Co., 2840 Naomi St., Burbank, Calif.
 Mory Radio Mfg. Co., 2794 Market St., Salem, Ore.
 National Electric Products Co., 140 Stanwix St., Pittsburgh 22, Pa.
 National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 Peiss Products Industries, 812 N. Pulaski St., Chicago 11, Ill.
 Phon Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Philco Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.
 Phon Electronics Inc., 50 Island St., Lawrence, Mass.
 Prodell, Cambridge, England.
 Radio Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio.
 Radio Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back and Back Covers.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.
 Radio Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
 S-C Laboratories, Inc., 37 George St., Newark 5, N. J.
 Schuch Co., Walter L., 3225 Exposition Pl., Los Angeles 12, Calif.
 Skyl Antennae Corp., 200 Silver St., Sharon, Pa.
 Snyder Mfg. Co., Philadelphia 40, Pa.
 Spiraling Products Co., 60 Grand St., New York, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Stables, Inc., Third St., North Wales, Pa.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
 Tel-Ray Enterprises Inc., Box 332, Henderson, Ky.
 Telnear Corp., 185 N. Wabash Ave., Chicago 1, Ill.
 Telrel Inc., Asbury Park, N. J.
 Television Laboratories, Inc., Mill St., Wauconda, Ill.
 Tennb, Quincy, Ill.

Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.
 Trio Mfg. Co., Griggsville, Ill.
 Walnut Machine Co., 1529 S. Walnut St., South Bend 14, Ind.
 Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.
 Wells & Winegard, 3000 Scotten Blvd., Burlington, Iowa.

ANTENNAS—Television Built-in

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
 Television Laboratories, Inc., Mill St., Wauconda, Ill.

ANTENNAS—Television Multiple Set

Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 Camburn, Inc., 32-40 57th St., Woodside, N. Y.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
 Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
 I. E. Manufacturing, 321 N. Hoynes Ave., Chicago 12, Ill.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
 LaPointe Electronics Inc., Rockville, Conn.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
 National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.

ANTENNAS—uhf & vhf

Acme Tool & Specialties Co., 224 N. Loomis St., Chicago 7, Ill.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 583.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Camburn, Inc., 32-40 57th St., Woodside, N. Y.
 Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
 Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
 Channel Master Co., Ellenville, N. Y.
 Clear Beam Antenna Co., 100 Prospect Ave., Burbank, Calif.
 Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland, Ohio.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Davis Electronics, Box 1247, Burbank, Calif.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
 Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
 Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
 Gates Radio Co., Quincy, Ill.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Gonet Co., 801 S. Main St., Burbank, Calif.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
 Hy-Lite Antennae, Inc., 242 E. 137th St., New York 51, N. Y.
 I. E. Manufacturing, 321 N. Hoynes Ave., Chicago 12, Ill.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.

LaPointe Electronics Inc., Rockville, Conn.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.
 Miller Television Co., 2840 Naomi St., Burbank, Calif.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 National Electric Products Co., 140 Stanwix St., Pittsburgh 22, Pa.
 National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 Omega Laboratories, P. O. Box 33, Arlington 74, Mass.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.
 Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
 Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
 Pye, Ltd., Cambridge, England.
 Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio.
 Radiart Corp., 3455 Vega Ave., Cleveland 13, Ohio.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.
 Radion Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
 Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Simplicity Tool Co., 2850 N. Mississippi Ave., P. O. Box 3723, Portland 8, Ore.
 Skyline Antennae Corp., 200 Silver St., Sharon, Pa.
 Snyder Mfg. Co., Philadelphia 40, Pa.
 Spiraling Products Co., 60 Grand St., New York, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Stainless, Inc., Third St., North Wales, Pa.
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
 Tel-A Ray Enterprises Inc., Box 332, Henderson, Ky.
 Telrex Inc., Asbury Park, N. J.
 Television Laboratories, Inc., Mill St., Wauconda, Ill.
TORNGREN CO., INC., C. W., 236 Pearl St., Somerville 45, Mass. ADV. PG. 672.
 Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.
 Trio Mfg. Co., Griggsville, Ill.
 Walnut Machine Co., 1529 S. Walnut St., South Bend 14, Ind.
 Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.
 Wells & Winegard, 3000 Scotten Blvd., Burlington, Iowa.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 6, Calif.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.
 Z & W Machine Products, Inc., 5100-16 St., Clair Ave., Cleveland 3, Ohio.

ANTENNAS—vhf Omnidirectional Radio Range

AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 583.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
 Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
 Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
 Hy-Lite Antennae, Inc., 242 E. 137th St., New York 51, N. Y.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.

TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516.
Telrex Inc., Asbury Park, N. J.
Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

ATTENUATORS

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 571.
Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y.
Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CENTRAL DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
Daystrom Instrument Co., Archbald, Pa.
Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
El Mec Laboratories, Inc., 730 Blvd., Kenilworth, N. J.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
GUIDELINE ASSOCIATES, 57 State St., Newark, N. J. ADV. PG. 505.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.
International Telemeter Corp., Ampli-Visfon Div., 2000 Stoner Ave., Los Angeles 25, Calif.
Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
KAY ELECTRIC CO., 25 Maple Av., Pine Brook, N. J. ADV. PG. 420, 421.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
Markite Corp., 155 Waverly Place, New York 14, N. Y.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 319.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
Muirhead & Co., Ltd., Beckenham, Kent, England.
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PAGE 44, 45.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
Rofan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 663.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
Vidaire Electronics Mfg. Co., 576 E. Merrick Rd., Lynbrook, N. Y.

ATTENUATORS—Microwave, Adjusted & Calibrated**ATTENUATORS—Microwave Coaxial Fixed****ATTENUATORS—Microwave Step****See MICROWAVE ACCESSORIES****AUDIOMETERS****See INSTRUMENTS—Electrical Measuring****AUTO RADIO CONTROLS****See CONTROLS—Radio Remote****BAFFLES—Speaker**

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
British Industries Corp., 164 Duane St., New York 13, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Butler Mfg. Co., Inc., B. B., 3150 Randolph St., Bellwood, Ill.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
Duotone Co., Inc., Keyport, N. J.
Electro-Voice, Inc., Buchanan, Mich.
Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.
Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
Illinois Wood Products Corp., 1656 N. Besly Court, Chicago 22, Ill.
Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Magnasyn Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
Olesen Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif.
Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
R-J Audio Products, Inc., 164 Duane St., New York 14, N. Y.
Racon Electric Co., 1261 Broadway, New York 1, N. Y.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
Stromberg-Carlson Co., Rochester 3, N. Y.
Trutone Electronics, Inc., 812-14 N. Highland Ave., Los Angeles 38, Calif.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 556.
UTAH RADIO PRODUCTS CO., INC., 1123 E. Franklin St., Huntington, Ind. ADV. PG. 654.
Vibracolor Co., 425 Bush St., San Francisco 8, Calif.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

BARRETTERS

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 319.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
Omega Laboratories, P. O. Box 33, Arlington 74, Mass.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

BASES—Relay**See also Mountings**

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
Kuhn & Jacob Molding & Tool Co., 1200 Southard St., Trenton, N. J.
Maryland Lava Co., Bel Air, Md.
Mica Insulator Co., Schenectady 1, N. Y.
ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 260.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Stromberg-Carlson Co., Rochester 3, N. Y.

BATTERIES—Dry

Acme Battery Co., 59 Pearl St., Brooklyn 1, N. Y.
Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
Bright Star Industries Co., 600 Getty Ave., Clifton, N. J.
BURGESS BATTERY CO., Battery Div., Freeport, Ill. ADV. PG. 617.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
Marathon Battery Co., Wausau, Wis.
NATIONAL CARBON CO., DIVISION OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 304.

Olin Industries, Inc., Electrical Div., 275 Winchester Ave., New Haven 4, Conn.
Philco Corp., Accessory Div., A & Allegheny Philadelphia 34, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
RAY-O-VAC CO., 212 E. Washington Ave., Madison, Wis. ADV. PG. 192.
Specialty Battery Co., Madison 4, Wisconsin.
Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio.

BATTERIES—Mercury

MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
Mallory & Co., Inc., P. R., 3029 E. Washington Indianapolis 6, Ind.
RAY-O-VAC CO., 212 E. Washington Ave., Madison, Wis. ADV. PG. 192.

BATTERIES—Standard Cell

Acme Battery Co., 59 Pearl St., Brooklyn 1, N. Y.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Ave., Mt. Vernon, N. Y. ADV. PG. 617.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

BATTERIES—Storage

Bowers Battery & Spark Plug Co., Reading, Pa.
Electric Storage Battery Co., 42 S. 15th St., Philadelphia 2, Pa.
Electronic Batteries, Inc., Bush Terminal Bldg. No. 28-34 35th St., Brooklyn 32, N. Y.
Gould-National Batteries, Inc., 35 Neoga St., Dept. N. Y.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
Nickel Cadmium Battery Corp., Easthampton, Mass.
Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio.
YARDNEY ELECTRIC CORP., Dept. EBG, 40 Leonard St., New York 13, N. Y. ADV. PG. 381.

BATTERIES—Storage Nonspill

Bowers Battery & Spark Plug Co., Reading, Pa.
Ectro, Inc., Delaware, Ohio.
Electric Storage Battery Co., 42 S. 15th St., Philadelphia 2, Pa.
Electro-Science Industries, Box 10066 International port, Los Angeles 45, Calif.
Gould-National Batteries, Inc., 35 Neoga St., Dept. N. Y.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
Nickel Cadmium Battery Corp., Easthampton, Mass.
YARDNEY ELECTRIC CORP., Dept. EBG, 40 Leonard St., New York 13, N. Y. ADV. PG. 381.

BATTERY CHARGERS

1. Electron Tube
2. Engine Driven
3. Metallic Oxide
4. Motor Generator
5. Portable
6. Selenium

ACME ELECTRIC CORP., 21 Water St., Cuba, N. Y. 3-6. ADV. PG. 260.
AIRPAX PRODUCTS CO., Middle River, Baltimore Md. 3-6. ADV. PG. 65.
American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa. 6.
AMERICAN TELEVISION & RADIO CO., 300 E. Fort St., St. Paul 1, Minn. 5-6. ADV. PG. 198.
Anglo Corp., 2037 W. Division St., Chicago 22, Ill.
ATLAS ENGINEERING CO., 3 Edgewood St., Rochdale, Mass. 5-6. ADV. PG. 230.
Automatic Electric Sales Corp., 1033 W. Van Buren Chicago 7, Ill. 6.
Bart-Messing Corp., 227 Main St., Belleville 9, N. J. 6.
Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Alto, Calif. 6.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson, N. J. 2-4-5-6. ADV. PG. 323.
Bone Engineering Corp., 701 W. Broadway, Glendale, Calif. 6.
Booth Co., Arthur E., 265 S. Alexandria Ave., Angeles, Calif. 3-6.
Bowers Battery & Spark Plug Co., Reading, Pa. 6.
Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. 1-5-6. ADV. PG. 572.
Control Corp., 718 Central Ave., Minneapolis 14, Minn. 6.
Cornell-Dubilier Electric Corp., South Plainfield, N. J. Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena, Calif. 1-5-6.
Dresser Electric Co., 942 Larned St., Detroit 7, Mich.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. 1. ADV. PG. 536.
Ectro, Inc., Delaware, Ohio. 5.
Electric Storage Battery Co., 42 S. 15th St., Philadelphia 2, Pa. 6.
Electrical Facilities Inc., 4239 Holden St., Oakland, Calif. 6.
Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y. 3-6.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Main Ave., Eatontown, N. J. 1-6. ADV. PG. 431.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. 3-6. ADV. PG. 490.

Farnell Metallurgical Corp., 2200 Sheridan Road, North Chicago, Ill. 6.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. 5-6. ADV. PG. 182-187.
 General Electric Co., 65 W. Broadway, New York, N. Y. 6.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River St., Schenectady 5, N. Y. 1-3 4-5-6. ADV. PG. 1-20.
 General Corp., Box 463, Manassas, Va. 2-4-5.
 General National Batteries, Inc., 35 Neoga St., Depew, N. Y. 3-5-6.
 General Electric Co., W., 130 Cedar St., New York, N. Y. 6.
 Hallameters Co., 4401 W. Fifth Ave., Chicago 24, Ill. 3.
 Hersh Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio. 2-4.
 Hey Industries, Inc., 471 Cortlandt St., Belleville 9, N. J. 5-6.
INVEST. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. 3-5-6. ADV. PG. 628.
 Kato Engineering Co., 1415 First Ave., Mankato, Minn. 1-6. ADV. PG. 23-25.
KEY SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. 3-4-6. ADV. PG. 497.
KEY LABS., 131-38 Sanford Ave., Flushing 55, N. Y. 1-6. ADV. PG. 23-25.
 Kin Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio. 1-5.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif. 1-5-6.
 McIn-Christie Corp., 3410 W. 67th St., Los Angeles 4, Calif. 1-5-6.
 Magic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y. 6.
 Maly & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 3-6.
 Mid Mfg. & Distributing Co., Inc., 1129 S. 13th St., Sheboygan, Wis. 2.
MOI RECTIFIER CORP., 557 Rogers Ave., Brooklyn 2, N. Y. 6. ADV. PG. 424.
 Motesearch Co., 1600 Junction Ave., Racine, Wis. 4.
 Oada & Sons Inc., D. W., University Ave. at 25th St., St. Minneapolis 14, Minn. 2.
OP GREEN CO., 71-5 Warren St., New York 7, N. Y. 5. ADV. PG. 341.
ORTIN CORP., THE, 196 Al'bon Ave., Paterson 2, N. J. 1-3-6. ADV. PG. 628.
 Palm, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, B. C. 3.
PERM ENGINEERING CORP., 345 Kansas St., El Monte, Calif. 3-6. ADV. PG. 561.
 Per Gen-E-Motor Corp., Dept. EBG, 5841 W. Dickens, Chicago 39, Ill. 2.
 Per Equipment Co., 5740 Nevada East, Detroit 34, Mich. 6.
 Per Transformer Co., Inc., 532 Mulberry St., Newark 1, N. J. 3-5-6.
 Per Corp., 3455 Vega Ave., Cleveland 13, Ohio. 5.
PER ELECTRIC CO., 2881 Middletown Rd., New York, N. Y. 6. ADV. PG. 641.
PEREON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. 6. ADV. PG. 26.
 Per Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif. 1-3.
PERD MILLER CO., 691 Bedford Ave., Brooklyn 6, N. Y. 6. ADV. PG. 162.
 Per Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio. 1-3-5-6.
PERSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 1. ADV. PG. 50, 51.
 Per Telephones & Cables, Ltd., Connaught House, Arch, London, W. C. 2, England. 5.
 Per Electronics, Inc., 7 Industrial Place, Summit, N. J. 1-3-5.
 Per Apparatus Builders, 109 Liberty St., New York 6, N. Y. 1-3-5-6.
 Per Electric & Machine Works, 17 S. Jefferson St., Chicago, Ill. 1-3-6.
PERFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. 6. ADV. PG. 591.
 Per Co., George, 835 N. 19th St., Philadelphia 30, Pa. 1.
PERHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. 3-5-6. ADV. PG. 113-124.
 Per Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio. 5.
PERHEY ELECTRIC CORP., Dept. EBG, 40 Leonard St., New York 13, N. Y. 5-6. ADV. PG. 381.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Melpar, Inc., 452 Swann Ave., Alexandria, Va.
 Phebo, Inc., 3640 Woodland St., Baltimore 15, Md.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
SPERRY-GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y., ADV. PG. 331, 332.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 Terpening Co., L. H., 16 W. 61st St., New York, N. Y.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

BEARINGS
 1. Jewel
 2. Miniature Ball
 3. Miniature Needle
 Allied Products Div., Hamilton Watch Co., Lancaster, Pa. 1-3.
 American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y. 1.
BIRD CO., RICHARD H., 1 Spruce St., Waltham, Mass. 1. ADV. PG. 302.
 Duotone Co., Inc., Keyport, N. J. 1.
 Gatti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J. 1.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1. ADV. PG. 1-20.
LANDIS & GYR, INC., 45 W. 45th St., New York 36, N. Y. 2. ADV. PG. 576.
 Miniature Precision Bearings, Inc., Keene, N. H. 2.
NEW HAMPSHIRE BALL BEARINGS, INC., Peterborough, New Hampshire. 2. ADV. PG. 285.
RESEARCH DEVELOPMENT MANUFACTURE, 429 E. Colom St., Philadelphia 44, Pa. 1-2-3. ADV. PG. 462.
 Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J. 2.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa. 1.
 Swiss Jewel Co., Lafayette Bldg., Philadelphia 6, Pa. 1.
SYNCOB PRODUCTS CO., Malden, Mass. 1. ADV. PG. 467.
 Vailorbs Jewel Co., Lancaster, Pa. 1.

BELLOWS
 Breeze Corp., Inc., 41 S. Sixth St., Newark 7, N. J.
 Bristol Co., The, Waterbury 20, Conn.
 Clifford Mfg. Co., Grove St., Waltham, Mass.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Eastern Metals Industries, Inc., 250 W. 54th St., New York, N. Y.
 Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
 Fulton Syphon Div., Robertshaw-Fulton Controls Co., Knoxville 1, Tenn.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

BELTS—Dial Drive
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

BENCH TEST SET-UPS
AINSLIE ELECTRONIC PRODUCTS INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 418.
 Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Newton Co., 55 Elm St., Manchester, Conn.
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
 Production Tool & Fixture Co., 37 W. Main St., Oyster Bay, N. Y.
STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 154.

BENDS—Microwave
 See MICROWAVE ACCESSORIES

BI-METALS—Thermostatic
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10 England.
 Wilson Co., H. A. 2655 U. S. Hwy. 22, Union, N. J.

BLOCKS—Fuse Blocks & Holders
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
BEL FUSE INC., 311 Mountain Road, Union City, N. J. ADV. PG. 635.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BUSSMANN MFG. CO., St. Louis 7, Mo. ADV. PG. 78.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
JONES DIV., HOWARD B. CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
 Keystone Electronics Corp., 423 Brooms St., New York 12, N. Y.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
LITTELFUSE, INC., Des Plaines, Ill. ADV. PG. 527.
 Mica Insulator Co., Schenectady 1, N. Y.
 Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.
 Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
 Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

BLOWERS—Small
 Air Control Installations, Ltd., Ruislip, Middlesex, England.
 American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Dynamic Air Engineering Inc., 7412 Maie Ave., Los Angeles 1, Calif.
EASTERN AIR DEVICES, INC., 15 Washington St., Dover, N. H. ADV. PG. 315.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 292.
 Fairchild Industries Division, Burlington, Vt.
 Fasco Industries, Inc., Rochester 2, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Globe Industries, Inc., P. O. Box 101, North Dayton Station, Dayton 4, Ohio.
HEINZE ELECTRIC CO., 685 Lawrence St., Lowell, Mass. ADV. PG. 505.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.
 Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.
 Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y.
 Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 McLean Engineering Laboratories, Princeton, N. J.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Ontario, Wis.
 Mission-Western Engineers, Inc., 132-134 W. Colorado St., Pasadena 1, Calif.
 Motordyne, Inc., 2661 S. Myrtle Ave., Monrovia, Calif.
OSTER MFG. CO., JOHN, 1 N. Main St., Racine, Wis. ADV. PG. 425.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
 Redmond Co., Inc., 201 Monroe St., Owosso, Mich.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
ROTRON MFG. CO., INC., 7-9 Schoonmaker Lane, Woodstock, N. Y. ADV. PG. 651.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.
 Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
 Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.

Stanat Manufacturing Co., 47-32 37th St., Long Island City 1, N. Y.
 Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.
 Universal Electric Co., 300 E. Main St., Owosso, Mich.

BOARDS—Capacitor or Resistor

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Avor Corp., 450 Broome St., New York 13, N. Y.
 Bright Radio Labs, Inc., 24-28 45th St., Long Island City 3, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Dimco Corp., 207 E. Sixth St., Dayton, Ohio.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
 Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
 Jowit Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
LYNN ELECTRONIC RESEARCH CO., 9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 580.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
 Maryland Lava Co., Bel Air, Md.
 Mica Insulator Co., Schenectady 1, N. Y.
NATIONAL TEL-TRONICS CORP., 35 St. Casparys Ave., Yonkers, N. Y. ADV. PG. 312.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

BOARDS—Strip Type

Accurate Electronics Corp., 1312 Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
LYNN ELECTRONIC RESEARCH CO., 9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 580.
 Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
 Mica Insulator Co., Schenectady 1, N. Y.
MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
NATIONAL TEL-TRONICS CORP., 35 St. Casparys Ave., Yonkers, N. Y. ADV. PG. 312.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

BOBBINS—Coil Winding

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.
 Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, Ill. ADV. PG. 638.
BUCKEY BOBBIN CO., 12200 Sprecher Ave., Cleveland 11, Ohio. ADV. PG. 479.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Y. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
 Gries Reproducer Corp., 151 Beechwood St., New Rochelle, N. Y.
 Isolantite Manufacturing Corp., Stirling, N. J.
KIRCHBERGER & CO., INC., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 Kuhn & Jacob Molding & Tool Co., 1200 Southland St., Trenton, N. J.
 Maryland Lava Co., Bel Air, Md.
 Mica Insulator Co., Schenectady 1, N. Y.
 Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Molded Products Co., Inc., 2820 N. Sylvania St., Fort Worth, Texas.
 Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 503.
 Resinite Corp., Sub. of Precision Paper Tube Co., 2035 W. Charleston St., Chicago 47, Ill.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
WHITSO, INC., 2037 Churchill St., Chicago 47, Ill. ADV. PG. 112.

BOBBINS—Transformer Winding

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, Ill. ADV. PG. 638.
BUCKEY BOBBIN CO., 12200 Sprecher Ave., Cleveland 11, Ohio. ADV. PG. 479.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
 Maryland Lava Co., Bel Air, Md.
 Mica Insulator Co., Schenectady 1, N. Y.
 Molded Products Co., Inc., 2820 N. Sylvania St., Fort Worth, Texas.
 Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 503.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Resinite Corp., Sub. of Precision Paper Tube Co., 2035 W. Charleston St., Chicago 47, Ill.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

BOLOMETER MOUNTS

See **MICROWAVE ACCESSORIES**
Crystal Mounts & Mixers

BOLOMETERS

See **TUBES—Bolometer**

BOLTS—Spade

WENCO MFG. CO., 1133 W. Hubbard St., Chicago 22, Ill. ADV. PG. 480.

BOLTS—Toggle or Expansion

E-Expansion . . . T-Toggle

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago 6, Ill. E-T.
 Arro Expansion Bolt Co., Boone Ave., Marion, Ohio. E-T.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y. E-T.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn. E.
 Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill. E-T.
 Holub Industries, Inc., 414 DeKalb Ave., Sycamore, Ill. E-T.
J F D MEG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. T. ADV. PG. 666.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. E-T. ADV. PG. 603.

National Lead Co., 111 Broadway, New York 6, N. Y.
 National Screw & Mfg. Co., The, Cleveland 4, Ohio. E-T.
 Star Stainless Screw Co., 206 Union Ave., Paterson N. J. E-T.
 Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, E-T.
 United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill. E.

BOOKS

See **TECHNICAL BOOKS—Publishers**

BOOMS—Microphone

Berndt-Bach, Inc., Auricon Div., 6914 Romaine St., Hollywood 38, Calif.
 Connecticut Telephone & Electric Corp., 70 Britton St., Meriden, Conn.
 Dressed-Barnes Corp., 250 N. Vinedo Ave., Pasadena 4, Calif.
 Magnasonic Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Olesen Co., Otto K., 1534 Cahuenga, Hollywood 3, Calif.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.

BOOSTERS—Television

Alliance Manufacturing Co., Lake Park Blvd., Alliant Ohio.
 Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.
 Bogen Co., Inc., David, 29 Ninth Ave., New York N. Y.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Channel Master Co., Ellenville, N. Y.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Electro-Voice, Inc., Buchanan, Mich.
 I.D.E.A., 7900 Pendleton Pike, Indianapolis 26, Ind.
 Industrial Television, Inc., 369 Lexington Ave., Clifton, N. J.
 Jowit Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 LaPointe Electronics Inc., Rockville, Conn.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Radiart Corp., 3455 Vega Ave., Cleveland 13, Ohio.
 Radio Mfg. Engineers, Inc., 300-302 First Ave., Peoria 11, Ill.
SHELDON ELECTRIC CO., DIV. OF ALLIED ELECTRIC PRODUCTS, INC., 76 Coit St., Irvington 11, N. Y. ADV. PG. 125.
SPENCER-KENNEDY LABS, INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
TURNER CO., THE, 909 17th St., N. E., Cedar Rapids 10, Iowa. ADV. PG. 430.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 1, Ind.
 Workman TV, Inc., 309 Queen Anne Road, Teaneck, N. J.

BOXES—Metal, Plastic or Waterproof

AMERICAN ALUMINUM COMPANY, 374 Jelliff Ave., Newark, N. J. ADV. PG. 660.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsy Ave., Brooklyn 14, N. Y. ADV. PG. 561.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn 22, N. Y.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 3, N. Y.
BAYSHORE WOOD PRODUCTS CO., INC., 234 Creek Rd., Keansburg, N. J. ADV. PG. 508.
 Bennett Mfg. Co., Alden, N. Y.
 Bradley Industries, 1650-58 N. Damen Ave., Chicago 47, Ill.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 470.
 Columbia Metal Box Co., 260 E. 143rd St., New York N. Y.
 Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif.
 Conrad & Moser, 2 Borden Ave., Long Island City N. Y.
 Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.
 Doepke Mfg. Co., Inc., Chas. Wm., Metal Specialist Div., Rossmoyne, Ohio.
DOLIN METAL PRODUCTS, INC., 315 Lexington Ave., Brooklyn 16, N. Y. ADV. PG. 474.
EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. Y. ADV. PG. 367.
FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV. PG. 450.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.

HRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.

Inne Corp. of America, 186 Granite St., Manchester, N. H.

METAL PRODUCTS CO., DIV. OF H & B MAINLINE CO., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.

Ken Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

Mja Electronics Co., 9810 Anza Ave., Inglewood, Calif.

Mcraft Inc., 86-08 130th St., Richmond Hill 18, N. Y.

Meest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.

Me Man Products, Inc., 430 E. 102nd St., Newark, N. Y.

Med Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Mie Mfg. Co., Owatonna 55, Minn.

MET-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.

Nal Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.

METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 230.

PIVIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 242.

Pict Engineering Laboratories Co., Inc., 314 Adams St., Newark 5, N. J.

Rf Mfg. Corp., Jericho Turnpike, Mineola, N. Y.

R City Products Co., Inc., Centre & Glendale Sts., Boston, Pa.

Rnic Laboratory, 1111 State Rd., E., Anderson, Ind.

R Electronics Co., Inc., Centre & Glendale Sts., Boston, Pa.

RIEY CO., INC., Middletown, Conn. ADV. PG. 557.

Set Co., Walter L., 3225 Exposition Pl., Los Angeles 1, Calif.

Sh Form Co., Inc., Auburn, N. Y.

Sford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.

St Products Co., 1420 W. Galer St., Seattle 99, Wash.

Stns-Walden, Inc., 475 Shrewsbury St., Worcester 4, Mass.

Star Steel Products Corp., 308 Pilgrim Rd., Menomonee Falls, Wis.

St City Machine & Tool Co., Inc., P. O. Box 351, 106 Seventh St., Bedford, Ind.

Stuse Ornamental Co., Inc., 581 S. Clinton St., Racine, N. Y.

Tical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.

T Former Metal Products Corp., 343 W. 26th St., New York, N. Y.

U GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

Ursal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

Wler, Inc., 27-10 Astoria Blvd., Long Island City 2, N. Y.

Wt-Happ Associates, Inc., 251 West St., South Hackensack, N. J.

Ze Mfg. Co., 1121 Chestnut St., Burbank, Calif.

BACKETS—f-m & Television Antenna

INON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.

Ac Tool & Specialties Co., 224 N. Loomis St., Chicago 11, Ill.

AELITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.

American Radio Hardware Co., Inc., 152 S. MacQuesten Ave., Mt. Vernon, N. Y.

Arch Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

Art Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.

Be Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.

Ca Machine Co., 691 Antoinette St., Detroit 2, Mich.

CITION PRODUCTS CO., 233 E. 146th St., New York 1, N. Y. ADV. PG. 616.

Ch Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.

CIRAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Flor Ave., Rockford, Ill. ADV. PG. 380.

Y AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.

Inne Corp. of America, 186 Granite St., Manchester, N. H.

J D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.

Keod Engineering Co., Inc., 265 Colfax Ave., Kenilworth, N. J.

Miax Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.

Me Man Products, Inc., 430 E. 102nd St., Newark, N. Y.

Nal Electric Products Co., 140 Stanwix St., Pittsburgh 22, Pa.

Phon Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.

Phix Electronics Inc., 50 Island St., Lawrence, Mass.

Ra City Products Co., Inc., Centre & Glendale Sts., Boston, Pa.

Ra Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.

Re Electronics Co., Inc., Centre & Glendale Sts., Boston, Pa.

So River Metal Products Co., Inc., 377-379 Turnpike, North River, N. J.

Stainless, Inc., Third St., North Wales, Pa.

Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.

Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.

Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.

BREADBOARD KITS—Electronic

Uni-Products Div. of Uni-Science, Inc., P. O. Box 64, Rockville, Md.

BREAKERS—Circuit

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Heinemann Electric Co., 97 Plum St., Trenton 2, N. J.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

LITTELFUSE, INC., Des Plaines, Ill. ADV. PG. 527.

Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Rohden Manufacturing Company, 4739 Montrose Ave., Chicago 41, Ill.

Spencer Thermostat Div., Metals & Control Corp., 34 Forest St., Attleboro, Mass.

Square D Co., 4041 N. Richards, Milwaukee 12, Wis.

Trumbull Components Dept., General Electric Co., 41 Woodford Ave., Plainville, Conn.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

BRIDGES—Capacitance

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Clough Bregle Co., 6014 N. Broadway, Chicago, Ill.

Cornell-Dubilier Electric Corp., South Plainfield, N. J.

Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.

Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.

FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

GLENCO CORP., Metuchen, N. J. ADV. PG. 640.

Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio.

GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.

Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.

Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.

INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 319.

Muirhead & Co., Ltd., Beckenham, Kent, England.

Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.

Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

BRIDGES—ELECTRICAL

BRIDGES—IMPEDANCE

BRIDGES—INDUCTANCE

See INSTRUMENTS—Electrical Measuring

BRIDGES—Megohm

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.

Barnes Development Co., 213 W. Baltimore Pike, Lansdowne 1, Pa.

Bendix Aviation Corp., Cincinnati Div., 203 W. Third St., Cincinnati 2, Ohio.

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio.

Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.

MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.

Pye, Ltd., Cambridge, England.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.

Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

BRIDGES—Temperature

Allegany Instrument Co., Inc., Cumberland, Md.

Bristol Co., The, Waterbury 20, Conn.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Eppley Lab., Inc., The, Newport, R. I.

FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.

Foxboro Co., The, Foxboro, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

Kelk & Co., G. F., 1195 Lawrence Ave., W., North Park P. O., Canada.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.

Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.

BRIDGES—Thermistor

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 53, Ill.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.

Weinschel Engineering Co., Inc., 10503 Metropolitan Ave., Kensington, Md.

Weston Laboratories, Inc., Harvard, Mass.

BRIDGES—VHF

See INSTRUMENTS—Electrical Measuring

BRIDGES—Wheatstone

Allegany Instrument Co., Inc., Cumberland, Md.

Barnes Development Co., 213 W. Baltimore Pike, Lansdowne 1, Pa.

Bristol Co., The, Waterbury 20, Conn.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.

Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.
 Eppley Lab., Inc., The, Newport, R. I.
FIELD INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
 Leeds & Northrup Co., 44 N. 16th St., Philadelphia 30, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W.C. 2, England.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 P. J. Ltd., Cambridge, England.
 Reiner Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 Tech Laboratories, Inc., Bergen & Edsall Bldvs., Palisades Park, N. J.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BROADCAST INPUT CONTROL EQUIPMENT

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
 Gates Radio Co., Quincy, Ill.
 International Electronics Corp., 137 Hudson St., New York 13, N. Y.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

BRUSHES—Carbon & Graphite

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
 Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
 St. Marys Carbon Co., State Rd., St. Marys, Pa.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.
 U. S. Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.

BRUSHES—Metal-Graphite

ELECTRO DEVELOPMENT CO., 6006 W. Washington Blvd., Culver City, Calif. ADV. PG. 221.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
 Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.
 Keystone Carbon Co., Inc., Saint Marys, Pa.
NATIONAL CARBON CO., DIVISION OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 304.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
 P.M. Industries, Inc., Stamford, Conn.
 St. Marys Carbon Co., State Rd., St. Marys, Pa.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.

U. S. Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.

BULBS—Miniature Lamp
 See **LIGHTS—Dial, Panel & Pilot**

BURNERS—Gas Fired

American Gas Furnace Co., 130 Spring St., Elizabeth, N. J.

BUS BAR SYSTEMS

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Trumbull Components Dept., General Electric Co., 41 Woodford Ave., Plainville, Conn.

BUSHINGS—Hermetically Sealed

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
ELECTRICAL INDUSTRIES, INC., 44 Sumner Ave., Newark 4, N. J. ADV. PG. 223.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Glass-Solder Engineering, 300 N. Lake Ave., Pasadena 4, Calif.
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
HERMASEAL CO., INC., 1101 Lafayette St., Elkhart, Ind. ADV. PG. 258.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Mitronics Inc., 232 Thirteenth Ave., Newark, N. J.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 507.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 Wright-Hepp Associates, Inc., 251 West St., South Hackensack, N. J.

BUSHINGS—Nonmetallic

Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
ATLANTIC INDIA RUBBER WORKS INC., Dept. EL, 571 W. Park St., Chicago 7, Ill. ADV. PG. 603.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Corning Glass Works, Corning, N. Y.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 Isolantite Manufacturing Corp., Stirling, N. J.
 Javex, P. O. Box 646, Redlands, Calif.
KIRCHBERGER & CO., INC., M., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Lavelle Rubber Co., 424 N. Wood St., Chicago 2, Ill.
LORD MFG. CO., 1635 W. 12th St., Erie, Pa. ADV. PG. 512.
 Maryland Lava Co., Bel Air, Md.
 Mica Insulator Co., Schenectady 11, N. Y.
NATIONAL CARBON CO., DIV. OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 304.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 503.
 Raybestos-Manhattan Inc., 61 Willett St., Passaic, N. J.
RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.
 Thomas & Betts Co., 36 Butler St., Elizabeth 1, N. J.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 U. S. Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
 Wilmington Fibre Specialty Co., P. O. Drawer 102, Wilmington 99, Del.

CABINETS

See Also **HOUSINGS**

CABINETS—Metal

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.
 Acme Electronix Div. of NEA Service, Inc., W. Third St., Lakeside, Cleveland 13, Ohio.
AINSLIE ELECTRONIC PRODUCTS, INC., 312 Quincy Ave., Quincy 69, Mass. ADV. PG. 418.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsie Ave., Brooklyn 14, N. Y. ADV. PG. 561.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn 22, N. Y.
 Bennett Mfg. Co., Alden, N. Y.
 Bingham Mfg. Co., J. F., 69 Bay State Rd., Lawrence, Mass.
BOYLE METALCRAFT CORP., 150 Sullivan St., Brooklyn 31, N. Y. ADV. PG. 582.
 Bridgeport Metal Products Mfg. Co., 365 Cherry St., Bridgeport 5, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Central Stamping & Mfg. Co., Polo, Ill.
CHASSIS TRAK CORP., 6250 E. Iona Rd., Indianapolis, Ind. ADV. PG. 629.
CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 470.
 Columbia Metal Box Co., 260 E. 143rd St., New York 17, N. Y.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 Corry-Jamestown Mfg. Co., Corry, Pa.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Daystrom Instrument Co., Archbald, Pa.
DOLIN METAL PRODUCTS, INC., 315 Lexington Ave., Brooklyn 16, N. Y. ADV. PG. 474.
 Donnelly Electric & Mfg. Co., 3050 Washington St., Boston, Mass.
 Dumont-Airplane & Marine Instruments, Inc., 15 Williams St., New York 5, N. Y.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
E B Metal Products Co., Inc., 12-14 Bridge Plaza S., Long Island City 1, N. Y.
 Edo Corp., College Point, N. Y.
 Elgin Metalformer Corp., 901 N. Liberty St., Elgin, Ill.
FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV. PG. 450.
 Gates Radio Co., Quincy, Ill.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
 General Metal Products Co., 1010-14 Centre St., Easton, Pa.
 Gosnet Co., 801 S. Main St., Burbank, Calif.
 Harrison & Co., Philip H., Matawan, N. J.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
 I.E. Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
KARP METAL PRODUCTS CO., DIV. OF H & B MACHINE CO., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
 Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
 Manna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 McElroy Mfg. Corp., Littleton, Mass.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
 Metalcraft, Inc., 86-08 130th St., Richmond Hill 18, N. Y.
 Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
M.U.TI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.

Non Co., 55 Elm St., Manchester, Conn.
 Northeast Engineering Inc., Manchester, N. H.
PAMETAL PRODUCTS CORP., 32-62 49th St., Long
 Island City 3, N. Y. ADV. PG. 230.
PRIER METAL PRODUCTS CO., 3160 Webster Ave.,
 Bronx, N. Y. ADV. PG. 242.
REMFG. Corp., Jericho Turnpike, Mineola, N. Y.
Rair Corp., Fifth St. & Cannon Ave., Lansdale, Pa.
Re Electronics Co., Inc., Centre & Glendale Sts.,
 Eton, Pa.
Rier & Thesmacher Co., Cleveland 13, Ohio.
Rc Metal Mfg. Co., 175 N. Michigan Ave., Chicago 1,
 Ill.
Stford Metal Specialty Co., 429 W. Broadway, New
 York 12, N. Y.
Stard Pressed Steel Co., Box 775, Jenkintown 10,
 Pa.
St Products Co., 1420 W. Galer St., Seattle 99,
 Wash.
Stor Steel Products Corp., 308 Pilgrim Rd., Menomonee
 Falls, Wis.
Tal & Cooper Co., 75 Front St., Brooklyn, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New
 York, N. Y.
U & F Manufacturing Corp., 10929 Vanowen St.,
 North Hollywood, Calif.
Waf Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16,
 N. Y.
Wern Sound & Electric Labs., Inc., 805 S. Fifth
 Milwaukee 4, Wis.
Wis Engineering & Construction Co., P. O. Box 590,
 Linden 1, N. J.
W-Happ Associates, Inc., 251 West St., South
 Hackensack, N. J.
Water Co., Rudolph, North Tonawanda, N. Y.

CANETS—Plastic
Bol Products Div. of The General Tire & Rubber Co.,
 Florence, Mass.
BRIART PLASTICS CORP., Old Country Rd., Mineola,
 N. Y. ADV. PG. 653.
Blili Electronic Sales Co., 23-03 45th Rd., Long Is-
 land City 1, N. Y.
Chio Die Mold Div. of U. S. Rubber Co., 4001 Wright-
 wood Ave., Chicago 39, Ill.
Emen Radio & Phonograph Corp., 111 Eighth Ave.,
 New York, N. Y.
ERI RESISTOR CORP., 644 W. 12th St., Erie, Pa.
 A. PG. 313, 314.
Felshal & Sons, Inc., G., 4100 W. Grand Ave.,
 Chicago 51, Ill.
Genid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.
Isite Corp. of America, 186 Granite St., Manchester,
 N. H.
Kaj Products Co., 41 Union St., Manchester, N. H.
Kunz Jacob Molding & Tool Co., 1200 Southard St.,
 San, N. J.
L Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Insulation Co., 335 E. Price St., Philadelphia 44,
 Pa.
Engineering Laboratories Co., Inc., 314 Adams
 Newark 5, N. J.
Co., Ltd., 2101 Bryant St., San Francisco 10,
 Calif.
Products Co., 1420 W. Galer St., Seattle 99, Wash.

CANETS—Wood
Electronic Corp., 1415 N. Brazos St., San Antonio
 Texas.
ansing Corp., 9356 Santa Monica Blvd., Beverly
 Hills, Calif.
Products, Inc., 209 25th St., Brooklyn 32,
 N. Y.
Co., Inc., David, 29 Ninth Ave., New York 14,
 N. Y.
Radio Labs., Inc., 24-28 45th St., Long Island
 City 13, N. Y.
Large Pattern Works, Inc., 55 First St., Cambridge
 Mass.
CO., 191 Central Ave., Newark 4, N. J. ADV.
PG. 243.
lab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
Voice, Inc., Buchanan, Mich.
laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
Radio & Phonograph Corp., 111 Eighth Ave.,
 New York, N. Y.
Co., Inc. H. A., 521 E. 162nd St., New York
 14, N. Y.
Instrument Co., 1315 S. Clarkson St., Denver
 10, Colo.
Wood Products Corp., 1656 N. Besly Court,
 Chicago 22, Ill.
Co., E., Bristol, Conn.
Products Co., 41 Union St., Manchester, N. H.
Show Case Corp., Fort Wayne 1, Ind.
ng Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Electronic Mfg. Co., 314 W. 58th St., Los
 Angeles, Calif.
Mercury Television Mfg. Corp., 5955 Van Nuys
 Blvd., Van Nuys, Calif.
cut Co., 38-01 Queens Blvd., Long Island City 1,
 N. Y.
Wood Cabinet Co., 88 Holmes St., Belleville,
 N. J.
Laboratories, Inc., 810 N. Lincoln Ave., Pitts-
 burgh 12, Pa.
urniture Mfg. Co., Steger, Ill.
Mfg. Corp., 8538 Warner Drive, Culver City,
 Calif.
ng-Carlson Co., Fochester 3, N. Y.
Electric Products, Inc., Radio & Television Div.,
 Buffalo 7, N. Y.

U M & F Manufacturing Corp., 10929 Vanowen St.,
 North Hollywood, Calif.
United Wood Specialty Mfg. Co., 951 Broadway, Fall
 River, Mass.
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St.,
 Huntington, Ind. ADV. PG. 654.
Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39,
 Ill.
Woodcraft Corp., 501 Salzburg Ave., Bay City, Mich.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

CABLE
 See also WIRE

CABLE ASSEMBLIES
Accurate Electronics Corp., Courtland Bldg., 1312 On-
 tario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union
 City, N. J. ADV. PG. 615.
Aeronautical Electronics, Inc., Raleigh-Durham Airport,
 P. O. Box 6043, Raleigh, N. C.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64,
 Mass. ADV. PG. 440.
American Machine & Foundry Co., Electronics Div., 1085
 Commonwealth Ave., Boston 15, Mass.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi-
 cago 50, Ill. ADV. PG. 80.
American Radio Hardware Co., Inc., 152 S. MacQuesten
 Pkwy., Mt. Vernon, N. Y.
ATLAS RESISTOR CO., 24 E. Coulter St., Philadelphia
 44, Pa. ADV. PG. 470.
AUDIO PRODUCTS CORP., 2265 Westwood Blvd., Los
 Angeles 64, Calif. ADV. PG. 653.
Authorized Manufacturers Service Co., Inc., 919 Wyckoff
 Ave., Brooklyn 27, N. Y.
B & M Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
BAYSHORE WOOD PRODUCTS CO., INC., 234 Creek Rd.,
 Keansburg, N. J. ADV. PG. 508.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44,
 Ill.
Bennett Mfg. Co., Alden, N. Y.
BERNCO ENGINEERING CORP., 5232 W. 10th St., In-
 dianapolis 24, Ind. ADV. PG. 529.
Bliss Electronic Corp., Box 123, Sussex, N. J.
BOSTON INSULATED WIRE & CABLE CO., 65 Bay St.,
 Boston 25, Mass. ADV. PG. 338.
BRAND & CO., INC., WILLIAM, North & Valley Sts.,
 Willimantic, Conn. ADV. PG. 396, 397.
Cable Electric Products Inc., Providence, R. I.
Cable Specialists Inc. of Conn., 166 Palisade Ave.,
 Bridgeport, Conn.
Cadre Industries Corp., Box 117, 19 Delaware Ave.,
 Edicott, N. Y.
CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central
 Ave., Pawtucket, R. I. ADV. PG. 155.
Carol Electronics Corp., 141 E. 25th St., New York 10,
 N. Y.
CITATION PRODUCTS CO., 233 E. 146th St., New York
 51, N. Y. ADV. PG. 616.
COAXIAL CONNECTOR CO., 37 North 2nd Ave., Mt.
 Vernon, N. Y. ADV. PG. 617.
Color Television, Inc., 973 E. San Carlos Ave., San
 Carlos, Calif.
Colortone Electronics, Inc., 238 William St., New York
 38, N. Y.
Columbia Wire & Supply Co., 2850 Irving Park Rd.,
 Chicago 18, Ill.
ConRay Corp., 1225 Ray St., Dayton 4, Ohio.
Consolidated Wire & Associated Companies, 1635 S.
 Clinton St., Chicago 16, Ill.
Co-Operative Industries, Inc., 100 Oakdale Rd., Chester,
 N. J.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y.
 ADV. PG. 222.
DAGE ELECTRIC CO., 67 N. Second St., Beech Grove,
 Ind. ADV. PG. 190.
Daystrom Instrument Co., Archbald, Pa.
Decatur Electronic Industries Corp., 203 Orinco Drive,
 Brightwater, N. Y.
Detectola, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave.,
 Chicago 40, Ill.
Eagle Signal Corp., Moline, Ill.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44,
 Pa. ADV. PG. 465.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Pater-
 son, N. J. ADV. PG. 380.
Eltran Corp., St. Anne, Ill.
Empire Electronics Co., Inc., 166 River St., Paterson 1,
 N. J.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T,
 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
Fisher Radio Corp., 21-21 Forty-Fourth Drive, Long
 Island City 1, N. Y.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia
 40, Pa.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV.
 PG. 292.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919
 Taylor Ave., Rockford, Ill. ADV. PG. 380.
GENERAL HERMETIC SEALING CORP., 99 E. Haw-
 thorne Ave., Valley Stream, N. Y. ADV. PG. 645.
General Insulated Wire Works, Inc., 69 Gordon Ave.,
 Providence 5, R. I.
General Laminated Products, Inc., 2857 S. Halstead St.,
 Chicago 8, Ill.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St.,
 Boston 15, Mass. ADV. PG. 410.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 177-180.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St.,
 Chicago 7, Ill. ADV. PG. 196.

Harrison & Co., Philip H., Matawan, N. J.
Holyoke Wire & Cable Co., 720 Main St., Holyoke, Mass.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chi-
 cago 25, Ill. ADV. PG. 641.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince
 St., New York, N. Y. ADV. PG. 457.
Industrial Products Co., Div. of Danbury-Knudsen, Inc.,
 Danbury, Conn.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belle-
 ville, N. J. ADV. PG. 279.
Insuline Corp. of America, 186 Granite St., Manchester,
 N. H.
Jowil Electronics, Inc., 7945 Germantown Ave., Phila-
 delphia 18, Pa.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Mon-
 roe St., Chicago 3, Ill. ADV. PG. 497.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199.
Kreutzer Industries, 1835 N. Hoyle Ave., Chicago 47, Ill.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Lee Electric & Mfg. Co., 2806 Clearwater St., Los
 Angeles 39, Calif.
Lenz Electric Mfg. Co., 1751 North Western Ave.,
 Chicago 47, Ill.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty
 Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
Microdot Division, Felts Corp., 1826 Fremont Ave.,
 South Pasadena, Calif.
MODELECTRIC PRODUCTS CORP., 1500 Bangs Ave., As-
 bury Park, N. J. ADV. PG. 140.
Molded Insulation Co., 335 E. Price St., Philadelphia
 44, Pa.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave.,
 Yonkers, N. Y. ADV. PG. 312.
Newton Co., 55 Elm St., Manchester, Conn.
ORTHON CORP., 196 Albion Ave., Paterson 2, N. J.
 ADV. PG. 628.
Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta.,
 Los Angeles 8, Calif.
Pacific Mercury Television Mfg. Corp., 5955 Van Nuys
 Blvd., Van Nuys, Calif.
PARAPLEGICS MFG. CO., INC., 10068 Franklin Ave.,
 Franklin Park, Ill. ADV. PG. 472.
PESCHEL ELECTRONICS, INC., 13 Garden St., New
 Rochelle, N. Y. ADV. PG. 504.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8,
 Mass. ADV. PG. 463.
Phebo, Inc., 3640 Woodland St., Baltimore 15, Md.
Phoenix Electronics, Inc., 50 Island St., Lawrence,
 Mass.
Radio City Products Co., Inc., Centre & Glendale Sts.,
 Easton, Pa.
RADIO SONIC CORP., 111 Bleeker St., New York 12,
 N. Y. ADV. PG. 631.
Reiner Electronics Co., Inc., Centre & Glendale Sts.,
 Easton, Pa.
Riverside Mfg. & Electrical Supply Co., 10221 Michigan
 Ave., Dearborn, Mich.
Roffan Co., Corner Route 1 & Camp Meeting Rd., Tops-
 field, Mass.
Royal Electric Co., Inc., Pawtucket, R. I.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave.,
 Chicago 41, Ill.
Saratoga Industries, Inc., Saratoga Springs, N. Y.
Sears Co., M. J., Delaware County, Roxbury, N. Y.
Selectar Industries, Inc., 3100 Ocean Parkway, Brook-
 lyn 35, N. Y.
Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn
 10, N. Y.
Square Root Mfg. Corp., 391 Saw Mill River Rd.,
 Yonkers, N. Y.
Superec Electronics Corp., 23 Atherton St., Yonkers,
 N. Y.
SWITCHCRAFT, INC., 1320 N. Halsted St., Chicago 22,
 Ill. ADV. PG. 491.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Pati-
 sades Park, N. J.
TELETRON INDUSTRIES CORP., 35-18 37th St., Long
 Island City 1, N. Y. ADV. PG. 538.
Telephonics Corp., Park Ave., Huntington, N. Y.
Television Laboratories, Inc., Mill St., Wauconda, Ill.
Thomas Electronics, Inc., 118 Ninth St., Passaic, N. J.
Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
TRU-CONNECTOR CORP., 416 Union St., Lynn, Mass.
 ADV. PG. 621.
Trutone Electronics, Inc., 812-14 N. Highland Ave.,
 Los Angeles 38, Calif.
United Manufacturing & Service Co., 405 S. Sixth St.,
 Milwaukee 4, Wis.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
 N. J. ADV. PG. 493.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts.,
 Union, N. J. ADV. PG. 577.
Victor Electric Wire & Cable Corp., 8 Ackerman Ave.,
 Clifton, N. J.
Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lyn-
 brook, N. Y.
Waltham Horological Corp., 711 Broad St., Lynn, Mass.
West Coast Electronics Co., 5873 W. Jefferson Blvd.,
 Los Angeles 16, Calif.
Western Sound & Electric Labs., Inc., 805 S. Fifth St.,
 Milwaukee 4, Wis.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
 St., Westbury 91, Conn. ADV. PG. 138.
Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG.
 64.
Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City
 27, Mo.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

CABLE CLAMPS & CLIPS

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, Ill. ADV. PG. 638.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
BUGGIE, INC., H. H., P. O. Box 817, Toledo 1, Ohio. ADV. PG. 539.
 Burndy Engineering Co., Inc., Norwalk, Conn.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Commercial Plastics Co., 282 W. North Ave., Chicago 47, Ill.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Holub Industries, Inc., 414 DeKalb Ave., Sycamore, Ill.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Judd Co., J. L., 87 Chambers St., New York 7, N. Y.
 Laughlin Co., Thomas, 199 Fore, Portland, Me.
NATIONAL TEL-TRONICS CORP., 35 St. Casmir's Ave., Yonkers, N. Y. ADV. PG. 312.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
T.L.G. Electric Corp., 31 W. 27th St., New York 1, N. Y.
Thomas & Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J.
TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 82.
 Weckesser Co., 5261 Avondale Ave., Chicago 30, Ill.
 Whitaker Cable Corp., Kansas City 16, Mo.
 Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.

CABLE HOOKS

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 I. E. Manufacturing, 321 N. Hoyme Ave., Chicago 12, Ill.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Laughlin Co., Thomas, 199 Fore, Portland, Me.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

CABLE—Coaxial Flexible

Aero Specialties, 85 Prescott St., Worcester, Mass.
ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
BOSTON INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BURROUGHS CORP., ELECTRONIC INSTRUMENT DIV., 1209 Vine St., Philadelphia, Pa. ADV. PG. 495.
 Cable Specialists Inc. of Conn., 166 Palisade Ave., Bridgeport, Conn.
CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 614.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Communication Products Co., Inc., Marlboro, N. J.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
 Holyoke Wire & Cable Co., 720 Main St., Holyoke, Mass.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.
 Okonite Co., The, Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall Street, New York 5, N. Y. ADV. PG. 156, 157.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.
 Precision Tube Co., Inc., North Wales, Pa.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
 Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.
TENSOLITE INSULATED WIRE CO., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
 Transradio Ltd., 138-A Cromwell Rd., London SW 7, England.
 Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
U. S. WIRE & CABLE CORP., Progress & Monroe St., Union, N. J. ADV. PG. 577.
 Waltham Horological Corp., 711 Broad St., Lynn, Mass.
 Warren Wire Co., Pownal, Vt.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

CABLE—Coaxial Rigid

ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
 Communication Products Co., Inc., Marlboro, N. J.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.
 Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S.E., 10, England.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
U. S. WIRE & CABLE CORP., Progress & Monroe St., Union, N. J. ADV. PG. 577.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

CABLE—Insulated

Aero Specialties, 85 Prescott St., Worcester, Mass.
ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
 American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
BOSTON INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Good, Inc., Don, 1014 Fair Daks Ave., South Pasadena, Calif.
 Holyoke Wire & Cable Co., 720 Main St., Holyoke, Mass.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
KOILED KORDS, INC., Box K, New Haven 14, Conn. ADV. PG. 602.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 New England Electrical Works, Inc., Lisbon, N. H.
 Okonite Co., The, Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Revere Corporation of America, Wallingford 2, Conn.
REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
 Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.
 Roehling's Sons Corp., John A., 640 Broad St., Trenton, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
SEQUOIA PROCESS CORP., 871 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 3, Mass.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S.E. 10, England.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
 Transradio Ltd., 138A Cromwell Rd., London, S.W. England.
 Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
U. S. WIRE & CABLE CORP., Progress & Monroe St., Union, N. J. ADV. PG. 577.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Warren Wire Co., Pownal, Vt.
 Western Insulated Wire Co., 2425 E. 30th St., Los Angeles 58, Calif.
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

CABLES—Low Capacitance

TENSOLITE INSULATED WIRE CO., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.

CABLE—Microphone

ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
 American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.

BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.

CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.

CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.

Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.

Electric Wire & Cable Co., Sycamore, Ill.

Electrovoice, Inc., Buchanan, Mich.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

Holyoke Wire & Cable Co., 720 Main St., Holyoke, Mass.

KOILED KORDS, INC., Box K, New Haven 14, Conn. ADV. PG. 602.

Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.

Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.

Okonite Co., The Canal St., Passaic, N. J.

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.

Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.

Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.

Precision Tube Co., Inc., North Wales, Pa.

Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.

Revere Corporation of America, Wallingford 2, Conn.

REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.

Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.

Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.

Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.

ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.

Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.

SEQUOIA PROCESS CORP., 871 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.

Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S.E. 10, England.

TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.

Transradio, Ltd., 138A Cromwell Rd., London SW 7, England.

Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.

U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.

United Technical Laboratories, Box 425-V, Morristown, N. J.

Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

Warren Wire Co., Pownal, Vt.

Whitaker Cable Corp., Kansas City 16, Mo.

WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

Co., Rudolph, North Tonawanda, N. Y.

—Shielded

Specialties, 85 Prescott St., Worcester, Mass.

PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.

ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 40, Ill. ADV. PG. 80.

Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.

Wire & Cable Co., 25 Broadway, New York 4, N. Y.

Wire & Cable Co., The, 63 Main St., Ansonia, Conn.

struments Corp., 350 Fifth Ave., New York 1, N. Y.

fg. Co., 4647 W. Van Buren St., Chicago 44, Ill.

Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.

BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.

Specialists Inc. of Conn., 166 Palisade Ave., Bridgeport, Conn.

CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.

CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.

Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.

Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Insulated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

Electric Industries, Inc., 100 Oakdale Rd., Chester, N. Y.

WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.

Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.

Corp., 1601 Wall St., Fort Wayne 6, Ind.

TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

Holyoke Wire & Cable Co., 720 Main St., Holyoke, Mass.

KOILED KORDS, INC., Box K, New Haven 14, Conn. ADV. PG. 602.

Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.

Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.

Okonite Co., The Canal St., Passaic, N. J.

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.

Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.

Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.

Precision Tube Co., Inc., North Wales, Pa.

Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.

Revere Corporation of America, Wallingford 2, Conn.

REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.

Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.

Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.

Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.

ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.

Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.

SEQUOIA PROCESS CORP., 871 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.

Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S.E. 10, England.

TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.

Transradio, Ltd., 138A Cromwell Rd., London SW 7, England.

Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.

U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.

United Technical Laboratories, Box 425-V, Morristown, N. J.

Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

Warren Wire Co., Pownal, Vt.

Whitaker Cable Corp., Kansas City 16, Mo.

WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

CABLE—Transmission Line

ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 40, Ill. ADV. PG. 80.

American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.

Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.

Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.

Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.

CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.

Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Communication Products Co., Inc., Marlboro, N. J.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

Copperweld Steel Co., Wire & Cable Div., Glassport, Pa.

CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.

Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.

J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.

Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.

Okonite Co., The Canal St., Passaic, N. J.

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.

PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall Street, New York 5, N. Y. ADV. PG. 156, 157.

Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.

Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.

Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.

Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.

Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.

Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.

Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.

ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.

Transradio Ltd., 138A Cromwell Rd., London S. W. 7, England.

Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.

U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.

Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

CABLE—uhf

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 40, Ill. ADV. PG. 80.

Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

BOSTON INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.

BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.

CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.

CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.

Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Communication Products Co., Inc., Marlboro, N. J.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.

HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.

Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.

Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.

Okonite Co., The Canal St., Passaic, N. J.

PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.

PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.

Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.

Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.

Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.

Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.

Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.

Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.

Transradio, Ltd., 138A Cromwell Rd., London S. W. 7, England.

Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.

U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.

Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

CALIBRATORS—Crystal

A.R.F. Products, Inc., 7627 Lake St., River Forest, Ill.

Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.

BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.

Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Daystrom Instrument Co., Archbald, Pa.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 Ferris Instrument Co., 110 Cornella St., Boonton, N. J.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne, Ind. ADV. PG. 181.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 319.
 Mercury Electronic Co., Box 450, Red Bank, N. J.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftsbury Ave., London, W.C. 2, England.
NEW LONDON INSTRUMENT CO., P. O. Box 189, New London, Conn. ADV. PG. 451.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.

CALIBRATORS—Radar Range

ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 571.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
 Daystrom Instrument Co., Archbald, Pa.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne, Ind. ADV. PG. 181.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
 Weston Laboratories, Inc., Harvard, Mass.

CALIBRATORS—Voltage

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CALIDYNE CO., P. O. Box 72, Winchester, Mass. ADV. PG. 509.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
COMPUTER CO. OF AMERICA, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Dessen-Barnes Corp., 750 N. Vinedo Ave., Pasadena 8, Calif.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 G. W. Associates, 108 Standard St., El Segundo, Calif.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KEPCO LABS., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 23-25.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Mercury Electronic Co., Box 450, Red Bank, N. J.
 Radiation, Inc., Melbourne, Fla.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Tektronix, Inc., P. O. Box 831, Portland 7, Ore.

TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.

CALIBRATORS—SWEEP

CALIBRATORS—UHF

See **INSTRUMENTS—Electrical Measuring**

CALIBRATORS—VSWR

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.

CALORIMETERS—Microwave

See **MICROWAVE ACCESSORIES**

CAMERAS—Oscilloscope

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Allegany Instrument Co., Inc., Cumberland, Md.
 Analex Corp., 150 Causeway St., Boston 14, Mass.
 Aremac Associates, 329 W. Washington St., Pasadena 3, Calif.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
B'LL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
BURKE & JAMES INC., 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 643.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Edgerton, Gernsmausen & Greir, Inc., 160 Brookline Ave., Boston 15, Mass.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
FAIRCHILD CAMERA & INSTRUMENT CORP., Robbins Lane, Syosset, N. Y. ADV. PG. 102, 103.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Warrick Co., Frederick P., Clarkson, Mich.

CAMERAS—Radar Recording

BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
 Maurer, Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Warrick Co., Frederick P., Clarkson, Mich.

CAMERAS—Television

Berndt-Back, Inc., Auricon Div., 6914 Romaine St., Hollywood 38, Calif.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Dage Electronics Div. of Thompson Products, Inc., 69 N. Second St., Beech Grove, Ind.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Federal Telecommunication Labs., a Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
 General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
 K-M Laboratories, 550 Beverly Rd., Teaneck, N. J.
 Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 Pye, Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
 Willys Electronics Div. of Willys Motors, Inc., Toledo, Ohio.

CAMERAS—X-Ray

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Central Research Laboratories, Inc., Red Wing, Minn.
 North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.
 Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
 Pye, Ltd., Cambridge, England.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

CANS

NOTE:

(h) indicates hermetically sealed types

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton, Mass. ADV. PG. 440.
AMERICAN ALUMINUM COMPANY, 374 Jelliff Ave., Newark, N. J. ADV. PG. 660.
 American Brass Co., 414 Meadow St., Waterbury, Conn.
ATLAS SCREW & SPECIALTY CO., 450 Broome St., New York 13, N. Y. ADV. PG. 312.
 Barnes Metal Products Co., 4425 W. 16th St., Chicago 23, Ill.
 Bridgeport Metal Products Mfg. Co., 365 Cherry Bridgeport 5, Conn.
 Burken Lamination Corp., 811 Whittier St., Bronx 4, N. Y.
 Calresin Corp., 4543 Brazil St., Los Angeles 10, Calif.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. ADV. PG. 167.
 Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Donnelly Electric & Mfg. Co., 3050 Washington St., Boston, Mass.
ELECTRO-SEAL CORP., 946 North Ave., Des Plaines, Ill. ADV. PG. 206.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV. PG. 450.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorn Ave., Valley Stream, N. Y. ADV. PG. 645.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop Chicago 7, Ill. ADV. PG. 196.
HELDOR MFG. CORP., Heldor Bushing & Terminal Inc., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
HUDSON TOOL & DIE CO., INC., 118 S. 14th St., Newark, N. J. ADV. PG. 363.
 K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 265.
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
 Northern Metal Products Co., 9597 W. Grand Ave., Franklin Park, Ill.
OLYMPIC METAL PRODUCTS CO., INC., Phillipsburg, N. J. ADV. PG. 224.
 Paul & Beekman, Inc., 1801 Courtland St., Philadelphia 40, Pa.
 Repath Co., Paul R., 641 E. 61st St., Los Angeles 10, Calif.
 Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.
 Scovill Manufacturing Co., Waterbury 20, Conn.
SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 562.
 Steel Products Co., 1420 W. Galer St., Seattle 99, Wash.
 Stone City Machine & Tool Co., Inc., P. O. Box 35, 1206 Seventh St., Bedford, Ind.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.
 Transformer Engineers, 161 E. California, Pasadena 4, Calif.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester, Mass.
 Wright-Hepp Associates, Inc., 251 West St., Saybrook, Conn.
 Hackensack, N. J.

CAPACITORS

NOTE:

Throughout all capacitor listings

(h) indicates hermetically sealed types

(p) indicates pressure types

(v) indicates vacuum types

Capacitors, Fixed

1. Ceramic
2. Decade
3. Electrolytic
4. Energy Storage
5. Feed Through
6. Fixed Composition
7. Gas Filled
8. Glass Dielectric
9. High Voltage
10. Metallized Paper
11. Mica
12. Paper
13. Plastic Dielectric
14. Power Factor
15. Precision Air
16. Pulse Forming Network

**Silvered Mica
Tantalum
Vacuum**

**Capacitors, Variable
Trimmer-Air
Trimmer-Ceramic
Trimmer-Glass
Trimmer-Mica
Trimmer-Vacuum
Tuning-Receiving
Tuning-Transmitter**

Aero Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Cal. 10-12-16. (h)
AERTE ELECTRONICS CORP., 507 26th St., Union City, N. J. 20. ADV. PG. 615.
 Aero Corp., 740 Belleville Ave., New Bedford, Mass. 3-4-5-9-10-11-12-13-14-16-17-21. (h)
AIRFOOT-MARINE PRODUCTS, INC., CHEMICALS & ELECTRICS DIV., 155 Park Ave., Elizabethtown, Pa. 2-9-16. ADV. PG. 526. (h)
 Alcorn Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa. 9-16. (h)
 Ajax Condenser Corp., 10905 Chandler Blvd., North Hollywood, Calif. 3-5-12-16. (h)
 All Products, Inc., Defiance, Ohio. 20-24.
 Allerdredy Co., 136 W. Greenfield Ave., Milwaukee 4, Wis. 1.
 American Condenser Co., 4410 Ravenswood Ave., Chicago 40, Ill. 3-12-13. (h)
 American Mica Insulation Co., Manasquan, N. J. 17.
 American Radionic Co., 33 & 55 Flatbush Ave., Brooklyn 1, N. Y. 1-12. (h)
AMPLEX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. 19. ADV. PG. 309.
ARC ELECTRONICS, INC., 103 Lafayette St., New York 10, N. Y. 1-5-9-11-12-17-21-22. ADV. PG. 624.
 Armbro Ceramics, Inc., 1 E. 57th St., New York 22, N. Y. 1-11-17-21.
ASTH CORP., 255 Grant Ave., East Newark, N. J. 3-12-13. ADV. PG. 419. (h)
 Auto Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. 12.
 Automatic Mfg. Co., 65 Gouverneur St., Newark 4, N. J. 1.
 Balch Research Laboratories, 49-53 Edison Place, Newark 2, N. J. 13. (h)
BARRETT & WILLIAMSON, 235 Fairfield Ave., Upper Merion, Pa. 25. ADV. PG. 174, 175.
BIASE, INC., 311 Mountain Rd., Union City, N. J. 21. ADV. PG. 635.
 Bright Radio Labs, Inc., 24-28 45th St., Long Island City 1, N. Y. 20-24-25.
 Bright Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 17-20.
 Bright Radio Electronics Ltd., 1833 Jefferson Place, Washington 6, D. C. 17.
 Bright Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. 20.
 Bright Radio Corp., 4543 Brazil St., Los Angeles 39, Calif. 10-12-16.
BURGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. 1-21. ADV. PG. 240.
BULL ELECTRONICS PRODUCTIONS CORP., ALLEN 17 Whiting St., Plainville, Conn. 21-24-25. ADV. PG. 394.
CELAB DIV. OF GLOBE-UNION, INC., 914Y E. 4th Ave., Milwaukee 1, Wis. 1-4-5-6-9-14-16-21. ADV. PG. 252, 342, 574, 607, 659. (h)
 Chicago Condenser Corp., 3255 W. Armitage Ave., Chicago 47, Ill. 4-5-12. (h)
 Condenser Manufacturers, Inc., 1018 Pearl St., Box 1234, Nashville, Tenn. 3-14-18. (h)
CONDENSER PRODUCTS CO., 140 Hamilton St., New Britain, Conn. 9-13-14-16. ADV. PG. 623. (h)
 Condenser Electric Corp., South Plainfield, N. J. 3-4-5-6-9-10-11-12-13-14-16-17-18.
 Condenser Glass Works, Corning, N. Y. 8-9-20.
CORNS ELECTRIC MFG. CORP., 540 39th St., Union City, N. J. 9-12-13-16. ADV. PG. 662. (h)
CORNS RADIO CORP., 853 Whittier St., New York 59, N. Y. 3-12. ADV. PG. 650.
 Corning, Inc., 2661 Myrtle, Monrovia, Calif. 1-9.
 Corning & Wilkens, Inc., 1901-7 Summit Ave., Union City, N. J. 9-19.
 Duffell Airplane & Marine Instruments, Inc., 15 Wilbur St., New York 5, N. Y. 2-3-5-6-9-11-12-13-14. (h)
ELECTRIC CULLOUGH, INC., San Bruno, Calif. 9-19-25. ADV. PG. 270, 271. (v)
 Electronic Mfg. Co., S. Park & John St., Willimantic, Conn. 11-12-20-21-22.
ELECTRONIC FABRICATORS, INC., 682 Broadway, New York 2, N. Y. 13. ADV. PG. 504. (h)
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. 1-5-17-21. ADV. PG. 313, 314.
 East Coast Metallurgical Corp., 2200 Sheridan Road, North Chicago, Ill. 18.
 East Coast Co., John E., 3179 N. Pulaski Rd., Chicago 41, Ill. 9-12-13-14. (h)
EDGE TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. 24-25. ADV. PG. 182, 187.
ELM CAPACITORS, INC., 3400 Park Ave., New York 56, N. Y. 2-4-9-13-16. ADV. PG. 482. (h)
 Electro Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. 5-6-13. (h)
ELM TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. 2. ADV. PG. 227.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 3-4-9-12-13-14-16-18. ADV. PG. 1-20.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. 1-20. ADV. PG. 1-20. (v)
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. 19-20-24-25. ADV. PG. 287. (h) (v)
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 11-12-15. ADV. PG. 177-180.
 Girard-Hopkins, 1000 40th St., Oakland 1, Calif. 12-14.
GLENCO CORP., Metuchen, N. J. 1. ADV. PG. 640.
GOOD-ALL ELECTRIC MFG. CO., 112 W. First St., Ogallala, Neb. 4-5-6-9-12-13. ADV. PG. 160, 161. (h)
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. 2-3-4-5-9-10-12-13-14-16. ADV. PG. 241. (h)
GULTON MFG. CORP., Metuchen, N. J. 1-4-16. ADV. PG. 640.
HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. 20-24-25. ADV. PG. 305-307.
 Herlec Corp., 6th & Beech St., Grafton, Wis. 1-21.
 Hopkins Engineering Co., 2082 Lincoln Ave., Altadena, Calif. 10-12.
ILLINOIS CONDENSER CO., 1616 N. Throop St., Chicago 22, Ill. 3-4-12-14. ADV. PG. 84. (h)
 Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill. 3-4-9-10-12-13-14-16. (h)
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. 6. ADV. PG. 233-235.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. 20-22. ADV. PG. 666.
 Jeffers Electronics Div. of Speer Carbon Co., DuBois, Pa. 1-6-9.
JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. 5-9-19-23-25. ADV. PG. 268, 269. (v)
 Johnson Mfg. Co., Boonton, N. J. 24-25.
JOHNSON CO., E. F., Waseca, Minn. 7-20-24-25. ADV. PG. 594, 595. (p)
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. 12. ADV. PG. 497.
LAPP INSULATOR CO., INC., RADIO SPECIALTIES DIV., 31 Gilbert St., LeRoy, N. Y. 7-9-25. ADV. PG. 414, 415.
LECLANCHE S. A., Yverdon, Switzerland. 13. ADV. PG. 457.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa. 2-11-15-17.
 Luther Electronic Mfg. Co., 5728 W. Washington Blvd., Los Angeles 16, Calif. 9-12-16. (h)
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. 3-18. ADV. PG. 181.
 Maida Development Co., 12 E. Howard St., Phoebus, Va. 1-5-9-21.
 Mallory & Co., Inc., P. R. 3029 E. Washington St., Indianapolis 6, Ind. 1-3-5-9-11-12-17-18-21.
 Maryland Lava Co., Bel Air, Md. 1.
McCoy ELECTRONICS CO., Mount Holly Springs, Pa. 24-25. ADV. PG. 525.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada. 25.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. 20-22.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. 3-4-5-9-11-12-13-14-16-17. ADV. PG. 352. (h)
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 20-25.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn. 1.
 Mitronics Inc., 232 Thirteenth Ave., Newark, N. J. 1-8.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 24.
 Mucon Corp., 9 St. Francis St., Newark 5, N. J. 1-21.
 Muirhead & Co., Ltd., Beckenham, Kent, England. 2-11-12-17.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill. 1-5-21.
MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. 1-17. ADV. PG. 136-137.
NATIONAL CAPACITOR CO., 60 Washington Court, Quincy 69, Mass. 4-5-6-9-10-12-13-14-16. ADV. PG. 286. (h)
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. 20-24-25. ADV. PG. 395.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill. 24.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa. 8-19.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. 13-20. ADV. PG. 471.
PLANET MFG. CORP., 225 Belleville Ave., Bloomfield, N. J. 3. ADV. PG. 441.
 Plastic Capacitors, Inc., 2511 W. Moffat St., Chicago 47, Ill. 2-4-9-13-14-16. (v)
 Potter Co., 1850 Sheridan Rd., North Chicago, Ill. 4-5-9-12-13. (h)
PYRAMID ELECTRIC CO., 1445 Hudson Blvd., North Bergen, N. J. 3-4-5-6-9-10-12-14. ADV. PG. 195. (h)
 Quality Components, Inc., St. Mary's, Pa. 6.
 Radio Condenser Co., Camden, N. J. 24-25. (h)
 Radio Frequency Co., 44 Park St., Medfield, Mass. 9.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill. 1-17.
RADIO MATERIALS CORP., 3325 N. California Ave., Chicago 18, Ill. 1. ADV. PG. 62, 63.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. 16. ADV. PG. 26.
 San Fernando Electric Mfg. Co., 1509 1st St., Box 952, San Fernando, Calif. 5-12-13. (h)
SANDERS ASSOCIATES, INC., Nashua, N. H. 1-13. ADV. PG. 622.

Sangamo Electric Co., Capacitor Div., Marion, Ill. 3-4-9-11-12-17. (h)
 Sarkes Tarzian, Inc., Tuner Div., Bloomington, Ind. 20.
 Schweitzer, Inc., Peter J., 405 Lexington Ave., New York 17, N. Y. 12.
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass. 20.
 Skottje Electronics Inc., 1106 Myers St., Peckville, Pa. 1-5.
 Solar Mfg. Corp., E. 46th & Seville Ave., Los Angeles 58, Calif. 1-5-9-21.
 Southern Electronics Co., 239 W. Orange Grove Ave., Burbank, Calif. 2-4-9-13. (h)
 Speer Carbon Co., St. Mary's, Pa. 1-5-6.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass. 1-3-4-5-6-9-10-11-12-13-14-16-17-18-21. (h)
STACKPOLE CARBON CO., St. Marys, Pa. 6. ADV. PG. 202, 203.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. 1-4-9-11-12-14-17.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind. 2-7-9-10-12.
 Stromberg-Carlson Co., Rochester 3, N. Y. 12.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. 1-5-21. ADV. PG. 293-296.
 Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London W. 3, England. 1-3-4-5-6-9-11-12-13-14-16-17-18-21. (h)
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y. 20-22.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas. 16.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. 20.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. 3-4-5-9-10-12-13-14-16. ADV. PG. 513. (h)
 United Condenser Corp., 337 E. 139th St., New York 54, N. Y. 4-9-12. (h)
 United Electronic Mfg. Corp., 542 39th St., Union City, N. J. 3. (h)
 United Electronics Co., 42 Spring St., Newark, N. J. 9-19.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y. 1-11.
U. S. ELECTRONICS CORP., 276 Warren St., Yonkers, N. Y. 13-16. ADV. PG. 493.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. 5-9-13-20. ADV. PG. 604, 605.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif. 19-23.
 Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y. 24.
VITRAMON, INC., Box 544, Bridgeport, Conn. 8. ADV. PG. 577.
 Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo. 25.

**CARTONS—for Shipping
See PACKAGING MATERIALS**

**CARTRIDGES
SEE CRYSTAL CARTRIDGES**

CASES—Diode & Transistor

CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. ADV. PG. 167.
ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 4, N. J. ADV. PG. 229.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark 7, N. J. ADV. PG. 223.
MANSOL CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.

CASES—Instrument & Meter

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
AMERICAN ALUMINUM COMPANY, 374 Jelliff Ave., Newark, N. J. ADV. PG. 660.
 American Radio Hardware Co., Inc., 152 S. Macquesten Pkwy., Mt. Vernon, N. Y.
 Bennett Co., Inc., R. P., Frederick, Md.
 Bennett Mfg. Co., Alden, N. Y.
 Bolta Products Div. of The General Tire & Rubber Co., Lawrence, Mass.
 Bristol Co., The, Waterbury 20, Conn.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif.
CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 470.
 Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Daniels, Inc., C. R., Box 6908, Baltimore, Md.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
DOLIN METAL PRODUCTS, INC., 315 Lexington Ave., Brooklyn 16, N. Y. ADV. PG. 474.
 Donnelly Electric & MFG. CO., 3050 Washington St., Boston, Mass.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 General Metal Products Co., 1010-14 Centre St., Easton, Pa.
 Harrison & Co., Philip H., Matawan, N. J.

HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 HUDSON TOOL & DIE CO., 118 S. 14th St., Newark, N. J. ADV. PG. 363.
 KARP METAL PRODUCTS CO., Div. of H & B Machine Co., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
 KOCH FIBERGLAS, Corte Madera, Calif. ADV. PG. 537.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Muckle Mfg. Co., Owatonna 55, Minn.
 MULTI-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.
 Product Engineering Laboratories Co., Inc. 314 Adams St., Newark 5, N. J.
 Raytor Corp., Fifth St. & Cannon Ave., Lansdale, Pa.
 REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
 Scientific Wood Cabinet Co., 88 Holmes St., Bellville, N. J.
 Triad Portable Case Corp., 310-314 W. Lincoln Ave., Mt. Vernon, N. Y.
 TUBULAR RIVET & STUD CO., Linden St., Quincy, Mass. ADV. PG. 300.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.
 Wright-Hepp Associates, Inc., 251 West St., South Hackensack, N. J.

CASES, PORTABLE

(for Radios, Phonographs, Amplifiers, etc.)

BAYSHORE WOOD PRODUCTS CO., INC., 234 Creek Rd., Keansburg, N. J. ADV. PG. 508.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Bolta Products Div. of The General Tire & Rubber Co., Lawrence, Mass.
 Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif.
 Central Stamping & Mfg. Co., Polo, Ill.
 CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 470.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn, Ill.
 KOCH FIBERGLAS, Corte Madera, Calif. ADV. PG. 537.
 Kolman Show Case Corp., Fort Wayne 1, Ind.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Monmouth Associates, Inc., Route 34, Main & Broad Sts., Matawan, N. J.
 Northern Metal Products Co., 9597 W. Grand Ave., Franklin Park, Ill.
 RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
 Scovill Manufacturing Co., Waterbury 20, Conn.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Triad Portable Case Corp., 310-314 W. Lincoln Ave., Mount Vernon, N. Y.

CAVITIES—Microwave

See MICROWAVE ACCESSORIES

CELLS—Photoelectric

Arnold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 BRADLEY LABS, INC., 170 G Columbus Ave., New Haven 11, Conn. ADV. PG. 218.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Continental Electric Co., Geneva, Ill.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave., El Segundo, Calif. ADV. PG. 101.
 Kemitte Laboratories, 1819 W. Grand Ave., Chicago 22, Ill.
 Northern Electronic & Vacuum Industries, St. Sauveur des Monts, P. Q., P. O. Box 105, Canada.
 Photoswitch Inc., 77 Broadway, Cambridge 42, Mass.
 Pys, Ltd., Cambridge, England.
 SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
 STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.
 VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Freflinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

CELLS—Photovoltaic

BRADLEY LABS, INC., 170 G Columbus Ave., New Haven 11, Conn. ADV. PG. 218.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.

CELLS—Standard

Epley Lab., Inc., The, Newport, R. I.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Freflinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

CEMENTS—Radio

Barrett Varnish Co., 1532 S. 50th Court, Chicago 50, Ill.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Javex, P. O. Box 646, Redlands, Calif.
 Sauerisen Cements Co., Sauerisen Bldg., Pittsburgh 15, Pa.

CERAMICS

See INSULATION MATERIALS

CHAINS—Small Drive

Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
 BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524.
 Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.
 National Screw & Mfg. Co., The, Cleveland 4, Ohio.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

CHAMBERS—Altitude

CHAMBERS—Fungus Test

See TEST EQUIPMENT—Environmental

CHAMBERS—Ionization

ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 333.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Jordan Electronic Mfg. Co., Inc., Union Bldg., 119 E. Union St., Pasadena 1, Calif.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Nuclear Development Lab., Box 7034, Kansas City, Mo.
 Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Southwest Products, Inc., Alamo Downs, Box 85-D, San Antonio, Rt. 4, Texas.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Wood Counter Laboratory, N., 5491 Blackstone, Chicago 37, Ill.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

CHAMBERS—Pressure

CHAMBERS—Rain and Sunshine

CHAMBERS—Sand and Dust

See TEST EQUIPMENT—Environmental

CHAMBERS—Shielded Screen

ACE ENGINEERING & MACHINE CO., INC., 3642 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 318.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 LINDGREN & ASSOCIATES, ERIK A., 4515 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 540.
 SHIELDING, INC., Box 217, Dept. E, Riverside, N. J. ADV. PG. 536.

CHAMBERS—Temperature & Humidity

Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
 Air Control Installations Ltd., Ruislip, Middlesex, England.
 AIRECO, INC., 2315-10 Second Ave., Carmen, Schenectady, N. Y. ADV. PG. 600.
 American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 AMERICAN RESEARCH CORP., 11 Brook St., Bristol, Conn. ADV. PG. 591.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 BOWSER TECHNICAL REFRIGERATION DIV. OF BOWSER, INC., Terryville, Conn. ADV. PG. 358, 359.
 Conrad Inc., 52 W. 4th, Holland, Mich.
 ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
 Environmental Equipment Corp., 369 Linden St., Brooklyn 27, N. Y.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hudson Bay Division, Refrigeration Systems, Inc., 646 W. Washington, Chicago 6, Ill.
 International Radiant Corp., 40 Matinecock Ave., Port Washington, N. Y.
 Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.
 MURPHY & MILLER, INC., 1322 S. Michigan Ave., Chicago 5, Ill. ADV. PG. 334.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 Radiation Instrument Development Labs., 2337 W. St., Chicago 36, Ill.
 STANDARD CABINET CO., 57 Washington Ave., Carlisle, N. J. ADV. PG. 550.
 TENNEY ENGINEERING INC., 1090 Springfield Union, N. J. ADV. PG. 487.
 Webber Mfg. Co., Inc., 2745 Madison Ave., Indianapolis 3, Ind.

CHAMBERS—Test

Air Control Installations Ltd., Ruislip, Middlesex, England.
 AIRECO, INC., 2315-10 Second Ave., Carmen, Schenectady, N. Y. ADV. PG. 600.
 American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 AMERICAN RESEARCH CORP., 11 Brook St., Bristol, Conn. ADV. PG. 591.
 BOWSER TECHNICAL REFRIGERATION DIV., BOWSER, INC., Terryville Conn. ADV. PG. 358, 359.
 CONRAD INC., 52 W. 4th, Holland, Mich. ADV. PG. 647.
 Environmental Equipment Corp., 369 Linden St., Brooklyn 27, N. Y.
 Hudson Bay Division, Refrigeration Systems, Inc., W. Washington, Chicago 6, Ill.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
 International Radiant Corp., 40 Matinecock Ave., Port Washington, N. Y.
 LINDGREN & ASSOCIATES, ERIK A., 4515 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 540.
 Newton Co., 55 Elm St., Manchester, Conn.
 SHIELDING, INC., Box 217, Dept. E., Riverside, N. J. ADV. PG. 536.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney Pa. Philadelphia 20, Pa.
 STANDARD CABINET CO., 57 Washington Ave., Carlisle, N. J. ADV. PG. 550.
 Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.
 MURPHY & MILLER, INC., 1322 S. Michigan Ave., Chicago 5, Ill. ADV. PG. 334.
 TENNEY ENGINEERING INC., 1090 Springfield Union, N. J. ADV. PG. 487.
 Webber Mfg. Co., Inc., 2745 Madison Ave., Indianapolis 3, Ind.

CHANGERS—Automatic Record

Birmingham Sound Reproducers, Ltd., Claremont W. Old Hill, Staffs, England.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Garrard Sales Corp., 164 Duane St., New York 13, N. Y.
 Lesa, Via Bergamo 21, Milan, Italy.
 MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 188.
 Radio Corp. of America, Home Instrument Div., Camden, N. J.
 V-M Corp., Benton Harbor, Mich.
 Wurilizer Co., Rudolph, North Tonawanda, N. Y.

CHARGERS—Battery

See BATTERY CHARGERS

CHASSIS SLIDES

See SLIDES—Chassis

CHASSIS—Metal

ABALON PRECISION MFG. CORP., 540 Casanova Blvd., Bronx 59, N. Y. ADV. PG. 490.
 Acme Tool & Specialties Co., 224 N. Loomis St., Chicago 17, Ill.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 AINSLIE ELECTRONIC PRODUCTS, INC., 312 Cambridge Ave., Quincy 69, Mass. ADV. PG. 418.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton, Mass. ADV. PG. 440.
 AMERICAN ALUMINUM COMPANY, 374 Jelliff Ave., Newark, N. J. ADV. PG. 660.
 American Machine & Foundry Co., Electronics Div., 10 Commonwealth Ave., Boston 15, Mass.
 American Radio Hardware Co., Inc., 152 S. MacQuarrie Pkwy., Mt. Vernon, N. Y.
 ART-LOYD METAL PRODUCTS CORP., 2973 Cross Ave., Brooklyn 14, N. Y. ADV. PG. 561.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn 16, N. Y.
 BAYSHORE WOOD PRODUCTS CO., INC., 234 Creek Rd., Keansburg, N. J. ADV. PG. 508.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Bennett Co., Inc., R. P., Frederick, Md.
 Bennett Mfg. Co., Alden, N. Y.
 Bingham Mfg. Co., J. F., 69 Bay State Rd., Lawrence, Mass.
 BOYLE METALCRAFT CORP., 150 Sullivan St., Brooklyn 31, N. Y. ADV. PG. 582.
 Buck Engineering Co., Inc., 37-41 Marcy St., Fresh Meadows, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Burken Lamination Corp., 811 Whittier St., Bronx 11, N. Y.
 CHASSIS TRAK CORP., 6250 E. Iona Rd., Indianapolis, Ind. ADV. PG. 629.
 CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 470.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.

Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Dayton Instrument Co., Archbald, Pa.
 DeLco Radio Div., General Motors Corp., Kokomo, Ind.
 Donny Electric & Mfg. Co., 3050 Washington St.,
 Boston 19, Mass.
 E. B.etal Products Co., Inc., 12-14 Bridge Plaza, S.,
 Ed Island City 1, N. Y.
 Eltr Corp., St. Anne, Ill.
 FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV.
 PG. 50.
 Feil Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Frank Electronics, Inc., 415 W. Pike St., Philadelphia
 40 Pa.
 Gate Radio Co., Quincy, Ill.
 General Metal Products Co., 1010-14 Centre St., Easton,
 Pa.
 Harr & Co., Philip H., Matawan, N. J.
 HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL
 CO. INC., 238 Lewis St., Paterson, N. J. ADV. PG.
 17
 HEN AND MILLER INDUSTRIES, 45 Rockefeller Plaza,
 New York, N. Y. ADV. PG. 599.
 Hewlett-Packard Electronics, Inc., 7945 Germantown Ave., Philadel-
 phia 18, Pa.
 KAR METAL PRODUCTS CO., DIV. OF H & B MACHINE
 CO., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
 Kirk Blum Mfg. Co., 2893 Spring Grove Ave., Cinci-
 nati 25, Ohio.
 Magn Electronics Co., 9810 Anza Ave., Inglewood,
 Calif.
 McE Mfg. Corp., Littleton, Mass.
 McE Mfg. Corp., 86-08 130th St., Richmond Hill 18,
 N. Y.
 Miniman Products, Inc., 430 E. 102nd St., New York,
 N. Y.
 MUL METAL CO., 1350 Garrison Ave., New York 59,
 N. Y. ADV. PG. 297.
 Northeastern Engineering, Inc., Manchester, N. H.
 North Metal Products Co., 9597 W. Grand Ave.,
 Franklin Park, Ill.
 PART-LIT PRODUCTS CORP., 32-62 49th St., Long
 Island City 3, N. Y. ADV. PG. 230.
 Paul Beekman, Inc., 1801 Cortland St., Philadelphia
 40 Pa.
 Phider Electronics, Inc., 50 Island St., Lawrence, Mass.
 PHOTO-CHEMICAL PRODUCTS, INC., 479 Walton Ave.,
 New York 51, N. Y. ADV. PG. 450.
 Radio Products Co., 2911 E. W. Carroll Ave., Chicago 12,
 Ill.
 Radio Laboratory, 1111 State Rd., E., Anderson, Ind.
 REF Corp., Jericho Turnpike, Mineola, N. Y.
 Radio Corp., Fifth St. & Cannon Ave., Lansdale, Pa.
 Radio Co., Paul R., 641 E. 61st St., Los Angeles 1,
 Calif.
 Reth & Thesmacher Co., Cleveland 13, Ohio.
 RFL CO., INC., Middletown, Conn. ADV. PG. 557.
 S. Manufacturing Co., Waterbury 20, Conn.
 SFLC PRODUCTS, 14515 Dickens St., Sherman Oaks
 Calif. ADV. PG. 608.
 S. Electronics, Inc., 7 Industrial Place, Summit,
 N. J.
 Turner Metal Products Corp., 343 W. 26th St.,
 New York, N. Y.
 V. F. Manufacturing Corp., 10929 Vanowen St.,
 Hollywood, Calif.
 West Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16,
 N. Y.
 V. Inc., 27-10 Astoria Blvd., Long Island City 2,
 N. Y.
 V. Mfg. Co., Inc., 2715 E. 14th St., Kansas City
 27 Mo.
 W. P. Pressed Aluminum Corp., 13-15 Hope Ave.,
 Wester, Mass.
 W. Lepp Associates, Inc., 251 West St., South
 Hackensack, N. J.
 W. Co., Rudolph, North Tonawanda, N. Y.
 Z. Co., 1121 Chestnut St., Burbank, Calif.

Vidaire Electronics Mfg. Co., 576 E. Merrick Rd., Lyn-
 brook, N. Y.
 Yonkers Industries, 28 School St., Yonkers, N. Y.

CHECKERS—Crystal Rectifier
 Airborne Instruments Lab., Inc., 160 Old Country Rd.,
 Mineola, N. Y.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
 Livingston, N. J. ADV. PG. 572.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burling-
 ton, N. J. ADV. PG. 536.
 EMPIRE STATE LABORATORIES, 2608 Merrick Rd.,
 Bellmore, N. Y. ADV. PG. 478.
 GENERAL ELECTRIC CO., Electronics Div., Electronics
 Park, Syracuse, N. Y. ADV. PG. 1-20.
 Lehigh Valley Electronic Mfg. Co., 215 S. 3rd St.,
 Allentown, Pa.
 Research Electronics Laboratory, Roslyn, Pa.

CHEMICALS—Electronic
 Baker Chemical Co., J. T., Phillipsburg, N. J.
 Barco Chemical Products Co., 701-703 S. LaSalle, Chi-
 cago 5, Ill.
 Barium & Chemicals, Inc., Willoughby, Ohio.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26,
 Pa.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919
 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE
 CORP., 40 Rector St., New York 6, N. Y. ADV. PG.
 168.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNE-
 SOTA MINING & MFG. CO., 6 Argyle Terrace, Irving-
 ton 11, N. J. ADV. PG. 246.
 Mallinckrodt Chemical Works, Second & Mallinckrodt
 Sts., St. Louis 7, Mo.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.
 504.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abing-
 ton, Pa.
 Schott Co., Walter L., 3225 Exposition Place, Los
 Angeles 18, Calif.
 Superex Electronics Corp., 23 Atherton St., Yonkers,
 N. Y.
 Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland
 13, Ohio.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broad-
 way, New York 19, N. Y. ADV. PG. 699-706.
 Workman TV, Inc., 309 Queen Anne Road, Teaneck, N. J.

CHEMICALS—Electroplating
 Bart-Messing Corp., 227 Main St., Belleville 9, N. J.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98,
 Del.
 Enthone, Inc., 442 Elm St., New Haven 2, Conn.
 GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE
 CORP., 40 Rector St., New York 6, N. Y. ADV. PG.
 168.
 Linick Chemical Co., 59 E. Madison St., Chicago 2, Ill.
 METZ REFINING CO., 369 Mulberry St., Newark 2,
 N. J. ADV. PG. 672.
 SEL-REX PRECIOUS METALS, INC., 229 Main St., Bell-
 ville 9, N. J. ADV. PG. 633.
 TECHNICAL, INC., P. O. Box 965, Providence 1, R. I.
 ADV. PG. 562.
 Western Gold & Platinum Works, 589 Bryant St., San
 Francisco, Calif.
 Wildberg Bros. Smelting & Refining Co., 742 Market St.,
 San Francisco 2, Calif.

CHEMICALS—Luminescent
 Baker Chemical Co., J. T., Phillipsburg, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Canadian Radium & Uranium Corp., 630 Fifth Ave.,
 New York 20, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98,
 Del.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919
 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Mallinckrodt Chemical Works, Second & Mallinckrodt
 Sts., St. Louis 7, Mo.
 PHOTO-CHEMICAL PRODUCTS, INC., 479 Walton Ave.,
 New York 51, N. Y. ADV. PG. 450.
 PRECISE MEASUREMENTS CO., 942 Kings Highway,
 Brooklyn 23, N. Y. ADV. PG. 650.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
 New York 19, N. Y. ADV. PG. 699-706.
 U. S. RADIUM CORP., 535 Pearl St., New York 7,
 N. Y. ADV. PG. 476.

CHEMICALS—Tube
 Baker Chemical Co., J. T., Phillipsburg, N. J.
 Barium & Chemicals, Inc., Willoughby, Ohio.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919
 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE
 CORP., 40 Rector St., New York 6, N. Y. ADV. PG.
 168.
 Mallinckrodt Chemical Works, Second & Mallinckrodt Sts.,
 St. Louis 7, Mo.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG.
 504.
 Philadelphia Quartz Co., 1146 Public Ledger Bldg., Phila-
 delphia 6, Pa.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abing-
 ton, Pa.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
 ADV. PG. Inside Back & Back Covers.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
 New York 19, N. Y. ADV. PG. 699-706.

NOTE:
 Throughout all choke listings:
 (h) indicates hermetically sealed types

CHOKES—Audio
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4,
 Calif. (h)
 ACR Transformer Mfg. Corp., 26-04 Fourth St., Astoria
 2, N. Y. (h)
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 (h)
 Aircraft Transformer Corp., West & Willow Aves., Long
 Branch, N. J. (h)
 AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa.
 ADV. PG. 479. (h)
 AIRPAX PRODUCTS CO., Middle River, Baltimore 20,
 Md. ADV. PG. 65. (h)
 Arco Transformer & Electric Co., 1602 S. Hanna St.,
 Fort Wayne, Ind. (h)
 Atlantic Transformer Co., Groton, Conn. (h)
 ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury,
 Mass. ADV. PG. 230. (h)
 AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minne-
 apolis 7, Minn. ADV. PG. 510. (h)
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
 BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y.
 ADV. PG. 197. (h)
 Carol Electronics Corp., 141 E. 25th St., New York 10,
 N. Y. (h)
 CELCO CONSTANTINE ENGINEERING LABORATORIES,
 CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549,
 551. (h)
 CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd.,
 Chicago, Ill. ADV. PG. 567. (h)
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago,
 Ill. (h)
 Coil Company of America, Inc., 48 Perry St., Closter,
 N. J. (h)
 Coil Winders, Inc., 100 New York Ave., Westbury,
 N. Y. (h)
 COMMUNICATION ACCESSORIES CO., Red Bridge Rd.,
 Hickman Hills, Mo. ADV. PG. 141-144. (h)
 Consolidated Radio Products Co., 350 W. Erie St., Chi-
 cago 10, Ill. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago
 22, Ill. (h)
 Cycle Electronic Laboratories, 356 Glenwood Ave., East
 Orange, N. J. (h)
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chi-
 cago 47, Ill. (h)
 De Coursey Engineering Lab., P. O. Box 235, Los
 Angeles 25, Calif. (h)
 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV.
 PG. 480. (h)
 Electran Mfg. Co., 1901 N. Clybourn, Chicago, Ill. (h)
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago
 39, Ill. (h)
 Electro Engineering Works, 6021 College Ave., Oakland
 18, Calif. (h)
 ELECTRONIC TRANSFORMER CO., 207 W. 25th St.,
 New York, N. Y. ADV. PG. 166. (h)
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn
 17, N. Y. ADV. PG. 490. (h)
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21,
 N. Y. (h)
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New
 York 20, N. Y. ADV. PG. 450. (h)
 FISHER ENGINEERING, INC., 2060 U. S. 24 East,
 P. O. Box 327, Huntington, Ind. ADV. PG. 550. (h)
 FOREST ELECTRIC CO., 7216 Circle Ave., Forest Park,
 Ill. ADV. PG. 644. (h)
 Foster Transformer Co., 3820 Colerain Ave., Cincinnati
 23, Ohio. (h)
 FRED TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 227. (h)
 GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mine-
 ola, N. Y. ADV. PG. 653. (h)
 GENERAL TRANSFORMER CORP., 18240 Harwood Ave.,
 Homewood, Ill. ADV. PG. 444. (h)
 Goodmans Industries Ltd., Axiom Works, Wembley, Mid-
 dlesex, England. (h)
 GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St.,
 Burbank, Calif. ADV. PG. 637. (h)
 GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd.,
 Chicago 31, Ill. ADV. PG. 501. (h)
 Grand Transformers, Inc., Grand Haven, Mich. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles
 37, Calif. (h)
 Halldorson Transformer Co., 4500 Ravenswood Ave., Chi-
 cago 40, Ill. (h)
 HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV.
 PG. 603. (h)
 Hyco Co., Inc., 11423 Vanowen St., North Hollywood,
 Calif. (h)
 Industrial Specialties Corp., 323 Atlantic Ave., Brook-
 lyn 2, N. Y. (h)
 INDUSTRIAL TRANSFORMER CO., Gouidsboro, Pa. ADV.
 PG. 442, 443. (h)
 ISLIP TRANSFORMER & METAL CO., INC., Beech St.,
 Islip, N. Y. ADV. PG. 485. (h)
 Jefferson Electric Co., Bellwood, Ill. (h)
 Jobbins Electronic Enterprises, Menlo Park, Calif. (h)
 Johnson Electronics Div. of Gramer Transformer Corp.,
 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
 K-V Transformer Corp., 20 E. Franklin St., Danbury,
 Conn. (h)
 KENYON TRANSFORMER CO., INC., 840 Barry St., New
 York 59, N. Y. ADV. PG. 437. (h)
 LANGEVIN MANUFACTURING CORP., 37 W. 65th St.,
 New York 23, N. Y. ADV. PG. 152, 153. (h)

Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirly Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140.
 Mystic Transformers Inc., 63 Swanton St., Winchester, Mass.
MORAN ELECTRONIC COMPONENTS, INC., 10515 Metropolitan Ave., Kensington, Md. ADV. PG. 498.
NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. ADV. PG. 532.
 Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
ORTHO ENGINEERING CORP., TRANSFORMER DIV., 245 Wallace St., Orange, N. J. ADV. PG. 612.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
 Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I. (h)
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Richmond Engineering Co., Inc., Concord St., South Norwalk, Conn.
 S. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
 Southwestern Industrial Electronics Co., 2831 Post Rd., P. O. Box 13058, Houston 19, Texas.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Speer Carbon Co., St. Marys, Pa.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
STERLING TRANSFORMER CORP., 297 N. Seventh St., Brooklyn 7, N. Y. ADV. PG. 662.
 Television Laboratories, Inc., Mill St., Wauconda, Ill.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Todd Products, 156 Gramatan Ave., Mt. Vernon, N. Y.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.
 Transformer Engineers, 161 E. California, Pasadena 1, Calif.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.
 Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif.
 Transvison, Inc., 460 North Ave., New Rochelle, N. Y.
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 534.
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 Tronic Coil Winding Co., Inc., 161 Fairfield Ave., Waterbury, Conn.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Westbury 91, Conn. ADV. PG. 138.

CHOKES—Filter

A.P.W. Co., 72 W. Main St., Rockaway, N. J.
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.
 Acro Transformer Mfg. Corp., 26-04 Fourth St., Astoria 2, N. Y.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.

AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479.
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65.
 Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind.
 Atlantic Transformer Co., Groton, Conn.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230.
AUDIO DEVELOPMENT CO., 2833 13th Ave. S., Minneapolis 7, Minn. ADV. PG. 510
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.
 Carad Corp., 2850 Bay Rd., Redwood City, Calif.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567.
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453.
 Coast Coil Co., 5332 W. Washington Blvd., Los Angeles 16, Calif.
 Coil Company of America, Inc., 48 Perry St., Closter, N. J.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COILCRAFT, INC., Cary, Ill. ADV. PG. 534.
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill.
 Crittenden Transformer Co., 1220 Nadeau St., Los Angeles, Calif.
 Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J.
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
 Electron Mfg. Co., 1901 N. Clybourn, Chicago, Ill. (h)
 Electronic Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. (h)
 Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. (h)
ELECTRONIC COILS, INC., P. O. Box 1665, 33 Lyman St., Springfield, Mass. ADV. PG. 603.
ELECTRONIC TRANSFORMER CO., 207 W. 25th St., New York, N. Y. ADV. PG. 166.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
FERRANTI ELECTRIC INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550.
FOREST ELECTRIC CO., 7216 Circle Ave., Forest Park, Ill. ADV. PG. 644.
 Foster Transformer Co., 3820 Colerain Ave., Cincinnati 23, Ohio.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 Gates Electric Co., 65 W. Broadway, New York, N. Y.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL TRANSFORMER CO., 18240 Harwood Ave., Homewood, Ill. ADV. PG. 444.
 Goodmans Industries Ltd., Axiom Works, Wembley, Middlesex, England.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637.
GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 31, Ill. ADV. PG. 501.
 Grand Transformers, Inc., Grand Haven, Mich. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
 Halldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill.
HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603.
 Hindle Transformer Co., Inc., Woods Church Rd., Flemington, N. J.
 Hyco Co., Inc., 11423 Vanowen St., North Hollywood, Calif.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
ISLIP TRANSFORMER & METAL CO., INC., Beech St., Islip, N. Y. ADV. PG. 485.
 Jefferson Electric Co., Bellwood, Ill. (h)
 Jobbins Electronic Enterprises, Menlo Park, Calif. (h)
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 437.

LANGEVIN MANUFACTURING CORP., 37 W. 65th New York 23, N. Y. ADV. PG. 152, 153.
 Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirly Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Merit Coil & Transformer Corp., 4427 N. Clark Chicago 40, Ill.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Mid-West Coil & Transformer Co., 1642 N. Halsted Chicago 14, Ill.
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins Milwaukee 9, Wis. ADV. PG. 140.
MORAN ELECTRONIC COMPONENTS, INC., 10515 Metropolitan Ave., Kensington, Md. ADV. PG. 498.
 Mystic Transformers Inc., 63 Swanton St., Winchester, Mass.
NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. ADV. PG. 532.
 Nothelfer Winding Labs., 9 Albemarle Ave., Trenton, N. J.
 Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
ORTHO ENGINEERING CORP., TRANSFORMER DIV., Wallace St., Orange, N. J. ADV. PG. 612.
ORTHO FILTER CORP., 198 Albion Ave., Paterson, N. J. ADV. PG. 312.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
 Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
 Power Equipment Co., 5740 Nevada East, Detroit Mich.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Richmond Engineering Co., Inc., Concord St., South Norwalk, Conn.
 S. N. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
 Southwestern Industrial Electronics Co., 2831 Post Rd., P. O. Box 13058, Houston 19, Texas.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Electrical Products Co., 2239 E. Third Dayton, Ohio.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
STERLING TRANSFORMER CORP., 297 N. Seventh Brooklyn 7, N. Y. ADV. PG. 662.
 Television Laboratories, Inc., Mill St., Wauconda, Ill.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
 Todd Products, 156 Gramatan Ave., Mt. Vernon, N. Y.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.
 Transformer Engineers, 161 E. California, Pasadena 1, Calif.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417.
 Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif.
 Transvison, Inc., 460 North Ave., New Rochelle, N. Y.
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 534.
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 Tronic Coil Winding Co., Inc., 161 Fairfield Ave., Waterbury, Conn.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 United Technical Laboratories, Box 425-V, Morrisonton, N. J.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 391, 552.

Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pitts-
 burgh 30, Pa. ADV. PG. 113-124.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
 St., Westbury 91, Conn. ADV. PG. 138.

CHOKES—Power

Acro Transformer Mfg. Corp., 26-04 Fourth St., Astoria
 2, O. (h)
Alcorn Transformer Corp., West & Willow Aves., Long
 Beach, N. J. (h)
AIRCO INC., 241 Fairfield Ave., Upper Darby, Pa.
 ADV. PG. 479. (h)
AIR PRODUCTS CO., Middle River, Baltimore 20,
 Md. ADV. PG. 65. (h)
Arco Transformer & Electric Co., 1602 S. Hanna St.,
 Ft. Wayne, Ind. (h)
Atlas Transformer Co., Groton, Conn. (h)
ATLANTIC ENGINEERING CO., 3 Edgewood St., Roxbury,
 Mass. ADV. PG. 230. (h)
AUDION DEVELOPMENT CO., 2833 13th Ave. S., Minne-
 apolis 7, Minn. ADV. PG. 510. (h)
Basic Electric Co., 601 Fifth St., Highland, Ill. (h)
Birds Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto,
 Ca. (h)
Carroll Electronics Corp., 141 E. 25th St., New York 10,
 N. Y. (h)
CELCO CONSTANTINE—ENGINEERING LABORATORIES
 60 Island Ave., Mahwah, N. J. ADV. PG. 547, 549,
 551. (h)
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd.,
 Chicago, Ill. ADV. PG. 567. (h)
Chico Magnetic Control Co., 1616 Damon Ave., Chi-
 cago 11, Ill. (h)
CHICAGO STANDARD TRANSFORMER CORP., 3580 Els-
 torve, Chicago 18, Ill. ADV. PG. 453. (h)
Coil Company of America, Inc., 48 Perry St., Closter,
 N. J. (h)
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 (h)
Consolidated Radio Products Co., 350 W. Erie St.,
 Chicago 10, Ill. (h)
Crest Transformer Corp., 1834-36 W. North Ave., Chi-
 cago 22, Ill. (h)
Cristofani Transformer Co., 1220 Nadeau St., Los An-
 geles, Calif. (h)
Cycle Electronic Laboratories, 356 Glenwood Ave., East
 Orange, N. J. (h)
DX Radio Products Co., Inc., 2300 Armitage Ave., Chi-
 cago 47, Ill. (h)
DESIGN & MFG. CO., Grandview 6, Mo. ADV.
 PG. 150. (h)
Electric Mfg. Co., 1901 N. Clybourn, Chicago, Ill. (h)
Electrical Windings, Inc., 2015 N. Kolmar Ave., Chi-
 cago 39, Ill. (h)
Engineering Works, 6021 College Ave., Oakland
 12, Calif. (h)
GENERAL COILS, INC., P. O. Box 1665, 33 Lyman
 St., Springfield, Mass. ADV. PG. 603. (h)
GENERAL TRANSFORMER CO., 207 W. 25th St.,
 New York, N. Y. ADV. PG. 166. (h)
GENERAL PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn
 1, N. Y. ADV. PG. 490. (h)
Grey Mfg. Co., Inc., 528 E. 72nd St., New York 21,
 N. Y. (h)
HEPPEL ELECTRIC, INC., 30 Rockefeller Plaza, New
 York, N. Y. ADV. PG. 450. (h)
HUGHES ENGINEERING, INC., 2060 U. S. 24 East,
 Box 327, Huntington, Ind. ADV. PG. 550. (h)
ORE ELECTRIC CO., 7216 Circle Ave., Forest Park,
 Ill. ADV. PG. 644. (h)
REEL TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brown 27, N. Y. ADV. PG. 227. (h)
Rast Electric Co., 65 W. Broadway, New York, N. Y.
ELECTRIC CO., Apparatus Sales Div., 1 River
 Chenectady 5, N. Y. ADV. PG. 1-20. (h)
REEL TRANSFORMER CO., 18240 Harwood Ave.,
 Homewood, Ill. ADV. PG. 444. (h)
Resonance Industries Ltd., Axiom Works, Wembley,
 Middlesex, England. (h)
OSL ELECTRIC & MFG. CO., 2921 W. Olive St.,
 Burbank, Calif. ADV. PG. 637. (h)
RAM TRANSFORMER CORP., 2734 N. Pulaski Rd.,
 Chicago 31, Ill. ADV. PG. 501. (h)
Radio Transformers, Inc., Grand Haven, Mich. (h)
Robert M., 5112 S. Hoover St., Los Angeles
 37, Calif. (h)
REGENT ENGINEERING CO., Westbury, N. Y. ADV.
 PG. 3. (h)
Radio Transformer Co., Inc., Woods Church Rd., Flem-
 ington, N. J. (h)
Radio Specialties Corp., 323 Atlantic Ave., Brook-
 lyn, N. Y. (h)
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV.
 PG. 2, 443. (h)
SLIP TRANSFORMER & METAL CO., INC., Beech St.,
 Islip, N. Y. ADV. PG. 485. (h)
Speers Electric Co., Bellwood, Ill. (h)
Electronic Enterprises, Menlo Park, Calif. (h)
Thomson Electronics Div. of Gramer Transformer Corp.,
 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
Transformer Corp., 20 E. Franklin St., Danbury,
 Conn. (h)
TRANSFORMER CO., INC., 840 Barry St.,
 New York 59, N. Y. ADV. PG. 437. (h)
WANGEN MANUFACTURING CORP., 37 W. 65th St.,
 New York, N. Y. ADV. PG. 152, 153. (h)
Varo Inc., 5561 Northwest Highway, Chicago 30, Ill.
ELECTRIC PRODUCTS CO., INC., 67 Thirty
 Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.

MAGNAVOX CO., Component Sales, Industrial & Defense
 Products, Fort Wayne 4, Ind. ADV. PG. 181. (h)
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New
 York 55, N. Y. ADV. PG. 212. (h)
Magnex Corp., 90-28 Van Wyck Expressway, Jamaica,
 N. Y. (h)
Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway
 Beach 93, N. Y. (h)
Mid-West Coil & Transformer Co., 1642 N. Halsted St.,
 Chicago 14, Ill. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St.,
 Milwaukee 9, Wis. ADV. PG. 140. (h)
NEW YORK TRANSFORMER CORP., Third Ave., Alpha,
 N. Y. ADV. PG. 532. (h)
Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3,
 N. J. (h)
Nuclear Measurements Corp., 2460 N. Arlington Ave.,
 Indianapolis 5, Ind. (h)
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV.
 PG. 44, 45. (h)
ORTHO ENGINEERING CORP., TRANSFORMER DIV., 245
 Wallace St., Orange, N. J. ADV. PG. 612. (h)
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2,
 N. J. ADV. PG. 312. (h)
Partridge Transformer, Ltd., Roebuck Rd., Tolworth,
 Surrey, England. (h)
Peerless Electrical Products Div. of Altac Lansing Corp.,
 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
Power Equipment Co., 5740 Nevada East, Detroit 34,
 Mich. (h)
POWER INDUSTRIES CO., 2511 S. Indiana Ave., Chicago
 16, Ill. ADV. PG. 650. (h)
Power Transformer Co., Inc., 532 Mulberry St., Newark
 5, N. J. (h)
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
 ADV. PG. Inside Back & Back Covers. (h)
Radio Music Corp., 84 S. Water St., Port Chester,
 N. Y. (h)
Radionic Transformer Co., 411 S. Sangamon St., Chicago
 7, Ill. (h)
Randall, Inc., Douglas, 102 High St., Westerly, R. I. (h)
Raypar, Inc., 7800 W. Addison St., Chicago, Ill. (h)
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Wal-
 tham 54, Mass. ADV. PG. 26. (h)
Richmond Engineering Co., Inc., Concord St., South Nor-
 walk, Conn. (h)
S. N. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis. (h)
Saratoga Industries, Inc., Saratoga Springs, N. Y. (h)
Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
Square Root Mfg. Corp., 391 Saw Mill River Rd.,
 Yonkers, N. Y. (h)
Standard Electrical Products Co., 2239 E. Third St.,
 Dayton, Ohio. (h)
Standard Electronics Corp., 287 Emmet St., Newark 5,
 N. J. (h)
Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England. (h)
Television Laboratories, Inc., Mill St., Wauconda, Ill.
Texas Instruments Inc., 6000 Lemmon Ave., Dallas,
 Texas. (h)
THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield
 Ave., Los Angeles 22, Calif. ADV. PG. 548. (h)
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
Todd Products, 156 Gramatan Ave., Mt. Vernon, N. Y.
Transformer Engineers, 161 E. California, Pasadena 1,
 Calif. (h)
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd,
 Pa. ADV. PG. 591. (h)
TRANSFORMERS, INC., 532 North St., Endicott, N. Y.
 ADV. PG. 416, 417. (h)
Tranonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield,
 Calif. (h)
Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV.
 PG. 534. (h)
TRIAD TRANSFORMER CORP., 4055 Redwood Ave.,
 Venice, Calif. ADV. PG. 398. (h)
Tronic Coil Winding Co., Inc., 161 Fairfield Ave., Water-
 bury, Conn. (h)
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey
 City, N. J. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
 N. J. ADV. PG. 493. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York
 13, N. Y. ADV. PG. Inside Front Cover. (h)
Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora
 St., Westbury 91, Conn. ADV. PG. 138. (h)
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pitts-
 burgh 30, Pa. ADV. PG. 113-124.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 (h)
Cycle Electronic Laboratories, 356 Glenwood Ave., East
 Orange, N. J. (h)
DX Radio Products Co., Inc., 2300 Armitage Ave., Chi-
 cago 47, Ill. (h)
Electrical Windings, Inc., 2015 N. Kolmar Ave., Chi-
 cago 39, Ill. (h)
ELECTRONIC COILS, INC., P. O. Box 1665, 33 Lyman
 St., Springfield, Mass. ADV. PG. 603. (h)
Fast & Co., John E., 3179 N. Pulaski Rd., Chicago 41,
 Ill. (h)
FUGLE-MILLER LABORATORIES, INC., 398 Main St.,
 Metuchen, N. J. ADV. PG. 367. (h)
Gates Radio Co., Quincy, Ill. (h)
GENERAL COIL PRODUCTS CORP., 43 Roselle St.,
 Mineola, N. Y. ADV. PG. 653. (h)
Goodmans Industries Ltd., Axiom Works, Wembley,
 Middlesex, England. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St.,
 Burbank, Calif. ADV. PG. 637. (h)
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St.,
 Chicago 7, Ill. ADV. PG. 196. (h)
Hindle Transformer Co., Inc., Woods Church Rd., Flem-
 ington, N. J. (h)
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave.,
 Chicago 25, Ill. ADV. PG. 641. (h)
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV.
 PG. 442, 443. (h)
ISLIP TRANSFORMER & METAL CO., INC., Beech St.,
 Islip, N. Y. ADV. PG. 485. (h)
Jeffers Electronics Div. of Speer Carbon Co., DuBois, Pa.
Johnson Electronics Div. of Gramer Transformer Corp.,
 2734 N. Pulaski Rd., Chicago 39, Ill. (h)
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199. (h)
Lectrohm, Inc., 5561 Northwest Highway, Chicago 30,
 Ill. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty
 Fourth St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
Magnex Corp., 90-28 Van Wyck Expressway, Jamaica,
 N. Y. (h)
Miller Co., J. W., 5917 S. Main St., Los Angeles 3,
 Calif. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St.,
 Milwaukee 9, Wis. ADV. PG. 140. (h)
Model Engineering & Mfg. Inc., Huntington, Ind. (h)
National Coil Co., P. O. Box 1237, Sheridan, Wyo. (h)
NORTH HILLS ELECTRIC CO., INC., 246-32 54th Ave.,
 Douglaston 62, N. Y. ADV. PG. 645. (h)
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV.
 PG. 44, 45. (h)
ORTHO ENGINEERING CORP., TRANSFORMER DIV., 245
 Wallace St., Orange, N. J. ADV. PG. 612. (h)
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2,
 N. J. ADV. PG. 312. (h)
Power Equipment Co., 5740 Nevada East, Detroit 34,
 Mich. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chi-
 cago 16, Ill. ADV. PG. 650. (h)
Power Transformer Co., Inc., 532 Mulberry St., Newark
 5, N. J. (h)
Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill. (h)
Radio Industries, Inc., 5225 Ravenswood Ave., Chicago
 40, Ill. (h)
Randall, Inc., Douglas, 102 High St., Westerly, R. I. (h)
Raypar, Inc., 7800 W. Addison St., Chicago, Ill. (h)
REDMAN ELECTRONICS CORP., P. O. Box 72, Thomp-
 sonville, Conn. ADV. PG. 334. (h)
Square Root Mfg. Corp., 391 Saw Mill River Rd.,
 Yonkers, N. Y. (h)
Standard Electrical Products Co., 2239 E. Third St.,
 Dayton, Ohio. (h)
Texas Instruments Inc., 6000 Lemmon Ave., Dallas,
 Texas. (h)
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
Union Electric & Mfg. Co., 1057 Summit Ave., Jersey
 City, N. J. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst,
 N. J. ADV. PG. 493. (h)
Vanguard Electronics Co., 3384 Motor Ave., Los Angeles
 34, Calif. (h)
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
Western Coil Products Co., 2993 Middlefield Rd., Palo
 Alto, Calif. (h)
Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City
 27, Mo. (h)

CHOKES—r-f & i-f

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway,
 Metuchen, N. J. ADV. PG. 496. (h)
Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4,
 Calif. (h)
Aerocoil, Inc., 24 Cliff St., Jersey City, N. J. (h)
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby,
 Pa. ADV. PG. 479. (h)
Bond Electronics Corp., 60 Springfield Ave., Spring-
 field Ave., Springfield, N. J. (h)
Bright Radio Labs., Inc., 24-28 45th St., Long Island
 City 3, N. Y. (h)
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,
 Cambridge 38, Mass. ADV. PG. 240. (h)
CELCO CONSTANTINE ENGINEERING LABORATORIES
 CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549,
 551. (h)
Chicago Magnetic Control Co., 1616 Damon Ave., Chi-
 cago, Ill. (h)
Coil Company of America, Inc., 48 Perry St., Closter,
 N. J. (h)

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway,
 Metuchen, N. J. ADV. PG. 496. (h)
Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4,
 Calif. (h)
Aerocoil, Inc., 24 Cliff St., Jersey City, N. J. (h)
Aerovox Corp., 740 Belleville Ave., New Bedford,
 Mass. (h)
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa.
 ADV. PG. 479. (h)
ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair
 Lawn, N. J. ADV. PG. 426. (h)
Automatic Mfg. Co., 65 Gouverneur St., Newark 4, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper
 Darby, Pa. ADV. PG. 174, 175. (h)
Bellair Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
Bond Electronics Corp., 60 Springfield Ave., Springfield,
 N. J. (h)
Bright Radio Labs., Inc., 24-28 45th St., Long Island
 City 3, N. Y. (h)
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. (h)

CADDELL-BURNS MFG. CO., 40 E. Second St., Mineola, N. Y. ADV. PG. 602.
 Calbest Engineering & Electronics Co., 828 Highland Ave., Hollywood 38, Calif.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
 Carad Corp., 2850 Bay Rd., Redwood City, Calif.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. (h)
COILCRAFT, INC., Cary, Ill. ADV. PG. 534.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. (h)
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480. (h)
ELECTRONIC COILS, INC., P. O. Box 1665, 33 Lyman St., Springfield, Mass. ADV. PG. 603.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583.
 Essex Electronics, Berkeley Heights, N. J.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 624.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
ISLIP TRANSFORMER & METAL CO., INC., Beech St., Islip, N. Y. ADV. PG. 485. (h)
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lewis Spring & Mfg. Corp., 2646 W. North Ave., Chicago 47, Ill.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
MENDELSON SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Co., J. W. 5917 S. Main St., Los Angeles 3, Calif.
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140.
MORAN ELECTRONIC COMPONENTS, INC., 10515 Metropolitan Ave., Kensington, Md. ADV. PG. 498.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
NORTH HILLS ELECTRIC CO., INC., 246-32 54th Ave., Douglaston 62, N. Y. ADV. PG. 645.
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.
ORTHO ENGINEERING CORP., TRANSFORMER DIV., 245 Wallace St., Orange, N. J. ADV. PG. 612.
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 334.
 Sickles F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Summit Coil Co., 4 Claremont Rd., Bernardsville, N. J.
 Superex Electronics Corp., 23 Atherton St., Yonkers, N. Y.

Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. (h)
 United Technical Laboratories, Box 425-V, Morristown, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.
 Wirt Co., 5221 Greene St., Philadelphia 44, Pa.

CHOPPERS—DC-AC

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65.
 Atlas Coil, Inc., Cottage St., Derby, Conn.
AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. J. ADV. PG. 490.
 Collins Manufacturing Co., Inc., 726 N. Kresson St., Baltimore 5, Md.
 General Devices, Inc., P. O. Box 253, Princeton, N. J.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
 Instrument Development Labs., Inc., 163 Highland Ave., Needham Heights, Mass.
 Iron Fireman, Electronics Div., 2800 S.E. Ninth Ave., Portland 2, Ore.
 James Vibrapop Co., 4036 N. Rockwell St., Chicago 18, Ill.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
STEVENS-ARNOLD INC., 22 Elkins St., South Boston 27, Mass. ADV. PG. 486.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Technical Operations, Inc., 6 Schouler Court, Arlington, Mass.
VIBRATION RESEARCH LABS., INC., 97 Lake Ave., Tuckahoe, N. Y. ADV. PG. 602.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

CHRONAXIMETERS

Electro-Medical Lab., Inc., South Woodstock 8, Vt.
CHRONOGRAPHS—Inertialess
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

CHRONOSCOPES

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mount Vernon, N. Y. ADV. PG. 360.
ELECTRICAL & PHYSICAL INSTRUMENT CORP., 42-19 27th St., Long Island City 1, N. Y. ADV. PG. 558.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

CIRCUITS—Printed, Stamped or Etched

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
 Anderson & Sons, Inc., Westfield, Mass.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 California Bent Glass Corp., Torrance, Calif.
CARDWELL ELECTRONICS PRODUCTIONS CORP., ALLEN D., 97 Whiting St., Plainville, Conn. ADV. PG. 394.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CENTRONICS CORP., 21-04 122 St., College Point, N. Y. ADV. PG. 598.
CIRCUIT CORP. OF AMERICA, 2448 N. Cicero Ave., Chicago, Ill. ADV. PG. 566.
 Circuitron, Inc., E. Main St., Rockville, Conn.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.

Codetyper Laboratories, 550 Fifth Ave., New York 5, N. Y.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astor Blvd., Long Island City 2, N. Y.
 Corning Glass Works, Corning, N. Y.
 Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 Davelle Laboratories, Inc., 145-68 228th St., Springfield Gardens 13, N. Y.
 Daystrom Instrument Co., Archbald, Pa.
 Digital Products, Inc., 7643 Fay Ave., La Jolla, Calif.
 Dressen-Barnes Corp., 750 N. Vinedo Ave., Pasadena, Calif.
DWYER ENGINEERING CO., INC., P. O. Box 48, Nashua, N. H. ADV. PG. 342.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 1, Pa. ADV. PG. 465.
ELECTRALAB, INC., 76 Atherton St., Boston 30, Mass. ADV. PG. 264.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
ELECTRONIC SERVICE CORP., 221 W. Lake St., Oak Park, Ill. ADV. PG. 590.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.
 Etched Products Corp., 39-01 Queens Blvd., Long Island City 4, N. Y.
 Filmwood Corp., 33 N. 23rd St., Camden 5, N. J.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
 Graphire Corp., 190 W. 237th St., New York 63, N. Y.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 64.
 Herlec Corp., 6th & Beech St., Grafton, Wis.
 Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
 Industrial Development & Mfg. Corp., P. O. Box 4, Needham, Mass.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Bellville, N. J. ADV. PG. 279.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Javex, P. O. Box 646, Redlands, Calif.
 Jewell Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 1, Calif. ADV. PG. 231.
LACEY BROTHERS ETCHED CIRCUITS, 117 S. Lombard Oak Park, Ill. ADV. PG. 591.
 LaPointe Electronics, Inc., Rockville, Conn.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Maida Development Co., 12 E. Howard St., Phoebus, Va.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 454, 455.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Mitronics Inc., 232 Thirteenth Ave., Newark, N. J.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Nameplates, Inc., 425 E. 101st St., Brooklyn 12, N. Y.
NORTH SHORE NAMEPLATE CO., Bank of Manhattan Bldg., Bayside 61, N. Y. ADV. PG. 526.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 3, Station J, Buffalo 8, N. Y. ADV. PG. 529.
RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
SEQUOIA PROCESS CORP., 871 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Technograph Printed Electronics, Inc., 191 Main St., Tarrytown, N. Y.
 Techron Co., 254-256 Friend St., Boston 14, Mass.
 Television Laboratories, Inc., Mill St., Wauconda, Ill.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
 U. S. Engineering Co., 521 Commercial St., Glendale, Calif.
U. S. RADIUM CORP., 535 Pearl St., New York 1, N. Y. ADV. PG. 476.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
 Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.

CIRCUITS—Plug-In

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 831

ALDE PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.

AUDI PRODUCTS CORP., 2265 Westwood Blvd., Los Angeles 64, Calif. ADV. PG. 653.

AVIATION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. Y. ADV. PG. 490.

Bend Computer Division, Bendix Aviation Corp., 5630 Ar Vitae St., Los Angeles 45, Calif.

Brush Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.

CENTLAB DIV. OF GLOBE-UNION, INC., 914Y E. Ke Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 57, 607, 659.

CELESTALAB INC., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.

Electrical Multiplier Corp., Electronics Div., San Gabriel, Calif.

Electrical Laboratories, 550 Fifth Ave., New York 19, N. Y.

Electrical Instrument Co., Archbald, Pa.

Electrical Products, Inc., 7643 Fay Ave., LaJolla, Calif.

Edwards Barnes Corp., 250 N. Vinado Ave., Pasadena 8, Calif.

EWING DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.

FLORALAB, INC., 76 Atherton St., Boston 30, Mass. ADV. PG. 264.

FLORALAB CORP., 5827 E. Beverly Blvd., Los Angeles 22, Calif. ADV. PG. 539.

General Engineering Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif.

General Electric Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.

GENCO SERVICE CORP., 221 W. Lake St., Oak Park, Ill. ADV. PG. 590.

Engineering Research Associates, Div. of Remington Rand, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.

EPSCO INCORPORATED, 126 Massachusetts Ave., Boston 5, Mass. ADV. PG. 583.

RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.

ETHEL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

EUDEIN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.

EUROPEAN ELECTRIC CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.

EUROPEAN ELECTRONICS CORP., 2432 Grand Concourse, New York 8, N. Y. ADV. PG. 655.

Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

EUROPEAN ELECTRONICS, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

EUROPEAN TELEVISION, INC., Binghamton, N. Y. ADV. PG. 449.

Euclid Research Inc., 141 S. Pacific Ave., Redondo Beach, Calif.

EUROPEAN COMPANY OF AMERICA, 196 DeGraw St., Brooklyn 31, N. Y. ADV. PG. 646.

EUROPEAN FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

Euclid, Ralph M., 135 W. Dayton St., Pasadena 5, Calif.

EUROPEAN CIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.

EUROPEAN PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.

EUROPEAN INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Euclid Inc., Melbourne, Fla.

EUROPEAN ASSOCIATES, INC., Nashua, N. H. ADV. PG. 42.

Euclid Electric Co., 125 Marshall St., North Adams, Mass.

Euclid Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

EUROPEAN TELELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449.

Euclid, Dept. EBG, P. O. Box 1207, Lindsay, Calif.

Euclid Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.

EUROPEAN INC., 404 Main St., Waltham 54, Mass. ADV. PG. 475.

EUROPEAN CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.

Dressen-Barnes Corp., 250 N. Vinado Ave., Pasadena 8, Calif.

DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.

ELECTRONIC SERVICE CORP., 221 W. Lake St., Oak Park, Ill. ADV. PG. 590.

EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 191.

Engineering Research Associates, Div. of Remington Rand, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.

EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583.

FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550.

GLENCO CORP., Metuchen, N. J. ADV. PG. 640.

GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.

GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y. Industrial Development & Mfg. Corp., P. O. Box 48, Needham, Mass.

INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.

INTERELECTRONICS CORP., 2432 Grand Concourse, New York 8, N. Y. ADV. PG. 655.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.

Newton Co., 55 Elm St., Manchester, Conn.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.

PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.

PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.

SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.

Sprague Electric Co., 125 Marshall St., North Adams, Mass.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449.

Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.

U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.

Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.

WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.

White Instrument Laboratories, 203 Riverside Drive, Austin, Texas.

CLAMPS for TUBES

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.

ATLAS E-E CORP., Bedford Airport, Bedford, Mass. ADV. PG. 674.

AUGAT BROS., INC., 33 Perry Ave., Attleboro, Mass. ADV. PG. 298.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

BIRTCHEER CORP., 4371 Valley Blvd., Los Angeles 32, Calif. ADV. PG. 545.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.

INTERNATIONAL ELECTRONIC RESEARCH CORP., 175 W. Magnolia Blvd., Burbank, Calif. ADV. PG. 398.

IPPOLITO & CO., INC., JAMES, 401 Concord Ave., Bronx 54, N. Y. ADV. PG. 625.

JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.

METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 454, 455.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.

PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.

Remler Co. Ltd., 2101 Bryant St., San Francisco 10, Calif.

Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

STAVER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 282.

TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 662.

TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 82.

Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

CLIPS—Fuse

AEROLITE ELECTRONICS CORP., 506 26th St., Union City, N. J. ADV. PG. 615.

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.

ATLAS E-E CORP., Bedford Airport, Bedford, Mass. ADV. PG. 674.

BEL-FUSE, INC., 311 Mountain Rd., Union City, N. J. ADV. PG. 635.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

British Electronic Sales Co., 21-03 45th Rd., Long Island City 1, N. Y.

BUSSMANN MFG. CO., St. Louis 7, Mo. ADV. PG. 78.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

Ideal Industries, Inc., 5103 Park & Borden Aves., Sycamore, Ill.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.

LITTELFUSE, INC., Des Plaines, Ill. ADV. PG. 527.

NATIONAL TEL-TRONICS CORP., 35 St. Caspary Ave., Yonkers, N. Y. ADV. PG. 312.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.

Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

SHERMAN MFG. CO., H. B., 22 Barney St., Battle Creek, Mich. ADV. PG. 661.

Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

Zierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

CLIPS—Grid

AEROLITE ELECTRONICS CORP., 506 26th St., Union City, N. J. ADV. PG. 615.

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

Haydu Brothers, P. O. Box 1226, Plainfield, N. J.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.

JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.

KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mt. Vernon, N. Y. ADV. PG. 567.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.

NATIONAL TEL-TRONICS CORP., 35 St. Caspary Ave., Yonkers, N. Y. ADV. PG. 312.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

Warren Plastics Corp., Warren, Pa.

Zierick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

CLIPS—Test

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV. PG. 445.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.

MUELLER ELECTRIC CO., 1583 E. 31st St., Cleveland 14, Ohio. ADV. PG. 551.

RAPID SPECIALTIES CO., 327 W. Huron St., Chicago 10, Ill. ADV. PG. 656.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 82.

Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.

CLOTHS—Speaker Grille

Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.

GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

CLOTHS—Woven Wire

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919-Taylor Ave., Rockford, Ill. ADV. PG. 380.
 JELLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. ADV. PG. 196.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

CLUTCHES—Magnetic

Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
 Electro-Mechanical Div. of General Riveters, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
 Electronic Manufacturing Engineers Co., 2410 Beacon St., Seattle 44, Wash.
 Globe Industries, Inc., P. O. Box 101, North Dayton Station, Dayton 4, Ohio.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
 Raymond Engineering Laboratory, Inc., Smith St., Middletown, Conn.
 REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
 Trans-American Precision Instrument Corp., 34-17 Lawrence St., Flushing 54, N. Y.
 VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.

COATINGS—Conductive
See also Graphite, Colloidal

Acheson Colloids Co., 1950 Washington Ave., Port Huron, Mich.
 American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
 California Bent Glass Corp., Torrance, Calif.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919-Taylor Ave., Rockford, Ill. ADV. PG. 380.
 INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Javex, P. O. Box 646, Redlands, Calif.
 Maas & Waldstein Co., 2121 McCarter Highway, Newark 4, N. J.
 METZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
 PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.

COATINGS-CONDUCTIVE—Tube Interior

Acheson Colloids Co., 1950 Washington Ave., Port Huron, Mich.
 INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Maas & Waldstein Co., 2121 McCarter Highway, Newark 4, N. J.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.

COATINGS—Protective
*Indicates Service Coating only.

Acheson Colloids Co., 1950 Washington Ave., Port Huron, Mich.
 American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.
 Bennett Mfg. Co., Alden, N. Y.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.
 California Bent Glass Corp., Torrance, Calif.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Doepke Mfg. Co., Inc., Chas. Wm., Metal Specialties Div., Rossmoyne, Ohio.
 Dow Chemical Co., Midland, Mich.
 Dow Corning Corp., Midland, Mich.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
 Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
 Filmwood Corp., 33 N. 23rd St., Camden 5, N. J.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919-Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Plastics Corp., P. O. Box 1236, Paterson, N. J.
 George Co., P. D., 5200 N. Second St., St. Louis, Mo.

Horn Co., Inc., 10th St. & 44th Ave., Long Island City 1, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 KELLOGG CO., M. W., P. O. Box 469, Jersey City 3, N. J. ADV. PG. 273-276.
 London Chemical Co., 325 W. 32nd St., Chicago 16, Ill.
 Lukens Steel Co. and Divisions, By-Products Steel Co. and Lukenweld, 447 Luken Building, Coatesville, Pa.
 Maas & Waldstein Co., 2121 McCarter Highway, Newark 4, N. J.
 Midland Industrial Finishes Co., Waukegan, Ill.
 Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Moyer Co., C. P., 8157 Monticello Ave., Skokie, Ill.
 NORTH AMERICAN RESEARCH LABS., INC., 725 Lexington Ave., Kenilworth, N. J. ADV. PG. 656.
 Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.
 PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
 Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis 4, Ind.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 Schenectady Varnish Co., Inc., Schenectady, N. Y.
 Shell Chemical Corp., 380 Madison Ave., New York 17, N. Y.
 SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 562.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
 Stevenson, Bro. & Co., 110 Pace St., Philadelphia 6, Pa.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.
 ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

COATINGS—Salt Spray Resistance

Acheson Colloids Co., 1950 Washington Ave., Port Huron, Mich.
 American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Enthone, Inc., 442 Elm St., New Haven 2, Conn.
 Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Maas & Waldstein Co., 2121 McCarter Highway, Newark 4, N. J.
 Midland Industrial Finishes Co., Waukegan, Ill.
 NORTH AMERICAN RESEARCH LABS., INC., 725 Lexington Ave., Kenilworth, N. J. ADV. PG. 656.
 Schenectady Varnish Co., Inc., Schenectady, N. Y.
 SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 562.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island, N. Y.
 Stevenson, Bro. & Co., 110 Race St., Philadelphia 6, Pa.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.
 Wright-Hepp Associates, Inc., 251 West St., South Hackensack, N. J.
 ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

CODE & TAB MARKERS

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
 Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y.
 Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg, Pa.
 Duramark, Inc., 2 Secatoag Ave., Port Washington, N. Y.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
 NORTH SHORE NAMEPLATE CO., Bank of Manhattan Bldg., Bayside 61, N. Y. ADV. PG. 526.
 Printed Collophane Tape Co., 521 N. La Brea Ave., Los Angeles 36, Calif.
 Schmidt, Inc., Geo. T., 1804 Belle Plaine, Chicago 13, Ill.
 Tablet & Ticket Co., 1021 W. Adams St., Chicago 7, Ill.
 Topflight Tape Co., 160 E. 9th Ave., York, Pa.
 Westline Products Div. of Western Lithograph Co., 600 E. Second St., Los Angeles 54, Calif.

COIL WINDING MACHINES
See MACHINES—Coil Winding**COILS**
See INDUCTANCES**COLORIMETERS—Photoelectric**

Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
 Beckman Instruments, Inc., 820 Mission St., San Francisco 1, Calif.
 Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 FARRAND OPTICAL CO., INC., 1 Bronx Blvd. at 23rd St., New York 70, N. Y. ADV. PG. 460.
 Gardner Labs., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 Rt. Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Instrument Development Labs., Inc., 163 Highland Ave., Needham Heights, Mass.
 Manufacturers Engineering & Equipment Corp., York & Mill Rds., Hatboro, Pa.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Pye Ltd., Cambridge, England.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 U M & F Manufacturing Corp., 10929 Vanowen North Hollywood, Calif.
 Warren Electronics Inc., Bound Brook, N. J.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

COLUMBIAN
See METALS**COMMUNICATION SYSTEMS**

1. Aircraft
2. Airport Traffic Control
3. Carrier Current
4. Facsimile
5. Induction
6. Marine Radio-Telephone
7. Microwave
8. Portable Installation
9. Railroad
10. Teletype
11. Vehicular

Acme Telectronix Div. of NEA Service Inc., West 7th & Lakeside, Cleveland 13, Ohio. 4.
 Adler Communications Laboratories, 1 Le Fevre Ln., New Rochelle, N. Y. 11.
 Aeronautical Communications Equipment, Inc., 318 Douglas Rd., Miami 33, Fla. 1.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C. 1-2.
 AIR ASSOCIATES, INC., Teterboro, N. J. 1-2-3-4-8-10-11. ADV. PG. 83.
 Airmec Ltd., High Wycombe, Buckinghamshire, England. 1.
 ALDEN ELECTRONIC & IMPULSE RECORDING EQUIPMENT CO., Box 125, Westboro, Mass. ADV. PG. 441.
 Alden Systems Co., 1 Alden Research Center, Westboro, Mass. 4.
 ALFAX PAPER & ENGINEERING CO., Washington P. O. Box 125, Westboro, Mass. 4. ADV. PG. 174, 175.
 Allied Eng. Div., Allied International Inc., Southwalk, Conn. 6-11.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif. 6-11.
 Automatic Electric Sales Corp., 1033 W. Van Buren Chicago 7, Ill. 9.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles Calif. 11.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Uxbridge, Pa. 10-11. ADV. PG. 174, 175.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. 1759, Fort Lauderdale, Fla. 1-2-6-8-11.
 Beam Instruments Corp., 350 Fifth Ave., New York, N. Y. 1-2-7.
 Bendix Radio Division, Bendix Aviation Corp., Bendmore 4, Md. 1-2-8-9-11.
 Bliss Electronic Corp., Box 123, Sussex, N. J. 8.
 Biudworth Marine Div., National Simplex-Bludworth Inc., 92 Gold St., New York 38, N. Y. 6.
 Boehme, Inc., H.O., 915 Broadway, New York 10, N. Y. 10.
 Brach Mfg. Corp., 200 Central Ave., Newark, N. J. 1.
 Bristol Motor Division, Vocaline Company of America, Inc., Old Saybrook, Conn. 3-8.
 C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn. 5-7.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England. 2.
 Codetypor Laboratories, 550 Fifth Ave., New York, N. Y. 10.
 COLLINS RADIO CO., Cedar Rapids, Iowa. 1-2. ADV. PG. 148, 149.
 COMMUNICATION ACCESSORIES CO., Red Bridge Hickman Hills, Mo. 3-10. ADV. PG. 141-144.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla. 1-2-6-8-11.
 Connecticut Telephone & Electric Corp., 70 Britton St., Meriden, Conn. 1-2-6-7-8-9-10-11.
 Crosby Labs., Inc., Box 233, Robbins Lane, Hickory, N. Y. 4-10.

Dalmon Co., 534 Laurel St., San Carlos, Calif. 8.
 Day Instrument Co., Archbald, Pa. 2-7.
DOLBY CO., ROBERT, Communications Equipment Div.,
 5000mm St., San Francisco 11, Calif. 10. ADV.
 PG. 68.
 Dornand Margolin, Inc., 30 Sylvester St., Westbury,
 N. Y. 1.
 DUM Laboratories, Inc., Allen B., Communication
 Products Div., 1500 Main Ave., Clifton, N. J. 8-11.
 Eldie of New York, Inc., 44-31 Douglaston Pkwy.,
 Queens, N. Y. 1-2-6-7-8-9-11.
 De Craft Industries Inc., 68 Jackson Ave., Stamford,
 Conn. 10-11.
 Elect Mechanical Research Inc., Ridgefield, Conn. 3.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple
 Av., Eatontown, N. J. 6. ADV. PG. 431.
 El N Laboratories, Inc., 730 Boulevard, Kenilworth,
 N. J. 1.
 El-T cs, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 2-8.
 Emer Radio & Phonograph Corp., 111 Eighth Ave.,
 New York, N. Y. 1.
ENGINEERING CO., 27 Wright St., Newark, N. J. 1.
 ADV. PG. 596.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City,
 N. Y. 2-6-8-10-11.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21,
 N. Y. 4.
 Farm Engineering & Mfg. Co., Irwin, Pa. 3-5-9.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T,
 88 Kingsland Rd., Clifton, N. J. 3-7-9-10-11.
 ADV. PG. 182-187.
 Fele Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 3-11.
 G & Equipment Co., Inc., 7309-7327 Varna Ave.,
 N. Hollywood, Calif. 1-6.
GARLAND RADIO CORP., 79 Washington St., Brooklyn 1,
 N. Y. 2-6. ADV. PG. 371.
 Gates Radio Co., Quincy, Ill. 2-6-8.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
 Rd. Schenectady 5, N. Y. 3. ADV. PG. 1-20.
 GeisCo., 801 S. Main St., Burbank, Calif. 1-2-11.
 Galliters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 8-11.
HAMILUND MFG. CO., 460 W. 34th St., New
 York 1, N. Y. 2. ADV. PG. 305-307.
 Logan Laboratories, Inc., 155 Perry St., New York 14,
 N. Y. 4.
 Industrial Radio Corp., 428 N. Parkside Ave., Chicago
 44, Ill. 8-11.
 International Research Associates, 2221 Warwick Ave.,
 San Monica, Calif. 1-8.
 Jai Electronics Corp., 6058 W. Fullerton Ave.,
 Chicago 39, Ill. 1.
 Jeleff, Inc., Ray, 40 E. Merrick Rd., Freeport,
 N. Y. 6.
 Kaas Engineering Co., 2995 Middlefield Road, P. O. Box
 Palo Alto, Calif. 2-6-8-11.
 K Research Labs., Elizabeth Bldg., 22 Pine St.,
 New York 1, N. Y. 10.
KEY SWITCHBOARD & SUPPLY CO., 79 W.
 4th St., Chicago 3, Ill. 3. ADV. PG. 497.
 Key for Electronics, Inc., 75 Pitts St., Boston
 Mass. 1-2-7-8.
KEY LABORATORIES, Morganville, N. J. 2. ADV.
 PG. 33.
 Key, 3171 S. Bundy Drive, Los Angeles 34, Calif.
 4-11.
 Key Electric Co., Inc., 1113 County Road, San
 Jose, Calif. 3-7.
 Key, Bergamo 21, Milan, Italy. 3.
KEY CO., E. B., 11 Bragg St., East Hartford 8,
 Conn. 8-11. ADV. PG. 590.
 Key Carrier Systems, Inc., 96 Jessie St., San Francisco
 5, Calif. 3-9-10.
KEY BOX CO., Component Sales, Industrial & Defense
 Products, Fort Wayne 4, Ind. 1-2. ADV. PG. 181.
 Key Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
 New York 4, N. Y. 1-2-6-7-8-10-11.
KEY CORP., W. L., 460 W. 34th St., New York 34,
 N. Y. 1-7. ADV. PG. 250.
 Key Measurement Engineering, Ltd., Arnprior, Ontario, Can-
 ada 2-6.
 Key Alch Industries, Inc., P. O. Box 17, Mineral Wells,
 Tex. 1.
 Key Radio Mfg. Co., 2794 Market St., Salem, Ore.
 1.
 Key, Inc., Communications & Electronics Div., 4545
 Julia Blvd., Chicago 51, Ill. 3-7-8-9-11.
 Key Overseas Ltd., Equipment Div., Century House,
 Shasbury Ave., London, W. C. 2, England. 6-8-11.
 Key Aeronautical Corp., 180 S. Main St., Ambler,
 Pa. 1-11.
KEY RADIO CO., INC., 143-145 W. 22nd St.,
 New York 11, N. Y. 4-10. ADV. PG. 324-326.
 Key Motor Co., Electronic Div., 35 Ryerson St.,
 Brooklyn, N. Y. 1-2-7-8-10.
 Key Inc., M. V., 4002 Fruit Valley Rd., Vancouver,
 Wash. 3-10.
 Key Wire Recorder Corp., 5900 Northwest Highway,
 Chicago 31, Ill. 1.
 Key Inc., 3640 Woodland St., Baltimore 15, Md.
 1-3.
 Key Corp., Government & Industrial Div., 4700 Wis-
 sington Ave., Philadelphia 44, Pa. 7.
KEY WIRELESS LABORATORIES, INC., 25 Prospect
 Place, West Newton 65, Mass. 4-10. ADV. PG. 92.
 Key, Cambridge, England. 2-6-7-8-9-10-11.

RADIO CORP. OF AMERICA, Engineering Products Div.,
 Camden, N. J. 7-9-11. ADV. PG. Inside Back &
 Back Covers.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J.
 10. ADV. PG. 609.
 Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Port-
 land 14, Ore. 8-11.
 Railway Communications, Inc., Smith Road & Glenwood,
 Raytown, Mo. 3-9-11.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Wal-
 tham 54, Mass. 6-7-8. ADV. PG. 26.
REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa.
 6. ADV. PG. 343.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10,
 Calif. 5.
 Schuttig & Co., Inc., 5005 Calvert Rd., College Park,
 Md. 2.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn
 35, N. Y. 7.
 Sightmaster of California Co., Gillespie Airport, Santee,
 Calif. 7.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 1-2-6-8.
 Sonotone Corp., Saw Mill River Rd., P. O. Box 200,
 Elmsford, N. Y. 8.
 Specialty Engineering Div. of Specialty Assembling &
 Packing Co., 79 Clifton Place, Brooklyn 38, N. Y. 1.
 Standard Electronics Corp., 287 Emmet St., Newark 5,
 N. J. 6.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England. 1-2-3-4-6-7-8-
 9-11.
STELMA, INC., 389 Ludlow St., Stamford, Conn. 9-10.
 ADV. PG. 670.
 Stromberg-Carlson Co., Rochester 3, N. Y. 3-8.
 T. L. G. Electric Corp., 31 W. 27th St., New York 1,
 N. Y. 1-2-3-10.
 Talk-A-Phone Co., 1512 S. Pulaski Rd., Chicago 23,
 Ill. 3-8.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y.
 4. ADV. PG. 303.
 Telegraph Construction & Maintenance Co., Ltd., Telcon
 Works, Greenwich, London S. E. 10, England 3.
 Telephonics Corp., Park Ave., Huntington, N. Y. 1.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J.
 7. ADV. PG. 540.
TIMES FACSIMILE CORP., 540 W. 58th St., New York
 19, N. Y. 4. ADV. PG. 662.
 Transiton, Inc., 154 Spring St., New York 12, N. Y.
 6-11.
 Union Switch & Signal Div. of Westinghouse Air Brake
 Co., General Apparatus Sales, Pittsburgh 18, Pa. 3.
 U. S. Instrument Corp., 409 Broad St., Summit, N. J.
 8-9.
 Vocaline Co. of America, Inc., Old Saybrook, Conn. 3-8.
 Vocatron Mfg. Div. of Vocaline Co. of America, Inc., Old
 Saybrook, Conn. 3-8.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van
 Nuys, Calif. 7.
 Webster Electric Co., 1900 Clark St., Racine, Wis. 2-3.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los
 Angeles 6, Calif. 11.
 Western Union Telegraph Co., 60 Hudson St., New York
 13, N. Y. 4-10.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868,
 Pittsburgh 30, Pa. 3-7-9. ADV. PG. 113-124.
 Wickes Engineering & Construction Co., P. O. Box 590,
 Camden 1, N. J. 2-11.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 1-2.
 Wilcox-Gay Corp., Charlotte, Mich. 2-6.
 Wonderful Radio Co., 2 Fifth Ave., New York 11,
 N. Y. 6-7-9-11.
 Wurflitzer Co., Rudolph, North Tonawanda, N. Y.
 1-4-11.

COMPARATORS—Automatic Resistance
 See INSTRUMENTS—Electrical Measuring

COMPARATORS—Capacitance
CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
 Livingston, N. J. ADV. PG. 572.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave.,
 Cleveland 14, Ohio.
 Communication Measurements Lab., Inc., 350 Leland
 Ave., Plainfield, N. J.
 Electronic Instrument Co., Inc., 84 Withers St., Brook-
 lyn 11, N. Y.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia
 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 227.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St.,
 New York 3, N. Y. ADV. PG. 657.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
 Pa. ADV. PG. 330.
 Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1,
 Calif.
 Southwestern Industrial Electronics Co., 2831 Post Oak
 Rd., P. O. Box 13058, Houston 19, Texas.

COMPARATORS—Circuit Linearity
COMPARATORS—Crystal
 See INSTRUMENTS—Electrical Measuring

COMPARATORS—Dielectric
 Central Research Laboratories, Inc., Red Wing, Minn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
 Livingston, N. J. ADV. PG. 572.

Foxboro Co., The, Foxboro, Mass.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia
 40, Pa.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
 Pa. ADV. PG. 330.

COMPARATORS—Inductance
CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
 Livingston, N. J. ADV. PG. 572.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia
 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 227.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St.,
 New York 3, N. Y. ADV. PG. 657.
 Mallory & Co., Inc., P. R., 3029 E. Washington St.,
 Indianapolis 6, Ind.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
 Pa. ADV. PG. 330.
 Southwestern Industrial Electronics Co., 2831 Post Oak
 Rd., P. O. Box 13058, Houston 19, Texas.

COMPARATORS—Iron Core
CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
 Livingston, N. J. ADV. PG. 572.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia
 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St.,
 Brooklyn 27, N. Y. ADV. PG. 227.
PENNSYLVANIA TESTING LABORATORY, Doylestown,
 Pa. ADV. PG. 330.

COMPARATORS—Q
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 158.

COMPARATORS—Surface
 See ANALYZERS—Surface

COMPARATORS—Voltage
 See INSTRUMENTS—Electrical Measuring

COMPASSES—Electronic Gyro
 Daystrom Instrument Co., Archbald, Pa.
 Engineering Research Associates, Div. of Remington Rand,
 Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls,
 N. J. ADV. PG. 372.

COMPOUNDS—Potting
 American Monomer Corp., 511 Lancaster St., Leominster,
 Mass.
 Atlantic Research Corp., 901 N. Columbus, Alexandria,
 Va.
BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East
 Rutherford, N. J. ADV. PG. 534.
 Brooklyn Paint & Varnish Co., 50 Jay St., Brooklyn 1,
 N. Y.
 Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif.
ELECTRONIC SERVICE CORP., 221 W. Lake St., Oak
 Park, Ill. ADV. PG. 590.
**IRVINGTON VARNISH & INSULATOR DIV. OF MINNE-
 SOTA MINING & MFG. CO.,** 6 Argyle Terrace, Irving-
 ton 11, N. J. ADV. PG. 246.
 Javex, P. O. Box 646, Redlands, Calif.
 Mitchell Rand Insulation Co., Inc., 51 Murray St.,
 New York 7, N. Y.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y.
 ADV. PG. 569.

COMPUTERS—Analog
 American Machine & Foundry Co., Electronics Div., 1085
 Commonwealth Ave., Boston 15, Mass.
ASSOCIATED AMERICAN TRADING DIVISION, 8010
 Empire State Bldg., New York 1, N. Y. ADV. PG. 669.
 Audio Instrument Co., Inc., 133 W. 14th St., New
 York 11, N. Y.
AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR &
FOUNDRY CO., 295 State Highway #17, Paramus,
 N. J. ADV. PG. 490.
 Benson-Lehner Corp., 2340 Sawtelle Blvd., Los Angeles
 64, Calif.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC.,
 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box
 C-3, Solana Beach, Calif. ADV. PG. 159.
 Boeing Airplane Co., Seattle Div., Seattle 14, Wash.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th
 St., New York 1, N. Y. ADV. PG. 201.
**COMPUTER CO. OF AMERICA, DIV. OF BRUNO-NEW
 YORK INDUSTRIES CORP.,** 460 W. 34th St., New
 York 1, N. Y. ADV. PG. 201.
 Computing Devices of Canada, Ltd., P. O. Box 508,
 Ottawa, Ontario.
DAVIES LABORATORIES, INC., 4705 Queensbury Rd.,
 Riverdale, Md. ADV. PG. 658.
 Daystrom Instrument Co., Archbald, Pa.
 Donner Scientific Co., 2829 Seventh St., Berkeley 10,
 Calif.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J.
 ADV. PG. 434, 435.
EPSCO INCORPORATED, 126 Massachusetts Ave., Bos-
 ton 15, Mass. ADV. PG. 583.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th
 St., New York 70, N. Y. ADV. PG. 460.
 General Precision Laboratories, Inc., 63 Bedford Rd.,
 Pleasantville, N. Y.
 Gerber Scientific Instrument Co., 89 Spruce St., Hart-
 ford 1, Conn.

Goodyear Aircraft Corp., 1210 Massillon Road, Akron 15, Ohio.
 Hathaway Instrument Co., 1315 S. Clark St., Denver 10, Colo.
 Instron Engineering Corp., 2 Hancock St., Quincy 71, Mass.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
LIBRASCOPE, INC., 1607 Flower St., Glendale 1, Calif. ADV. PG. 531.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
MID-CENTURY INSTRUMENTAL CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
 Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Newton Co., 55 Elm St., Manchester, Conn.
 North American Phillips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.
 Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
 Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

COMPUTERS—Digital

A.C.F. Electronics, Inc., Alexandria, Va.
 American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Bendix Computer Division, Bendix Aviation Corp., 5630 Arbor Vitae St., Los Angeles 45, Calif.
BURROUGHS CORP., ELECTRONIC INSTRUMENTS DIV., 1209 Vine St., Philadelphia, Pa. ADV. PG. 495.
 Codetypers Laboratories, 550 Fifth Ave., New York 19, N. Y.
COMPUTER CONTROL CO., INC., Dept. L4, 92 Broad St., Babson Park 57, Mass. ADV. PG. 639.
 Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.
 Computing Devices of Canada, Ltd., P. O. Box 508, Ottawa, Ontario.
 Daystrom Instrument Co., Archbald, Pa.
 Digital Products, Inc., 7643 Fay Ave., LaJolla, Calif.
ELECTRONIC COMPUTER DIV., COMPONENT DEPT., UNDERWOOD CORP., 35-10 36th Ave., Long Island City 6, N. Y. ADV. PG. 192.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
 General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
 Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
 Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
LIBRASCOPE, INC., 1607 Flower St., Glendale 1, Calif. ADV. PG. 531.
 Logistics Research Inc., 141 S. Pacific Ave., Redondo Beach, Calif.
MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 563.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
MAGNETICS RESEARCH CO., 142 King St., Chappaqua, N. Y. ADV. PG. 651.
 Marchant Research, Inc., 1475 Powell St., Emeryville, Calif.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.
NUCLEONIC COMPANY OF AMERICA, 196 DeGraw St., Brooklyn 31, N. Y. ADV. PG. 646.
 Phebo, Inc., 3640 Woodland St., Baltimore 15, Md.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 543.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
 Warren Electronics, Inc., Bound Brook, N. J.

COMPUTERS—Electronic
See **MACHINES****CONDENSERS**
See **CAPACITORS****CONES—Metal Television**

HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.

CONES—Speaker

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
 Stevens Products Inc., 86-88 Main St., East Orange, N. J.

CONNECTORS

1. Anode
2. Audio
3. Antennae
4. Coaxial Cable
5. Diode
6. Electrical, AN or MIL-C-5015
7. Hermetically Sealed
8. Interlock
9. Miniature
10. Phono
11. Power
12. Printed Circuit
13. R-F
14. Subminiature
15. Waterproof

A/G A Div. of Elastic Stop Nut Corp. of America, 1029 Newark Ave., Elizabeth 3, N. J. 15.
 Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio. 2-3-5-8-10.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. 1-2-8-9-10-12. ADV. PG. 615.
 Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg, Pa. 1-2-3-4-5-8-9-10-11-12.
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. 11. ADV. PG. 428.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. 1-2-3-4-8-9-10-11. ADV. PG. 440.
ALLIED INDUSTRIES, INC., 2500 Woodland Ave., Louisville 10, Ky. 4-9-13-14-15. ADV. PG. 648.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. 2-3-4-6-7-9-11-13-14-15. ADV. PG. 80.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y. 6-10-11.
 Automatic Metal Products Corp., 315-323 Berry St., Brooklyn 11, N. Y. 2-4-9-13-14.
 Automatic & Precision Mfg. Co., 252 Hawthorne Ave., Yonkers 5, N. Y. 6-9-11.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif. 6-9.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 3. ADV. PG. 174, 175.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y. 1-3-4.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. 13. ADV. PG. 569.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J. 3-4-6-9.
 Breeze Corps., Inc., 41 S. Sixth St., Newark 7, N. J. 6-9-11-13.
BRILHART PLASTICS CORP., Old Country Rd., Mineola, N. Y. 3. ADV. PG. 653.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 1-2-3-4-5-8-9-10-11-13.
 Brookhaven Electronics Corp., Box 931, Sanford, N. C. 4-13.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. 10.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. 4-13. ADV. PG. 151.
BUGGIE, INC., H. H., P. O. Box 817, Toledo 1, Ohio. 2-4-6-7-8-9. ADV. PG. 539.
 Burndy Engineering Co., Inc., Norwalk, Conn. 4-7-9-11-15.
 Cable Electric Products Inc., Providence, R. I. 4-6-11. California Bent Glass Corp., Torrance, Calif. 12.
CANNON ELECTRIC CO., 3209 Humboldt St., Los Angeles 31, Calif. 2-4-6-7-9-11-12-14-15. ADV. PG. 87.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. 2-6-7-11-15.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. 3-7-9-12-14. ADV. PG. 252, 342, 574, 607, 659.
CENTRONICS CORP., 21-04 122 St., College Point, N. Y. 12. ADV. PG. 598.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. 2-3-5-9-10-11-12-13-14. ADV. PG. 354, 355.
 Circon Component Co., 17544 Rayer St., Northridge, Calif. 2-3-9-10-11-12-13-14.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. 5-9-12. ADV. PG. 616.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md. 4.
COAXIAL CONNECTOR CO., 37 North 2nd Ave., Mt. Vernon, N. Y. 4. ADV. PG. 617.
 Communication Products Co., Inc., Marlboro, N. J. 4-13-15.
CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. 7. ADV. PG. 167.
 Continental Connector Corp., 30-30 Northern Blvd., Long Island City, N. Y. 3-7-9-11-12-14.
DAGE ELECTRIC CO., 67 N. Second St., Beech Grove, Ind. 4-7-9-13-14-15. ADV. PG. 190.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. 6-7-9-11-12-14. ADV. PG. 411, 413.
DIAMOND MFG. CORP., 7 North Ave., Wakefield, Mass. 4-7-9-13-14. ADV. PG. 345.
 Digital Products, Inc., 7643 Fay Ave., LaJolla, Calif. 12.
 Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y. 3.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. 13. ADV. PG. 601.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. 3-8-9-10-11-12-14. ADV. PG. 465.
EITEL-McCULLOUGH, INC., San Bruno, Calif. 1. ADV. PG. 270, 271.
 Elco Corp., 190 W. Glenwood Ave., Philadelphia 40, Pa. 2-3-9-11-12-14.
 Electro Precision Products, Inc., 139-30 34th Rd., Flushing 54, N. Y. 3-4-7-9-13-14-15.
ELECTRONIC SERVICE CORP., 221 W. Lake St., Oak Park, Ill. 15. ADV. PG. 590.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. 12. ADV. PG. 313, 314.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio. 12.
 Frankel Connector Co., 27 Vestry St., New York, N. Y. 11.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. 7-9-14. ADV. PG. 492.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. 1-3-4-10. ADV. PG. 292.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. 8-10. ADV. PG. 380.
 General Electric Co., Wiring Device Dept., Providence 7, R. I. 6-7-12.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I. 8.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill. 1-3-5-8-10.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 4-13. ADV. PG. 177-180.
 Glass-Solder Engineering, 300 N. Lake Ave., Pasadena 4, Calif. 7.
GLENCO CORP., Metuchen, N. J. 4-9-14-15. ADV. PG. 640.
 Gorn Electric Co., Gorn Electronics Div., 837 Main St., Stamford, Conn. 2-4-6-9-11-12.
GULTON MFG. CORP., Metuchen, N. J. 9-14-15. ADV. PG. 640.
 Hallett Mfg. Co., 1601 W. Florence Ave., Inglewood, Calif. 4.
HARVEY HUBBELL, INC., State St. & Bostwick Ave., Bridgeport 2, Conn. 8-9-12-14. ADV. PG. 515.
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. 7. ADV. PG. 176.
HERMASEAL CO., INC., 1101 Lafayette St., Elkhart, Ind. 7. ADV. PG. 258.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. 6-7-14-15. ADV. PG. 223.
 Hobson Bros., 4940 W. Lawrence Ave., Chicago 30, Ill. 1.
INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. 11. ADV. PG. 667.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. 1-5-8. ADV. PG. 457.
 Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn. 4-9-13.
INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. 12-14. ADV. PG. 575.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. 12-13-14. ADV. PG. 279.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H. 1-2-6-10.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. 3-4-13. ADV. PG. 666.
 Javex, P. O. Box 646, Redlands, Calif. 2-3-4-9-11-15.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa. 4-9-13.
JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. 2-3. ADV. PG. 354, 355.
 Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa. 6-11-15.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. 5-9.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. 2-3-4-9-13-14-15. ADV. PG. 199.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J. 7.
LAPP INSULATOR CO., INC., RADIO SPECIALTIES DIV., 31 Gilbert St., LeRoy, N. Y. 13. ADV. PG. 414, 415.
 Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill. 1-3-8-10.
MENDELSON SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. 4-7-8-9-11-13-14-15. ADV. PG. 292.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. 6-11. ADV. PG. 454, 455.

Division, Felts Corp., 1826 Fremont Ave., Pasadena, Calif. 4-5-7-9-14-15.

Western Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla. 15.

Minneapolis-Honeywell Regulator Co., Aeronautical Div., 26 Ridgway Rd., Minneapolis 13, Minn. 9-15.

Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 2-3-4-6-7-8-9-11-15.

Corporation of America, 40 Church St., Pawtucket, R. I. 6-7-8-9-10-11-14.

Frank W., 1300 Soldiers Field Rd., Boston 35, Mass. 9.

INDEX CORPORATION OF AMERICA, 125 Clifton Bl., Clifton, N. J. 6-7-12-14. ADV. PG. 136, 13.

ATLANTIC CO., INC., 61 Sherman St., Malden 48, Mass. 1. ADV. PG. 395.

ATLANTIC TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. 1-2-3-8-9-10. ADV. PG. 312.

CIRCUITS CORP., Glen Cove, N. Y. 12. ADV. PG. 471.

X G. CO., INC., 24 Bedford St., Newark, N. J. 6. ADV. PG. 598.

Code, Inc., 307 Bergen Ave., Kearny, N. J. 3.

National Co., 1334 N. Kostner Ave., Chicago 51, Ill. 2-4-8-10-11-15.

Mfg. Co., 7850 Garfield Blvd., Cleveland 25, Ohio 4.

Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. 15.

Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich. 6-7-15.

Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass. 1-2-3-4-9-11-13-14.

USS & STOLL CO., INC., 125-6 Barclay St., New York 7, N. Y. 8-9-11-15. ADV. PG. 632.

Photo., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif. 1-9-10.

LA DIVISION, BENDIX AVIATION CORP., Sidener N. Y. 6-11-15. ADV. PG. 109.

ALTRON CORP., 186 Union Ave., New Rochelle, N. Y. 7-9-14. ADV. PG. 611.

Inc., M. J., Delaware County, Roxbury, N. Y. 2-9.

Industries, Inc., 3100 Ocean Parkway, Brooklyn 5, N. Y. 4-6-11-13-15.

Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y. 1-3-4-8-9-10-14.

ER GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. 4. ADV. PG. 331, 332.

Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. 12.

Herman D., Lafayette Bldg., Philadelphia 6, Pa.

OFF CERAMIC & MFG. CO., Latrobe, Pa. 7. ADV. PG. 293-296.

RAFT, INC., 1320 N. Halsted St., Chicago 22, Ill. 2-10. ADV. PG. 491.

IA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-2-3-5-8-10-11-14. ADV. PG. 206.

Electric Corp., 31 W. 27th St., New York 1, N. Y. 6.

Matériel Corp., P. O. Box 142, Mamaroneck, N. Y. 4.

RAFT LABORATORIES, INC., Thomaston-Waterford, Thomaston, Conn. 13. ADV. PG. 461.

Construction & Maintenance Co., Ltd., Telcon Greenwich, London S.E. 10, England. 4-11-13-15.

& Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J. 6-11.

Inc., 500 Frelinghuysen Ave., Newark 5, N. J. 6.

CONNECTOR CORP., 416 Union St., Lynn, Mass. 2-3-7-9-13-14-15. ADV. PG. 621.

INI CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. 1-3-4-10-12. ADV. PG. 329.

COMPONENTS, INC., 454 E. 148th St., New York 15, N. Y. 4-6-7-9-11-12-14-15. ADV. PG. 339.

LECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. 13. ADV. PG. 493.

SKET CO., P. O. Box 93, Camden, N. J. 7-8-9-11-14-15. ADV. PG. 604, 605.

TRANSFORMER CO., 150 Varick St., New York 13, N. Y. 3. ADV. PG. Inside Front Cover.

Electronics Mfg. Co., 576 W. Merrick Rd., Hickory, N. Y. 1.

Horological Corp., 711 Broad St., Lynn, Mass. 2-7-8-9-10-11-13-14-15.

Screw Co., Waltham, Mass. 6.

Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio. 3-9.

Plastics Corp., Warren, Pa. 1.

Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif. 3.

Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 4.

ITY BLAKE CO., New Haven 14, Conn. 4-6-7-9-10-12-14-15. ADV. PG. 64.

REGISTER ELECTRONICS, INC., 15 Crescent St., Westbrook, Conn. 7-9-11-12-14-15. ADV. PG. 164, 165.

Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio. 3.

AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.

Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

Federal Electric Products Co., 50 Paris St., Newark 5, N. J.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 377.

Haley Electronics Co., 57 William St., New York 5, N. Y.

Hoffman Needle Works, Inc., 635 59th St., West New York, N. J.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

LEACH RELAY DIV. OF LEACH CORP., 5915 Avalon Blvd., Los Angeles 3, Calif. ADV. PG. 378.

Lee Spring Co., Inc., 32 Main St., Brooklyn 1, N. Y.

Mack Electric Devices, Inc., 43 Glenside Ave., Wyncote, Pa.

McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.

MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.

Square D Co., 4041 N. Richards, Milwaukee 12, Wis.

Trumbull Components Dept., General Electric Co., 41 Woodford Ave., Plainville, Conn.

Ultrasonic Corp., 640 Memorial Drive, Cambridge 39, Mass.

VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.

WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 365, 366.

Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

Wiegand Co., Edwin L., 7606 Thomas Blvd., Pittsburgh 8, Pa.

Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.

Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

CONTACTS—Electrical

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.

Automatic Metal Products Corp., 315-323 Berry St., Brooklyn 11, N. Y.

Baker & Co., Inc., 113 Astor St., Newark 5, N. J.

BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524.

BRAININ CO., C. S., 320 Washington St., Mt. Vernon, N. Y. ADV. PG. 548.

Braun Tool & Instrument Co., Inc., H., 140 Fifth Ave., Hawthorne, N. J.

Cable Electric Products Inc., Providence, R. I.

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.

Continental Connector Corp., 30-30 Northern Blvd., Long Island City, N. Y.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

Eagle Signal Corp., Moline, Ill.

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GIBSON ELECTRIC CO., 8361 Frankstown Ave., Pittsburgh 21, Pa. ADV. PG. 230.

GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 377.

Javex, P. O. Box 646, Redlands, Calif.

LEACH RELAY DIV. OF LEACH CORP., 5915 Avalon Blvd., Los Angeles 3, Calif. ADV. PG. 378.

MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.

METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.

METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 454, 455.

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.

Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.

Sinclair Mfg. Co., Chartley, Mass.

STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.

Standard Metals Corp., Broad & Whiting Sts., North Attleboro, Mass.

Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.

Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.

TUBULAR RIVET & STUD CO., Linden St., Quincy, Mass. ADV. PG. 300.

UCINITE CO., DIV. OF UNITED CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.

Vallorbs Jewel Co., Lancaster, Pa.

VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

CONTAINERS—for Shipping See PACKAGING MATERIALS

CONTROLS—Alarm System

Assembly Products Co., Chagrin Falls 6, Ohio.

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.

Bristol Co., The, Waterbury 20, Conn.

Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.

Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.

De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.

Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

Dondar Devices, 321 E. 6th St., Medford, Ore.

DUBROW DEVELOPMENT CO., 235 Penn. St., Burlington, N. J. ADV. PG. 536.

EDISON INC., THOMAS A., Instrument Div., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 392, 393.

Electrical Service Co., 1271 Mission St., San Francisco, Calif.

El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.

El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Fenwal, Inc., 60 Pleasant St., Ashland, Mass.

Fischer & Porter Co., 476 Warminster Rd., Hatboro, Pa.

GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 458.

General Devices, Inc., P. O. Box 253, Princeton, N. J.

HANMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 305-307.

Hughey & Phillips, Inc., 3300 N. San Fernando Blvd., Burbank, Calif.

Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

Mercord Corp., 4201 Belmont Ave., Chicago 41, Ill.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.

North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.

Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

Recora Co., 56 W. 103rd St., Chicago 28, Ill.

Reynolds Electric Co., 3000 River Rd., River Grove, Ill.

RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

United Electric Controls Co., 85 School St., Watertown 72, Mass.

WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Automatic Tuning

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.

DUBROW DEVELOPMENT CO., 235 Penn. St., Burlington, N. J. ADV. PG. 536.

Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.

LIBRASCOPE, INC., 1607 Flower St., Glendale, Calif. ADV. PG. 531.

Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

CONTROLS—Automatic Voltage Regulating

Airmec Ltd., High Wycombe, Buckinghamshire, England.

Allied Eng. Div., Allied International Inc., South Norwalk, Conn.

ASSOCIATED ENGINEERING CORP. OF BOSTON, 65 Kent St., Brookline 46, Mass. ADV. PG. 591, 625.

BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.

BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.

Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.

Daystrom Instrument Co., Archbald, Pa.

Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.

Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.

DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
 ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. ADV. PG. 469.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Industrial Electronics Co., Inc., Hanover, Mass.
 INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. ADV. PG. 628.
 KEPCO LABS., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 23-25.
 L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 212.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Omega Mfg. Co., 40 Hudson St., New York, N. Y.
 PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
 Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
 RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
 Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
 SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 50, 51.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
 SUPERIOR ELECTRIC CO., THE, 4000 Mae Ave., Bristol, Conn. ADV. PG. 336, 337.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

CONTROLS—Capacitance Operated

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
 Niagara Electron Laboratories, Andover, N. Y.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Thermo Instruments Co., Box 335, Belmont, Calif.

CONTROLS—Chemical

Bristol Co., The, Waterbury 20, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. Y.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Foxboro Co., The, Foxboro, Mass.
 INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W.C. 2, England.
 Niagara Electron Laboratories, Andover, N. Y.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Tailler & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Warren Electronics, Inc., Bound Brook, N. J.

CONTROLS—Counting & Sorting

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Anatron Engineering Corp., 10 Congress St., Pasadena 2, Calif.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Brinnell Company, The, Simsbury, Conn.
 Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Daystrom Instrument Co., Archbald, Pa.

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Eagle Signal Corp., Moline, Ill.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electrodyne Co., Endicott St., Norwood, Mass.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Pantek Co., Box 212, El Segundo, Calif.
 PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 WERNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

**CONTROLS—Density
See CONTROLS—Specific Gravity**

CONTROLS—Dimension

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Foxboro Co., The, Foxboro, Mass.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Sheffield Corp., The, Dayton 1, Ohio.

CONTROLS—Door

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 A. R. F. Products, Inc., 7627 Lake St., River Forest, Ill.
 AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
 AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Cable Electric Products Inc., Providence, R. I.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Recora Co., 56 W. 103rd St., Chicago 28, Ill.
 Square D Co., 4041 N. Richards St., Milwaukee 1, Wis.
 Stanley Works, The, 195 Lake St., New Britain, Conn.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

CONTROLS—Electric Motor

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn.
 ASSOCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. ADV. PG. 669.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 CLIFTON PRECISION PRODUCTS CO., INC., Broadway at Marple Ave., Clifton Heights, Pa. ADV. PG. 394.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 General Controls Co., Glendale 1, Calif.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 Mack Electric Devices, Inc., 43 Glenside Ave., Wyncote, Pa.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
 Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
 Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
 Northeastern Engineering, Inc., Manchester, N. H.
 OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.
 OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. ADV. PG. 341.
 RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
 Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 Trumbull Components Div., General Electric Co., 41 Woodford Ave., Plainville, Conn.
 Ultrasonic Corp., 640 Memorial Drive, Cambridge 39, Mass.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 365, 366.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

CONTROLS—Electronic Motor

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Allis Co., Louis, 427 E. Stewart St., Milwaukee 7, Wis.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
 Brinnell Company, The, Simsbury, Conn.
 Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio.
 CLIFTON PRECISION PRODUCTS CO., INC., Broadway at Marple Ave., Clifton Heights, Pa. ADV. PG. 394.
 Computing Devices of Canada Ltd., P. O. Box 508, Ottawa, Ontario.
 CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Dresden-Barnes Corp., 750 N. Vinedo Ave., Pasadena 6, Calif.
 Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
 OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. ADV. PG. 341.
 RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
 Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
 Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
 Servo-Tek Products Co., Inc., 1086 Goffie Rd., Hawthorne, N. J.
 Short Wave Plastic Forming Co., 2921 W. Alamec Burbank, Calif.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 Weltronic Co., 19500 W. Eight Mile Rd., Detroit 14, Mich.

CONTROLS—Elevator Leveling

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.

CONTROLS—Film Thickness

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
ELN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 ank Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 me Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 stant Development Labs., Inc., 163 Highland Ave., Neam Heights, Mass.
 I Company, 116 Nassau St., New York 38, N. Y.
 att Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 and Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 ace, Inc., 130 High St., Boston 10, Mass.

CONTROLS—Flame Failure

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 ist Co., The Waterbury 20, Conn.
EG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 mbion Control Corp., 718 Beacon St., Boston 15, Mass.
 onic Corp., 2512 N. Halsted St., Chicago 14, Ill.
 cs, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 ctual Service Co., 1271 Mission St., San Francisco, Calif.
 Radar Products, 1041 N. Pulaski Rd., Chicago 31, Ill.
 Control Corp., 1573 E. Forest St., Detroit, Mich.
 Controls Co., Glendale 1, Calif.
 Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 nneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Flexible Mechanical Push-Pull

Chain & Cable Co., Inc., 601 Stephenson Bldg., Detroit 2, Mich.

CONTROLS—Fluid Conductivity

eter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 o., The Waterbury 20, Conn.
EG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 cs, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Service Co., 1271 Mission St., San Francisco, Calif.
ELN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Co., The Foxboro, Mass.
 k Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Instruments, Inc., 89 Commerce Rd., Cedar Rapids 9, Iowa.
 Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 ar Electron Laboratories, Andover, N. Y.
 Company, 116 Nassau St., New York 38, N. Y.
 ch, Inc., 77 Broadway, Cambridge 42, Mass.
 orporation of America, Wallingford 2, Conn.
 F Manufacturing Corp., 10929 Vanowen St., Hollywood, Calif.

CONTROLS—Fluid Flow

Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
TEMPERATURE SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
 Temperature Control Co., Inc., 5212 Pulaski Philadelphia 44, Pa.
 eter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 o., The Waterbury 20, Conn.
 Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
EG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 ngineering Corp., 560 Providence Highway, Norwood, Mass.
 Service Co., 1271 Mission St., San Francisco, Calif.
 er Porter Co., 476 Warminster Road, Hatboro, Pa.
 Co., The Foxboro, Mass.
 yphon Div., Robertshaw-Fulton Controls Co., Knoxville 1, Tenn.
 Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Electronics Co., 57 William St., New York 5, N. Y.
 Co., 818 W. 12th St., Erie, Pa.
 Co., Inc., 541 Windsor St., Hartford 1, Conn.
 Maxwell & Moore, Inc., Stratford, Conn.

MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y.
 Niagara Electron Laboratories, Andover, N. Y.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Revere Corporation of America, Wallingford 2, Conn.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.
WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Food Processing

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The Waterbury 20, Conn.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
ELN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The Foxboro, Mass.
 Fulton Syphon Div., Robertshaw-Fulton Controls Co., Knoxville 1, Tenn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.

CONTROLS—Frequency

AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 Bulova Watch Co., Quartz Crystal Div., 630 Fifth Ave., New York 20, N. Y.
 Burlington Instrument Co., Burlington, Iowa.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 De Mornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
 Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Filters, Inc., 30 Sagamore Hill Drive, Port Washington, N. Y.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Frequency Standards, P. O. Box 504, Asbury Park, N. J.
INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. ADV. PG. 628.
 Leland Electric Co., Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio.
 Magnetic Research Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
 Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Norrman Laboratories, Ernst, Williams Bay, Wis.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.

CONTROLS—Gain See ATTENUATORS

CONTROLS—Heat Treating

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The Waterbury 20, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Foxboro Co., The Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
 Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

CONTROLS—Humidity

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 Barber-Colman Co., Automatic Controls, Rockford, Ill.
 Bristol Co., The Waterbury 20, Conn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Communication Products Co., Inc., Marlboro, N. J.
 Foxboro Co., The Foxboro, Mass.
 Friz Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 General Controls Co., Glendale 1, Calif.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Niagara Electron Laboratories, Andover, N. Y.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Serdex, Inc., 91 Cambridge St., Boston, Mass.
 Thermo Instruments Co., Box 335, Belmont, Calif.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Illumination

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Hughey & Phillips, Inc., 3300 N. San Fernando Blvd., Burbank, Calif.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Inspection

Arma Corp., Old Country Rd., Garden City, N. Y.
AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gerrett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Rockwell Engineering Co., 4063 N. New Jersey St., Indianapolis 5, Ind.
 Sheffield Corp., The Dayton 1, Ohio.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Liquid Level

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 Bristol Co., The, Waterbury 20, Conn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. Y. De-Tec-Tronic Corp., 2512 Halsted St., Chicago 14, Ill. Deltz Co., S. J., 38 River Edge Rd., River Edge, N. J. Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J. **DUBROW DEVELOPMENT CO.**, 235 Penn St., Burlington, N. J. ADV. PG. 536.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 498.
 Fenwal, Inc., 60 Pleasant St., Ashland, Mass.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Fischer & Porter Co. 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 377.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics Co., Inc., Hanover, Mass.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Niagara Electron Laboratories, Andover, N. Y.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
 Reverse Corporation of America, Wallingford 2, Conn.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
 Richardson Scale Co., Clifton, N. J.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
 Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 Thermo Instruments Co., Box 335, Belmont, Calif.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.
 Trimount Instrument Co., 3119 W. Lake St., Chicago 12, Ill.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.
 Vapor Recovery Systems Co., 2820 N. Alameda, P. O. Box 231, Compton, Calif.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 Warrick Co., Charles F., 1964 W. Eleven Mile Rd., Berkley, Mich.
WORNOR ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Loop Regulation

C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 Pantek Co., Box 212, El Segundo, Calif.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Trans-Sonics, Inc., 5 Forrest Ave., Bedford, Mass.

CONTROLS—Machine Safety

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Brinnell Company, The, Simsbury, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Deltz Co., S. J., 38 River Edge Rd., River Edge, N. J. De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.

Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J. Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.
MODELECTRIC PRODUCTS CORP., 1500 Banks Ave., Asbury Park, N. J. ADV. PG. 140.
 Newton Co., 55 Elm St., Manchester, Conn.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Recora Co., 56 W. 103rd St., Chicago 28, Ill.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.
WORNOR ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Materials Thickness

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.
 Bristol Co., The, Waterbury 20, Conn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Foxboro Co., The, Foxboro, Mass.
 Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Rockwell Engineering Co., 4063 N. New Jersey St., Indianapolis 5, Ind.
 Sheffield Corp., The, Dayton 1, Ohio.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.

CONTROLS—Mechanical Overload

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Brinnell Company, The, Simsbury, Conn.
 Bristol Co., The, Waterbury 20, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Dillon & Co., Inc., W. C., 14620Z Keswick St., Van Nuys, Calif.
 Electro-Mechanical Div. of General Riveters, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
 Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.
 Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.

CONTROLS—Mechanical Switch

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 Bristol Co., The, Waterbury 20, Conn.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J. Eagle Signal Corp., Moline, Ill.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 General Devices, Inc., P. O. Box 253, Princeton, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

CONTROLS—Moisture

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 Barber-Colman Co., Automatic Controls, Rockford, Ill.
 Bristol Co., The, Waterbury 20, Conn.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

CONTROLS—Oxygen

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

CONTROLS—Package Wrapping

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Deltz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Fisher-Pierce Co., Inc., 170 Pearl St., South Braintree (Boston 85), Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 North Electric Mfg. Co., 501 S. Market St., Gallon, Ohio.
 Pantek Co., Box 212, El Segundo, Calif.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
 Telegraph Construction & Maintenance Co., Ltd., Telegraph Works, Greenwich, London, S. E. 10, England.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.
WORNOR ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—pH

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 LaMotte Chemical Products Co., Towson 4, Baltimore 12, Md.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 3, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 1, N. J. ADV. PG. 312.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
 Pye, Ltd., Cambridge, England.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.

CONTROLS—Photoelectric

Airmec Ltd., High Wycombe, Buckinghamshire, England.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 20.
 Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. W. 6, England.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Daystrom Instrument Co., Archbald, Pa.
 Deltz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 53, Ill.

ARIND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.

Electronic Pierce Co., Inc., 170 Pearl St., South Braintree (Boston 85), Mass.

Electronic Electronics, Inc., 415 W. Pike St., Philadelphia 42, Pa.

Electronic Control Company, 1200 Soldiers Field Rd., Boston 4, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River St., Schenectady 5, N. Y. ADV. PG. 1-20.

Electronic Electronics Co., 57 William St., New York 5, N. Y.

Electronic Instrument Co., 70 Coolidge Hill Rd., Watertown 72, Mass.

Electronic & Phillips, Inc., 3300 N. San Fernando Blvd., Burbank, Calif.

Electronic Electronics Co., Inc., Hanover, Mass.

Electronic Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.

Electronic Development Labs., Inc., 163 Highland Ave., Neponset Heights, Mass.

Electronic Co., 1100 Raymond Blvd., Newark, N. J.

Electronic Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.

Electronic Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

ELECTRIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.

Electronic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.

Electronic Balancing, Inc., 191 Herricks Rd., Garden City 3, Pa. N. Y.

IDENTITY INSTRUMENTAL CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.

Electronic Co., 55 Elm St., Manchester, Conn.

Electronic Mfg. Co., 501 S. Market St., Galion, Ohio.

Electronic Company, 116 Nassau St., New York 38, N. Y.

Electronic Hitch, Inc., 77 Broadway, Cambridge 42, Mass.

OSTE MACHINERY CO., ELECTRONICS DIV., 140 Elliott St., Beverly, Mass. ADV. PG. 291.

OPTIC INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Electronic Products Co., 9118 Brookville Road, Silver Spring, Md.

Electronic Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.

Electronic Cooper Co., 75 Front St., Brooklyn, N. Y.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Photographic Exposure

BLACK SCIENTIFIC INSTRUMENT CO., P. O. Box 10, Panama Beach, Calif. ADV. PG. 159.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Boston, N. J. ADV. PG. 572.

ARIND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.

Electronic Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.

Electronic Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

Electronic Engineering Co., 4063 N. New Jersey St., Minneapolis 5, Ind.

Electronic Skunks Misery Rd., Syosset, N. Y.

Electronic N. Inc., 404 Main St., Waltham 54, Mass. ADV. PG. 74, 475.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

Electronic & Co., G. C., 1950 Eighth Ave., Huntington, W. Va.

CONTROLS—Positioning

ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.

Electronic Accessories Corp., 1414 Chestnut Ave., Hillside, N. J.

Electronic Filmers Mfg. Co., 735 S. 70th St., Milwaukee 1, Wis.

Electronic Regulator Co., 240 E. Ontario St., Chicago 11, Ill.

Electronic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

AVION CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 46.

Electronic Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.

Electronic Instrument Corp., 13-11 111th St., College Point, N. Y.

Electronic Engineering Corp., 701 W. Broadway, Glendale 4, Calif.

Electronic Co., The, Waterbury 20, Conn.

Electronic Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

AVION ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.

Electronic S. J., 38 River Edge Rd., River Edge, N. J.

Electronic Trms, Inc., 221 N. Hermitage Ave., Trenton, N. J.

DELTA CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.

Electronic Mechanical Div. of General Riveters, Inc., 785 Heron Ave., Buffalo 7, N. Y.

Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.

Electronic Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.

DELTA TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Nassau Rd., Clifton, N. J. ADV. PG. 182-187.

Electronic Controls, Inc., 503 Rhode Island Ave., N.E., Washington 2, D. C.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

General Controls Co., Glendale 1, Calif.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Gerrett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.

INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.

Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.

Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.

L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.

MAGNETIC AMPLIFIERS, INC., 632 Tinton St., New York 55, N. Y. ADV. PG. 212.

Magnetic Research Controls, Inc., 119 W. 63rd St., New York 23, N. Y.

Manning, Maxwell & Moore, Inc., Stratford, Conn.

Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y.

Pantek Co., Box 212, El Segundo, Calif.

Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, Ill.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Richardson Scale Co., Clifton, N. J.

RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.

Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.

SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.

Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.

Servo-Tek Products Co., Inc., 1086 Goffie Rd., Hawthorne, N. J.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.

Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.

Synchro Start Products, Inc., 8151 N. Ridgeway Ave., Skokie, Ill.

WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Power Level

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.

Brinnell Company, The, Simsbury, Conn.

Coral Co., The, Waterbury 20, Conn.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

ELECTRICAL & PHYSICAL INSTRUMENT CORP., 42-19 27th St., Long Island City 1, N. Y. ADV. PG. 558.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

Gates Radio Co., Quincy, Ill.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Pressure

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. J. ADV. PG. 490.

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.

Bristol Co., The, Waterbury 20, Conn.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Control Engineering Corp., Providence Highway, Norwood, Mass.

Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.

Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

DeVronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 53, Ill.

Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.

Foxboro Co., The, Foxboro, Mass.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

Fulton Siphon Div., Robertshaw-Fulton Controls Co., Knoxville 4, Tenn.

General Controls Co., Glendale 1, Calif.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Gerrett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.

Giannini & Co., Inc., G. M., Pasadena 1, Calif.

Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.

Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.

Iron Fireman, Electronics Div., 2800 S. E. Ninth Ave., Portland 2, Ore.

Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.

Manning, Maxwell & Moore, Inc., Stratford, Conn.

Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.

Niagara Electron Laboratories, Andover, N. Y.

Richardson Scale Co., Clifton, N. J.

Square D Co., 4041 N. Richards St., Milwaukee 12, Wis.

United Electric Controls Co., 85 School St., Watertown 72, Mass.

Wallace & Tiernan Co., Inc., Belleville 9, N. J.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

White-Rodgers Electric Co., Armament Dept., 1209 Cass Ave., St. Louis 6, Mo.

CONTROLS—Printing

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Daystrom Instrument Co., Archbald, Pa.

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.

Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Instrument Development Labs., Inc., 163 Highland Ave., Neponset Heights, Mass.

North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.

Pantek Co., Box 212, El Segundo, Calif.

Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

CONTROLS—Radio Remote

A. R. F. Products, Inc., 7627 Lake St., River Forest, Ill.

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.

AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 583.

APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44, Princeton, N. J. ADV. PG. 618.

Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.

Bristol Co., The, Waterbury 20, Conn.

C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Codetypor Laboratories, 550 Fifth Ave., New York 19, N. Y.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

Electro Engineering & Mfg. Co., 627 W. Alexandrine Ave., Detroit 1, Mich.

Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.

Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.

Gables Engineering, Inc., P. O. Box 751, Coral Gables, Fla.

Gates Radio Co., Quincy, Ill.

Gyro Electronics Co., 325 Canal St., New York, N. Y.

HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 305-307.

Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.

Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.

Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.

Maryland Electronic Mfg. Corp., College Park, Md.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

Motorola Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.

Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.

North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.

Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.

Phebo, Inc., 3640 Woodland St., Baltimore 15, Md.

Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

Pye, Ltd., Cambridge, England.

Schuttig & Co., Inc., 5005 Calvert Rd., College Park, Md.

Shields Laboratory Inc., 810 Lincoln Ave., Pittsburgh 12, Pa.

Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

CONTROLS—Register

Anatran Engineering Corp., 10 Congress St., Pasadena 2, Calif.
 Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Electrodyne Co., Endicott St., Norwood, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Industrial Electronics Co., Inc., Hanover, Mass.
 North Electric Mfg. Co., 501 S. Market St., Gallon, Ohio.
 Pantek Co., Box 212, El Segundo, Calif.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
 RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
 WORNOR ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Register Cutter

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Electrodyne Co., Endicott St., Norwood, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 Pantek Co., Box 212, El Segundo, Calif.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

CONTROLS—Servo

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Arma Corp., Old Country Rd., Garden City, N. Y.
 Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 ASSOCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. ADV. PG. 669.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
 BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
 BOWMAR INSTRUMENT CORP., 2415 Pennsylvania Ave., Fort Wayne, Ind. ADV. PG. 657.
 Bristol Co., The, Waterbury 20, Conn.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 CLIFTON PRECISION PRODUCTS CO., INC., Broadway at Marple Ave., Clifton Heights, Pa. ADV. PG. 394.
 Computing Devices of Canada Ltd., P. O. Box 508, Ottawa, Ontario.
 Control Components Co., 46 Walnut St., Brookline 47, Mass.
 CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
 Control Engineering Corp., Providence Highway, Norwood, Mass.
 Daystrom Instrument Co., Archbald, Pa.
 DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
 Electro-Mechanical Div. of General Riveters, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
 FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Feedback Controls, Inc., 503 Rhode Island Ave., N.E. Washington 2, D. C.
 FORD INSTRUMENT CO., DIV. OF THE SPERRY CORP., 31-10 Thomson Ave., Long Island City 1, N. Y. ADV. PG. 614.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 G-M LABORATORIES, INC., 4336 N. Knox Ave., Chicago, Ill. ADV. PG. 608.
 General Controls Co., Glendale 1, Calif.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
 GYROMECHANISMS, INC., Halesite, N. Y. ADV. PG. 544.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 KEARFOOT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.

L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 LIBRASCOPE, INC., 1607 Flower St., Glendale, Calif. ADV. PG. 531.
 LINK AVIATION, INC., Binghamton, N. Y. ADV. PG. 507.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
 Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
 MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 MID-CENTURY INSTRUMENTIC CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
 Moog Valve Co., Inc., Prorer Airport, East Aurora, N. Y.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 NAIR CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
 Newton Co., 55 Elm St., Manchester, Conn.
 OSTER MFG. CO., JOHN, 1 N. Main St., Racine, Wis. ADV. PG. 425.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 P. M. Industries, Inc., Stamford, Conn.
 Phecco, Inc., 3640 Woodland St., Baltimore 15, Md.
 RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Richardson Scale Co., Clifton, N. J.
 Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
 Rockwell Engineering Co., 4063 N. New Jersey St., Indianapolis 5, Ind.
 SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 SERVO CORP OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.
 Servospec Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
 Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Trans-American Precision Instrument Corp., 34-17 Lawrence St., Flushing 54, N. Y.
 TRANSICOIL CORP., 107 Grand St., New York 13, N. Y. ADV. PG. 37.
 Trans-Sonics, Inc., 5 Forrest Ave., Bedford, Mass.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 White-Rodgers Electric Co., Armament Dept., 1209 Cass Ave., St. Louis 6, Mo.
 Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.
 Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

CONTROLS—Smoke & Combustion, Electronic

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Bailey Meter Co., 1050 Ivanhoe Pk., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Combustion Control Corp., 718 Beacon St., Boston 15, Mass.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
 RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
 WORNOR ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

CONTROLS—Sound System

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bright Radio Labs, Inc., 24-28 45th St., Long Island City 3, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 Gates Radio Co., Quincy, Ill.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Lesa, Via Bergamo 21, Milan, Italy.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.

Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Phecco, Inc., 3640 Woodland St., Baltimore 15, Md.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.

CONTROLS—Specific Gravity

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windmill Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

CONTROLS—Strain

Bristol Co., The, Waterbury 20, Conn.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 4, Wis.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Magnetic Research Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
 Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 Polyphase Instrument Co., 705 Haverford Rd., Brynmawr, Pa.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Richardson Scale Co., Clifton, N. J.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

CONTROLS—Temperature, Electronic

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Barber-Colman Co., Automatic Controls, Rockford, Ill.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bristol Co., The, Waterbury 20, Conn.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
 Deltron, Inc., P. O. Box 192, Glenside, Pa.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif.
 Electron Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Fenwal, Inc., 60 Pleasant St., Ashland, Mass.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. ADV. PG. 469.
 General Devices, Inc., P. O. Box 253, Princeton, N. J.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
 L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 LEWIS CO., E. B., 11 Bragg St., East Hartford 8, Conn. ADV. PG. 590.

MAONALD CO., INC., W. S., 33 University Rd.,
Cbridge 38, Mass. ADV. PG. 563.

Mang, Maxwell & Moore, Inc., Stratford, Conn.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,
Minneapolis, Minn.

Minneapolis-Honeywell Regulator Co., Aeronautical Div.,
20 Ridgway Rd., Minneapolis 13, Minn.

MINNEAPOLIS-HONEYWELL REGULATOR CO., Indus-
trial Div., Wayne & Windrim Aves., Philadelphia 4
Pa. ADV. PG. 52, 53.

Mold Overseas Ltd., Equipment Div., Century House,
Stesbury Ave., London, W. C. 2, England.

Nia Electron Laboratories, Andover, N. Y.

Par Co., Box 212, El Segundo, Calif.

Philadelphia Scientific Glass Co., 4 Eckard Ave., Abing-
ton, Pa.

SEER CORP. OF AMERICA, 20-20 Jericho Turnpike,
N Hyde Park, N. Y. ADV. PG. 69-72.

Spelties, Inc., Skunks Misery Rd., Syosset, N. Y.

Stard Electronics Research Corp., 2 East End Ave.,
New York 21, N. Y.

STENS MFG. CO., INC., 69 S. Walnut St., Mansfield,
O. ADV. PG. 317.

Sumit Electronics, Inc., 7 Industrial Place, Summit,
N. J.

Thy-Albert Instrument Co., 5351 Pulaski Ave., Phila-
delphia 44, Pa.

ULET CO., GEORGE, 413 Market St., Newark 5,
N. J. ADV. PG. 587.

Uni Electric Controls Co., 85 School St., Watertown
Mass.

We Instrument Corp., 525 N. Noble St., Chicago 22,

WEDN ELECTRICAL INSTRUMENT CORP., 614 Fre-
linghuysen Ave., Newark 5, N. J. ADV. PG. 530.

Wh Rodgers Electric Co., Armament Dept., 1209 Cass
St. Louis 6, Mo.

CONTROLS—Tentering

Aska Regulator Co., 240 E. Ontario St., Chicago 11,
Ill.

Automatic Temperature Control Co., Inc., 5212 Pulaski
Ave., Philadelphia 44, Pa.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Rho-witch, Inc., 77 Broadway, Cambridge 42, Mass.

Serleed Div. of Electro Devices, Inc., 4 Godwin Ave.,
Paterson, N. J.

CONTROLS—Timing

ADDS & WESTLAKE CO., THE, Michigan St., Elkhart,
Ind. ADV. PG. 213-216.

Bradley Co., 136 W. Greenfield Ave., Milwaukee
Wis.

Hart & Hegeman Electric Co., 103 Hawthorn St.,
Hford 6, Conn.

ATOMIC INSTRUMENT Co., 84 Massachusetts Ave., Cam-
bridge 39, Mass. 481.

Electronics Co., 1946 Farmingdale Rd., Westfield,
Mass.

Automatic Temperature Control Co., Inc., 5212 Pulaski
Philadelphia 44, Pa.

IRON CO., P. O. Box 722-H, Danville, Ill. ADV.
446.

ELBACK SCIENTIFIC INSTRUMENT CO., P. O. Box
Solano Beach, Calif. ADV. PG. 159.

Erle Co., The, Waterbury 20, Conn.

Television Ltd., Worsley Bridge Rd., London,
26, England.

Control Co., 1146 E. 152nd St., Cleveland 10,
Ohio.

Cor Designs Div., Henry G. Dietz Co., 12-16 Astoria
Blvd., Long Island City 2, N. Y.

CRATER CO., INC., R. W., Box 13, Centerbrook, Conn.
ADV. PG. 272.

Dayton Instrument Co., Archbald, Pa.

Electro-Tronic Corp., 2512 N. Halsted St., Chicago 14,
Ill.

Electronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.

Gray Co., 207 E. Sixth St., Dayton, Ohio.

East Signal Corp., Moline, Ill.

Electrical Service Co., 1271 Mission St., San Francisco,
Calif.

Electronic Control Corp., 1573 E. Forest St., Detroit,
Mich.

Electrical Laboratories, Inc., 730 Boulevard, Kenilworth,
N. J.

WATER ELECTRIC CO., 21 Mossfield Rd., Waban 68,
Mass. ADV. PG. 498.

Foxboro Co., The, Foxboro, Mass.

Galvorothea Mechanisms, Inc., 81-01 Broadway Elm-
hurst, N. Y.

General Control Company, 1200 Soldiers Field Rd., Bos-
ton 34, Mass.

General Controls Co., Glendale 1, Calif.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Ger Corp., M. A., 724 W. Winnebago St., Milwaukee
5 Wis.

CONTROL INC., 12 Hollywood Plaza, East Orange,
N. J. ADV. PG. 469.

Half Electronics Co., 57 William St., New York 5,
N. Y.

HANCOCK CO., A. W., The, 232 N. Elm St., Waterbury,
Conn. ADV. PG. 477.

HANCOCK MFG. CO., INC., 2400 Elm St., Torrington,
Conn. ADV. PG. 310, 311.

Kul Corp., Electronics Div., 1200 N. Broad St.,
Philadelphia 21, Pa.

LeFlarsheim Co., 111 E. Amity Rd., Cincinnati 37,
Ohio.

Lumentite Electric Co., 407 S. Dearborn St., Chicago 5,
Ill.

Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind.

Masco Products, 2119 S. Sepulveda Blvd., Los Angeles,
Calif.

MODELECTRIC PRODUCTS CORP., 1500 Bangs Ave.,
Asbury Park, N. J. ADV. PG. 140.

Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.

NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64,
Calif. ADV. PG. 585.

North Electric Mfg. Co., 501 S. Market St., Galion,
Ohio.

Pantek Co., Box 212, El Segundo, Calif.

Paragon Electric Co., Two Rivers, Wis.

Photobell Company, 116 Nassau St., New York 38, N. Y.

Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd.,
Great Neck, N. Y. ADV. PG. 403.

Pratt & Whitney Div., Niles-Bement-Pond Co., Charter
Oak Blvd., West Hartford 1, Conn.

Recora Co., 56 W. 103rd St., Chicago 28, Ill.

Reynolds Electric Co., 3000 River Rd., River Grove, Ill.

Richardson Scale Co., Clifton, N. J.

RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.

Rockwell Engineering Co., 4063 N. New Jersey St.,
Indianapolis 5, Ind.

Square D Co., 4041 N. Richards St., Milwaukee 12, Wis.

Stromberg-Carlson Co., Rochester 3, N. Y.

Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.

ULANET CO., GEORGE, 413 Market St., Newark 5, N. J.
ADV. PG. 587.

Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.

VECTRON, INC., 404 Main St., Waltham 54, Mass.
ADV. PG. 474, 475.

Vocaline Co. of America, Inc., Old Saybrook, Conn.

Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19,
Mich.

Wilson & Co., G. C., 1950 Eighth Ave., Huntington,
W. Va.

Zenith Electric Co., 152 W. Walton St., Chicago 10,
Ill.

CONTROLS—Torque, Electronic

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.

Atlas Metal Stamping Co., Castor & Kensington Aves.,
Philadelphia 24, Pa.

AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR
& FOUNDRY CO., 295 State Highway #17, Paramus,
N. J. ADV. PG. 490.

Bristol Co., The, Waterbury 20, Conn.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10,
Ohio.

Electro-Mechanical Div. of General Riveters, Inc., 785
Hertel Ave., Buffalo 7, N. Y.

Electronic Control Corp., 1573 E. Forest St., Detroit,
Mich.

FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON
CONTROLS CO., 2920 N. Fourth St., Philadelphia 33,
Pa. ADV. PG. 610.

Foxboro Co., The, Foxboro, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver
10, Colo.

Industrial Electronics, Inc., 8060 Wheeler St., Detroit
10, Mich.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls,
N. J. ADV. PG. 372.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New
York 55, N. Y. ADV. PG. 212.

OPAD-GREEN CO., 71-5 Warren St., New York 7,
N. Y. ADV. PG. 341.

Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave.,
Paterson, N. J.

CONTROLS—Turbidity

Bristol Co., The, Waterbury 20, Conn.

Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.

Electric Eye Equipment Co., 16 W. Fairchild St.,
Danville, Ill.

Electrical Service Co., 1271 Mission St., San Francisco,
Calif.

FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON
CONTROLS CO., 2920 N. Fourth St., Philadelphia 33,
Pa. ADV. PG. 610.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Photobell Company, 116 Nassau St., New York 38, N. Y.

Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.

CONTROLS—Ultrasonic

ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd.,
Fair Lawn, N. J. ADV. PG. 426.

ARENBERG ULTRASONIC LABORATORY, 94 Green St.,
Jamaica Plain 30, Mass. ADV. PG. 571.

BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson
3, N. J. ADV. PG. 323.

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave.,
Stamford, Conn. ADV. PG. 557.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

International Electronics Corp., 137 Hudson St., New
York 13, N. Y.

Otis Elevator Co., Electronic Div., 35 Ryerson St.,
Brooklyn, N. Y.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Wal-
tham 54, Mass. ADV. PG. 26.

Rich-Roth Laboratories, 1240 Main St., Hartford 3,
Conn.

Vendo Co., 7400 E. 12th St., Kansas City 8, Mo.

CONTROLS—Vacuum

Askania Regulator Co., 240 E. Ontario St., Chicago 11,
Ill.

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.

BOURNS LABORATORIES, 6135 Magnolia Ave., River-
side, Calif. ADV. PG. 369.

Bristol Co., The, Waterbury 20, Conn.

Consolidated Vacuum Corp., Rochester 3, N. Y.

Cooper Co., Clark, 349 N. Market St., Palmyra, N. Y.

Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria
Blvd., Long Island City 2, N. Y.

Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.

Foxboro Co., The, Foxboro, Mass.

Friez Instrument Div., Bendix Aviation Corp., Baltimore
4, Md.

Fulton Sylphon Div., Robertshaw-Fulton Controls Co.,
Knoxville 4, Tenn.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Litton Engineering Laboratories, 1049 Brittan Ave., San
Carlos, Calif.

Manning, Maxwell & Moore, Inc., Stratford, Conn.

Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.

Merritt & Zaleski, Inc., 33-66 12th St., Long Island
City 6, N. Y.

NAER CORP., 2301 S. Purdue Ave., West Los Angeles
64, Calif. ADV. PG. 585.

Philadelphia Scientific Glass Co., 4 Eckard Ave., Abing-
ton, Pa.

Precision Scientific Co., 3737 W. Cortland St., Chicago
47, Ill.

Process & Instruments, 15 Stone Ave., Brooklyn 33,
N. Y.

Research Electronics Laboratory, Roslyn, Pa.

Square D Co., 4041 N. Richards St., Milwaukee 12,
Wis.

Stokes Machine Co., F. J., 5850 Tabor Rd., Inley P. O.,
Philadelphia 20, Pa.

United Electric Controls Co., 85 School St., Watertown
72, Mass.

Vacuum-Electronic Engineering Co., 86 Denton Ave.,
New Hyde Park, N. Y.

Vacuum Tube Products, 506 S. Cleveland St., Ocean-
side, Calif.

Wallace & Tiernan Co., Inc., Belleville 9, N. J.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chi-
cago 10, Ill.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Fre-
linghuysen Ave., Newark 5, N. J. ADV. PG. 530.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

CONTROLS—Ventilating Control System

Barber-Colman Co., Automatic Controls, Rockford, Ill.

Bristol Co., The, Waterbury 20, Conn.

Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria
Blvd., Long Island City 2, N. Y.

FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON
CONTROLS CO., 2920 N. Fourth St., Philadelphia 33,
Pa. ADV. PG. 610.

Foxboro Co., The, Foxboro, Mass.

General Controls Co., Glendale 1, Calif.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave.,
S. Minneapolis, Minn.

White-Rodgers Electric Co., Armament Dept., 1209 Cass
Ave., St. Louis 6, Mo.

CONTROLS—Volume & Tone

M... Indicates miniature type

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4,
Wis. M.

British Electronic Sales Co., 23-03 45th Rd., Long
Island City 1, N. Y. M.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E.
Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342,
574, 607, 659. M.

CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG.
350, 351. M.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.
PG. 243. M.

INTERELECTRONICS CORP., 2432 Grand Concourse, New
York 58, N. Y. ADV. PG. 655. M.

INTERNATIONAL RESISTANCE CO., 401 N. Broad St.,
Philadelphia 8, Pa. ADV. PG. 233-236. M.

Lesca, Via Bergamo 21, Milan, Italy. M.

McIntosh Laboratory, Inc., 320 Water St., Binghamton,
N. Y. M.

Mallory & Co., Inc., P. R., 3029 E. Washington St.,
Indianapolis 6, Ind. M.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel,
Ill. M.

OHMITE MFG. CO., 3601 Howard St., Skokie, Ill.
ADV. PG. 44, 45. M.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 362. M.

STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG.
202, 203. M.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Pall-
sades Park, N. J. M.

Wirt Co., 5221 Greene St., Philadelphia 44, Pa. M.

CONTROLS—Weight

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Bristol Co., The, Waterbury 20, Conn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Richardson Scale Co., Clifton, N. J.
 Rockwell Engineering Co., 4063 N. New Jersey St., Indianapolis 5, Ind.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.

CONTROLS—Welding

AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 498.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.
 Photobell Company, 116 Massau St., New York 38, N. Y.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Robotron Corp., 21300A W. Eight Mile Rd., P. O. Box 4885, Detroit 19, Mich.
 Square D Co., 4041 N. Richards St., Milwaukee 12, Wis.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

CONVERTERS

1. AC-DC
2. Computing
3. DC-AC
4. F-M
5. Frequency
6. Frequency Shift
7. High Frequency
8. Low Frequency
9. Magnetic
10. Microwave
11. Rotary
12. Static, Electronic
13. Television
14. Vibrator Type
15. Voltage
16. Waveform

A B C Radio Laboratories, 3334 N. New Jersey St., Indianapolis 5, Ind. 4.
 Acme Electronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio. 5.
 Adler Communications Laboratories, 1 Le Fevre Lane, New Rochelle, N. Y. 6.
AIR ASSOCIATES, INC., Teterboro, N. J. 5-6. ADV. PG. 83.
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-3-9-14-15. ADV. PG. 65.
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. 10. ADV. PG. 428.
 Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio. 13.
 American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif. 5-7.
AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. 1-3-13-14. ADV. PG. 198.
 Astatic Corporation, The, Conneaut, Ohio. 13.
AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. Y. 5. ADV. PG. 490.
BALLANTINE LABORATORIES, INC., Boonton, N. J. 3. ADV. PG. 58.
 Barber Labs., Alfred W., 32-44 Francis Lewis Blvd., Flushing, N. Y. 6.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. 5-6. ADV. PG. 174-175.
 Benson-Lehner Corp., 2340 Sawtelle Blvd., Los Angeles 64, Calif. 2-15.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. 1. ADV. PG. 283.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. 5-11. ADV. PG. 159.
 Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J. 13.
 Bludworth Marine Div., National Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y. 11.
 Boehme, Inc., H. O., 915 Broadway, New York 10, N. Y. 6.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y. 13.

BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Patterson 3, N. J. 1-5-7-15-16. ADV. PG. 323.
 Bristol Co., The, Waterbury 20, Conn. 1-3.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. 14. ADV. PG. 592.
CARTER MOTOR CO., 2644 N. Maplewood Ave., Chicago 47, Ill. 3-11. ADV. PG. 219.
 Century Electric Co., 1806 Pine St., St. Louis 3, Mo. 1-3-5-11.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. 10.
CHATHAM ELECTRONICS CORP., Livingston, N. J. 3-12. ADV. PG. 132, 133.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. 15-16. ADV. PG. 572.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. 1-3-6.
CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. 1-3-5-11. ADV. PG. 612.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J. 1-3-14-15.
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. 4-5.
 Daystrom Instrument Co., Archbald, Pa. 2.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. 10. ADV. PG. 344.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. 9. ADV. PG. 85.
 Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif. 1-3-9-15.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. 6-15. ADV. PG. 536.
EASTERN AIR DEVICES, INC., 15 Washington St., Dover, N. H. 11. ADV. PG. 315.
 Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif. 2.
 Electro-Voice, Inc., Buchanan, Mich. 7-13.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J. 1.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. 3-11. ADV. PG. 636.
ELECTRIC SPECIALTY CO., 300 South St., Stamford, Conn. 1-3-5-6-7-8-11. ADV. PG. 649.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. 1-3-5-7-8-11. ADV. PG. 292.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. 1. ADV. PG. 554.
ELECTRONIC MEASUREMENTS CO., INC., Lewis St. & Maple Ave., Eatontown, N. J. 1-3-6-12-15. ADV. PG. 431.
 Erco Radio Labs, Inc., E. Stewart Ave., Garden City, N. Y. 5-6.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. 1-12-14. ADV. PG. 182-187.
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. 5-10. ADV. PG. 550.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa. 2-5-11.
 Gates Electric Co., 65 W. Broadway, New York, N. Y. 1.
 General Devices, Inc., P. O. Box 253, Princeton, N. J. 3.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-3-5-11. ADV. PG. 1-20.
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. 13. ADV. PG. 287.
 Georator Corp., Box 463, Manassas, Va. 3-5-11.
 Gonset Co., 801 S. Main St., Burbank, Calif. 4.
 Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill. 3-11.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y. 5-7-13.
 Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill. 11.
 Harvey-Wells Electronics, Inc., North St., Southbridge, Conn. 13.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio. 1-3-5-11.
 I.D.E.A., 7900 Pendleton Pike, Indianapolis 26, Ind. 13.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. 1. ADV. PG. 47.
 Industrial Television, Inc., 369 Lexington Ave., Clifton, N. J. 13.
INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. 1-2-3-9-11-12. ADV. PG. 628.
 Instrument Development Labs, Inc., 163 Highland Ave., Needham Heights, Mass. 1-3-11.
 Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md. 2.
 Janette Electric Mfg. Co., 555 W. Monroe St., Chicago 6, Ill. 3.
 Jowill Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa. 13.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif. 14.
 Kahn Research Labs., Elizabeth Bldg., 22 Pine St., Freeport, N. Y. 6.
 Kato Engineering Co., 1415 First Ave., Mankato, Minn. 3-5-11.
 Katolight Corp., 624 Front St., Mankato, Minn. 1-3-5-7-8-11.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. 2. ADV. PG. 231.
KEPCO LABS., 131-38 Sanford Ave., Flushing 55, N. Y. 1-15. ADV. PG. 23-25.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. 10. ADV. PG. 199.
LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. 1. ADV. PG. 259.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif. 14.
 Leland Electric Co., Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio. 1-3.
 Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y. 7.
 Lesa, Via Bergamo 21, Milan, Italy. 1-3.
 McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif. 1.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. 1-2-3-5-6-8-9-15. ADV. PG. 212.
 Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y. 9.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif. 3-9.
MAGNETICS RESEARCH CO., 142 King St., Chappaqua, N. Y. 2. ADV. PG. 651.
 Mallory & Co., Inc., P. R. 3029 E. Washington St., Indianapolis 6, Ind. 1-13.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. 4-15.
 Mercury Electronic Co., Box 450, Red Bank, N. J. 5-12.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. 13.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. 10. ADV. PG. 613.
MILLIVAC INSTRUMENT CORP., 444 Second St., Boston 997, Schenectady, N. Y. 14. ADV. PG. 484.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. 3-14. ADV. PG. 52, 53.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn. 5-9.
MODEL RECTIFIER CORP., 557 Rogers Ave., Brooklyn 25, N. Y. 1. ADV. PG. 424.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore. 5-7.
 Motordyne, Inc., 2661 S. Myrtle Ave., Monrovia, Calif. 3-11.
 Muirhead & Co., Ltd., Beckenham, Kent, England. 4.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. 10. ADV. PG. 666.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. 6. ADV. PG. 324-326.
OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. 1. ADV. PG. 341.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. 1-3-15. ADV. PG. 628.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. 10. ADV. PG. 444.
 Potter Aeronautical Co., Route #22, Union, N. J.
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J. 1-15.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. 1-3-14-15. ADV. PG. 650.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. 10. ADV. PG. 528.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. 6. ADV. PG. 92.
 Price Electric Corp., Frederick, Md. 9-11.
 Pye, Ltd., Cambridge, England. 13.
 Radiart Corp., 3455 Vega Ave., Cleveland 13, Ohio. 1-3-14.
 Radio Engineering Labs, Inc., 36-40 37th St., Long Island City 1, N. Y. 10.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. 4. ADV. PG. 609.
 Radio Mfg. Engineers, Inc., 300-302 First Ave., Pearl River 6, Ill. 5-13.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. 13. ADV. PG. 88, 89.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. 1-5. ADV. PG. 26.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif. 5-12.
 Richardson-Allen Corp., 39-15 Main St., Flushing, N. Y. 1-3.
 Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio. 5.
SANDERS ASSOCIATES, INC., Nashua, N. H. 1. ADV. PG. 622.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. 5-6-7. ADV. PG. 69-72.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 1-3-5-8-15. ADV. PG. 50, 51.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. 13. ADV. PG. 555.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. 14.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 11.
STELMA, INC., 389 Ludlow St., Stamford, Conn. 6. ADV. PG. 670.
 Stromberg-Carlson Co., Rochester 3, N. Y. 1-14.
 Syntron Corp., 243 Lexington, Haver City, Pa. 1.
 Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y. 1.
 Technical Material Corp., P. O. Box 142, Mamaroneck, N. Y. 6.
TERADO CO., 1059 Raymond Ave., St. Paul 8, Minn. 3-14. ADV. PG. 418.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. 6. ADV. PG. 662.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. 5-6-9.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. 9. ADV. PG. Inside Front Cover.

Co., Inc., 1801 Walnut St., Garland, Texas. 1-3-12-15.
ECTRA, INC., 404 Main St., Waltham 54, Mass. 5-12. ADV. PG. 474, 475.
IBRAN RESEARCH LABS., INC., 97 Lake Ave., Tucke, N. Y. 1-3-14. ADV. PG. 602.
lectronics Mfg. Co., 576 E. Merrick Rd., Lynbrook, N. Y. 4.
idion Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind. 13.
aveg P., Inc., P. O. Box 486, 14845 Oxnard St., Vanuys, Calif. 10.
Velcro Co., 19500 W. Eight Mile Rd., Detroit 19, Mich. 1-5.
Micro Laboratories, Inc., Great Neck, N. Y. 10.
INGER CORP., E. 7th & Division Sts., Sioux City, Iowa 3-11. ADV. PG. 257.

BOOKS—Electronic

AYTHN MFG. CO., EQUIPMENT SALES DIV., Waltham 4, Mass. ADV. PG. 26.

ORDERS

Electric Heating Co., 1217 Washington St., Boston, Mass.
EROLE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
LINE ELECTRIC PRODUCTS INC., 76 Coit St., Irvington, N. J. ADV. PG. 125.
Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
ASSOCIATED ENGINEERING CORP. OF BOSTON, 65 Kent St., Brookline 46, Mass. ADV. PG. 591, 625.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
THE WOOD PRODUCTS CO., INC., 234 Creek Rd., Kearburg, N. J. ADV. PG. 508.
Iden Tg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
mbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
ble Electronic Products Inc., Providence, R. I.
ROLABLE DIV. OF CRESCENT CO., INC., 20 CENT. Pawtucket, R. I. ADV. PG. 155.
WEST CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
nsolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
RNIE WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
Electronic Industries Corp., 203 Orinco Drive, Bldg. 1, Mt. Vernon, N. Y.
Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
Wire & Cable Co., Sycamore, Ill.
etric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Longland City, N. Y.
Products Co., 1418 N. Highland Ave., Hollywood 3, Calif.
Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
le Corp., 1601 Wall St., Fort Wayne 6, Ind.
DIAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
Dechea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
E-L MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 2.
NER ELECTRIC CO., Construction Materials Div., 128 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.
Electric Co., Wiring Device Dept., Providence 7, R. I.
nsulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
ILED KORDS, INC., Box K, New Haven 14, Conn. ADV. PG. 602.
LKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
ic & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
nsulated Wire Div., The Overlakes Corp., 171 Lincoln Ave., Lowell, Mass.
DELTRIC PRODUCTS CORP., 1500 Bangs Ave., Asbury Park, N. J. ADV. PG. 140.
nsulated Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
ctricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
NSYLVANIA TESTING LABORATORY, Doylestown, Pa. DV. PG. 330.
HALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
ADSON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
astic Wire & Cable Corp., Jewett City, Conn.
nsulated Wire Co., 830 Monroe St., Hoboken, N. J.
ode and Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
ersion Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
ANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.

Roffan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
Royal Electric Co., Inc., Pawtucket, R. I.
Sears Co., M. J., Delaware County, Roxbury, N. Y.
Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
Telephonics Corp., Park Ave., Huntington, N. Y.
TRIMM, INC., 400 W. Lake St., Libertyville, N. Y. ADV. PG. 639.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

CORDS—Dial Cords & Cables

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
Cable Electric Products Inc., Providence, R. I.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Diamond Wire & Cable Co., Sycamore, Ill.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W. C. 2, England.
Stromberg-Carlson Co., Rochester 3, N. Y.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

CORDS—Lacing

B & M Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
Columbian Rope Co., Auburn, N. Y.
Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
GUDEBROD BROS. SILK CO., INC., ELECTRONICS DIV., 225 W. 34th St., New York 1, N. Y. ADV. PG. 446.
HEMINWAY & BARTLETT MFG. CO., 500 Fifth Ave., New York 36, N. Y. ADV. PG. 242.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
Owens-Corning Fiberglas Corp., 598 Madison Ave., New York 22, N. Y.
RESIN INDUSTRIES, INC., Santa Barbara, Calif. ADV. PG. 154.

CORDS—Line

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
ASSOCIATED ENGINEERING CORP. OF BOSTON, 65 Kent St., Brookline 46, Mass. ADV. PG. 591, 625.
B & M Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
Bright Radio Labs, Inc., 24-28 45th St., Long Island City 3, N. Y.
Cable Electric Products, Inc., Providence, R. I.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
Decatur Electronic Industries Corp., 203 Orinco Drive, Brightwater, N. Y.
Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
KOILED KORDS, INC., Box K, New Haven 14, Conn. ADV. PG. 602.
Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln Ave., Lowell, Mass.
Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
Plastic Wire & Cable Corp., Jewett City, Conn.
Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
Royal Electric Co., Inc., Pawtucket, R. I.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stromberg-Carlson Co., Rochester 3, N. Y.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

CORDS—Line Resistance

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
Holyoke Wire & Cable Co., 720 Main St., Holyoke, Mass.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.

CORDS—Patch

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
ASSOCIATED ENGINEERING CORP. OF BOSTON, 65 Kent St., Brookline 46, Mass. ADV. PG. 591, 625.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
COAXIAL CONNECTOR CO., 37 North 2nd Ave., Mt. Vernon, N. Y. ADV. PG. 617.
ConRay Corp., 1225 Ray St., Dayton 4, Ohio.
Decatur Electronic Industries Corp., 203 Orinco Drive, Brightwater, N. Y.
Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
Gates Radio Co., Quincy, Ill.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Hall, Inc., F. Sumner, Amityville, N. Y.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
Roffan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Stromberg-Carlson Co., Rochester 3, N. Y.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449.
TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.

CORES—C Type

ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 347.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.

Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Custom Components, Inc., 303 Bergen Ave., Kearny, N. J.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
MOLONEY ELECTRIC CO., 5590 Bircher Blvd., St. Louis 20, Mo. ADV. PG. 356.
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
PYROFERRIC CO., INC., 621 E. 216th St., New York 67, N. Y. ADV. PG. 593.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 162.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
YALE & TOWNE MFG. CO., POWDERED METAL PRODUCTS DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

CORES—Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
CENTRALAB DIV. OF GLOBE UNION INC., 914Y E. Keefe Ave., Milwaukee, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Custom Components, Inc., 303 Bergen Ave., Kearny, N. J.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Ferricore Inc., 15 School St., Yonkers 2, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
 Isolantite Manufacturing Corp., Stirling, N. J.
KIRCHBERGER & CO., INC., M., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 Louthan Mfg. Co., East Liverpool, Ohio.
MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 526.
 Maryland Lava Co., Bel Air, Md.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Norton Co., 1 New Bond St., Worcester 6, Mass.
 Saxonburg Ceramics, Saxonburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
YALE & TOWNE MFG. CO., POWDERED METAL PRODUCTS DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

CORES—Cut

See **CORES—C Type**
CORES—E Type
CORES—U Type

CORES—E Type

ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 347.

CORES—Ferrite

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Custom Components, Inc., 303 Bergen Ave., Kearny, N. J.
 Ferricore Inc., 15 School St., Yonkers 2, N. Y.
 Ferroxcube Corp. of America, 125 E. Bridge St., Saugerties, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
 Speer Resistor Division, Speer Carbon Co., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 Superelex Electronics Corp., 23 Atherton St., Yonkers, N. Y.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
YALE & TOWNE MFG. CO., POWDERED METAL PRODUCTS DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

CORES—High Permeability Magnetic

ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 347.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Custom Components, Inc., 303 Bergen Ave., Kearny, N. J.
 Ferricore Inc., 15 School St., Yonkers 2, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 526.
 Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.

MAGNETICS, INC., P. O. Box 230-A, Butler, Pa. ADV. PG. 28.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
PYROFERRIC CO., INC., 621 E. 216th St., New York 67, N. Y. ADV. PG. 593.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 162.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
YALE & TOWNE MFG. CO., POWDERED METAL PRODUCTS DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

CORES—Iron

Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Custom Components, Inc., 303 Bergen Ave., Kearny, N. J.
FEDERAL TELEPHONE & RADIO CO., A Div. of IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 526.
NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
PYROFERRIC CO., INC., 621 E. 216th St., New York 67, N. Y. ADV. PG. 593.
RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 360.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
 Waltham Screw Co., Waltham, Mass.
YALE & TOWNE MFG. CO., POWDERED METAL PRODUCTS DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

CORES—Powdered Iron

Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Custom Components, Inc., 303 Bergen Ave., Kearny, N. J.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
 Laboratoire Industriel de Physique Applique, 67 Rue M.A.-Colombier, Bagnolet (Seine) France.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 526.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
PYROFERRIC CO., INC., 621 E. 216th St., New York 67, N. Y. ADV. PG. 593.
 Quality Components, Inc., St. Marys, Pa.
RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 360.
 Speer Resistor Division, Speer Carbon Co., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
YALE & TOWNE MFG. CO., POWDERED METAL PRODUCTS DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

CORES—Slug Tuning Units

Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Custom Components, Inc., 303 Bergen Ave., Kearny, N. J.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
 Gries Reproducer Corp., 151 Beechwood St., New Rochelle, N. Y.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
PYROFERRIC CO., INC., 621 E. 216th St., New York 67, N. Y. ADV. PG. 593.
 Quality Components, Inc., St. Marys, Pa.
RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 360.
 Speer Resistor Division, Speer Carbon Co., St. Marys, Pa.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
YALE & TOWNE MFG. CO., POWDERED METAL PRODUCTS DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

CORES—Tape Wound

ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 347.
BURROUGHS CORP., ELECTRONIC INSTRUMENTS DIV., 1209 Vine St., Philadelphia, Pa. ADV. PG. 495.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
MAGNETICS, INC., P. O. Box 230-E, Butler, Pa. ADV. PG. 28.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 162.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

CORES—Toroidal

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 6, Mass. ADV. PG. 440.
ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 347.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Custom Components, Inc., 303 Bergen Ave., Kearny, N. J.
 Ferricore, Inc., 15 School St., Yonkers 2, N. Y.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
MAGNETIC CORE CORP., 2 Croton Ave., Ossining, N. Y. ADV. PG. 526.
MAGNETICS, INC., P. O. Box 230-E, Butler, Pa. ADV. PG. 28.
MAGNETICS RESEARCH CO., 142 King St., Chappaqua, N. Y. ADV. PG. 651.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
PYROFERRIC CO., INC., 621 E. 216th New York 67, N. Y. ADV. PG. 593.
RADIO CORES, INC., 9540 Tully Ave., Oak Lawn, Ill. ADV. PG. 360.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 162.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

CORES—U Type

See **CORES—C Type**

COUNTERS, ELECTRON AND NUCLEAR

See **COUNTERS—Geiger**

COUNTERS—Electronic

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pasadena, N. J. ADV. PG. 645.
 Airmec Ltd., High Wycombe, Buckinghamshire, England
 Allegany Instrument Co., Inc., Cumberland, Md.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
AUDIO PRODUCTS CORP., 2265 Westwood Blvd., Los Angeles 64, Calif. ADV. PG. 653.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Bendix Aviation Corp., Cincinnati Div., 203 W. Third St., Cincinnati 2, Ohio.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 28.
 Boesch Mfg. Co., Danbury, Conn.
BURROUGHS CORP., ELECTRONIC INSTRUMENTS DIV., 1209 Vine St., Philadelphia, Pa. ADV. PG. 495.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Codetypor Laboratories, 550 Fifth Ave., New York 11, N. Y.
 Computing Devices of Canada, Ltd., P. O. Box 50, Ottawa, Ontario.
 Daystrom Instrument Co., Archbald, Pa.
DECADE INSTRUMENT CO., Box 153, Caldwell, N. J. ADV. PG. 448.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Detector Corp., 5420 Vineland Ave., North Hollywood, Calif.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
ELECTRICAL & PHYSICAL INSTRUMENT CORP., 42-27th St., Long Island City 1, N. Y. ADV. PG. 558.
 Electronic Control Corp., 1573 E. Forest Ave., Detroit Mich.
 Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif.

NUCLEONIC MEASUREMENTS CO., Lewis St. & Maple Ave. Eatontown, N. J. ADV. PG. 431.

N. Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.

Trics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

Engineering Research Associates, Div. of Remington Rand, Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.

SC INCORPORATED, 126 Massachusetts Ave., Boston 5, Mass. ADV. PG. 583.

Engineering Co., 8026 Monticello Ave., Skokie, Ill.

ates Radio Co., Quincy, Ill.

radstadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.

aled Electronics Co., 57 William St., New York 5, N. Y.

EWITT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Ca. ADV. PG. 29-36.

YDAIRE, INC., 3000 Winona Ave., Burbank, Calif. ADV. PG. 205.

abory for Electronics, Inc., 75 Pitts St., Boston 14, Ma.

erm Inc., 5303 Adeline St., Oakland 10, Calif.

BR COPE, INC., 1607 Flower St., Glendale, Calif. ADV. PG. 531.

ay Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.

eamment Engineering, Ltd., Arnprior, Ontario, Canada.

inn EA Electronics Corp., 47 W. Water St., St. Paul 1, Minn.

orth American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

ult. Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.

UCLEONIC COMPANY OF AMERICA, 196 DeGraw St., Brooklyn 31, N. Y. ADV. PG. 646.

ant Co., Box 212, El Segundo, Calif.

hth Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

OST MACHINERY CO., ELECTRONICS DIV., 140 Elliot St., Beverly, Mass. ADV. PG. 291.

offe Aeronautical Co., Route #22, Union, N. J.

OTT INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

P Scientific Instrument Co., Inc., 307 Culver Blvd., Playa Del Rey, Calif.

adiant Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.

aditive Products, Inc., 443 W. Congress St., Detroit 26, Mich.

ADI CORP. OF AMERICA, Engineering Products Div., Union, N. J. ADV. PG. Inside Back & Back Covers.

IL CO., INC., Middletown, Conn. ADV. PG. 557.

Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

ree Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

ran Electronics, Inc., 7 Industrial Place, Summit, N. J.

Measurement Corp., P. O. Box 1947, New York 10, N. Y.

computing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

ics Corp., Park Ave., Huntington, N. Y.

es, Inc., 472 Park Ave., Ferguson Station, St. Louis 21, Mo.

AL T CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.

NUCLEONIC COMPANY OF AMERICA, 196 DeGraw St., Brooklyn 31, N. Y. ADV. PG. 646.

Pantek Co., Box 212, El Segundo, Calif.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.

WANG LABORATORIES, 296 Columbus Ave., Boston 16, Mass. ADV. PG. 633.

COUNTERS—Geiger

Airmec Ltd., High Wycombe, Buckinghamshire, England.

ANTON ELECTRONIC LABS, INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 333.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.

BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Cyclotron Specialties Co., Moraga 8, Calif.

Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

Dectron Corp., 5420 Vineland Ave., North Hollywood, Calif.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.

Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.

El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

Fisher Research Labs, Inc., 1961 University Ave., Palo Alto, Calif.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.

Leighton Labs., H. W., 26 Herman St., Glen Ridge, N. J.

Lermac, Inc., 5303 Adeline St., Oakland 10, Calif.

LIBRASCOPE, INC., 1607 Flower St., Glendale, Calif. ADV. PG. 531.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

Nuclear Development Lab., Box 7034, Kansas City, Mo.

Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.

Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.

NUCLEONIC COMPANY OF AMERICA, 196 DeGraw St., Brooklyn 31, N. Y. ADV. PG. 646.

Pacific Transducer EBG Corp., 11921 W. Pico Blvd., Los Angeles 64, Calif.

Pantek Co., Box 212, El Segundo, Calif.

Precision Radiation Instruments, Inc., 2235 S. LaBrea Ave., Los Angeles 16, Calif.

R-C Scientific Instrument Co., 307 Culver Blvd., Playa Del Rey, Calif.

Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.

Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.

Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.

Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.

Southwest Products, Inc., Alamo Downs, Box 85-D, San Antonio, Rt. 4, Texas.

Technical Measurement Corp., P. O. Box 1947, New Haven, Conn.

Tracerlab, Inc., 130 High St., Boston 10, Mass.

Twentieth Century Electronics, Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.

VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

Welch Allyn, Inc., Skaneateles Falls, N. Y.

Wood Counter Laboratory, N., 5491 Blackstone, Chicago 37, Ill.

COUNTERS—Frequency

ANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 645.

ASSOCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. ADV. PG. 669.

OTTER INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.

nd Aviation Corp., Cincinnati Div., 203 W. Third St., Cincinnati 2, Ohio.

nd Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.

ERKEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.

nd Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Multiplier Corp., Electronics Div., San Gabriel, Calif.

yclotron Specialties Co., Moraga 8, Calif.

yston Instrument Co., Archbald, Pa.

etabolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

ectron Corp., 5420 Vineland Ave., North Hollywood, Ca.

URRY DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.

ectric Engineering Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif.

Trics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

EWITT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

YDAIRE, INC., 3000 Winona Ave., Burbank, Calif. ADV. PG. 205.

iversity Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.

abory for Electronics, Inc., 75 Pitts St., Boston 14, Ma.

inn EA Electronics Corp., 47 W. Water St., St. Paul 1, Minn.

orth American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

ORTERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 324-326.

COUNTERS—Mechanical

Anatran Engineering Corp., 10 Congress St., Pasadena 2, Calif.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Boesch Mfg. Co., Danbury, Conn.

CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.

Cyclotron Specialties Co., Moraga 8, Calif.

Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.

Eagle Signal Corp., Moline, Ill.

Gorrell & Gorrell, Haworth, N. J.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.

Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.

Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.

RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.

Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.

Veeder-Root, Inc., Hartford 2, Conn.

COUNTERS—Photoelectric

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 645.

Airmec Ltd., High Wycombe, Buckinghamshire, England.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.

BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.

Dectron Corp., 5420 Vineland Ave., North Hollywood, Calif.

De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.

Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.

Electrical Service Co., 1271 Mission St., San Francisco, Calif.

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.

FEDERAL TELEPHONE & RADIO CO., A Div. of IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

GENERAL ELECTRIC CO., Apparatus Sales Div. 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Haley Electronics Co., 57 William St., New York 5, N. Y.

Hauman Instrument Co., 70 Coolidge Hill Rd., Watertown 72, Mass.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

Pantek Co., Box 212, El Segundo, Calif.

Photobell Company, 116 Nassau St., New York 38, N. Y.

Photoswitch Inc., 77 Broadway, Cambridge 42, Mass.

POST MACHINERY CO., ELECTRONICS DIV., 140 Elliot St., Beverly, Mass. ADV. PG. 291.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Pye, Ltd., Cambridge, England.

R-C Scientific Instrument Co., 307 Culver Blvd., Playa Del Rey, Calif.

RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.

Special Products Co., 9118 Brookville Road, Silver Spring, Md.

Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

Unitronics, Inc., 472 Park Ave., Ferguson Station, St. Louis 21, Mo.

COUNTERS—Proportional

Anatran Engineering Corp., 10 Congress St., Pasadena 2, Calif.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Bendix Aviation Corp., Cincinnati Div., 203 W. Third St., Cincinnati 2, Ohio.

CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.

Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.

El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.

Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.

NUCLEONIC COMPANY OF AMERICA, 196 DeGraw St., Brooklyn 31, N. Y. ADV. PG. 646.

Pantek Co., Box 212, El Segundo, Calif.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.

Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.

Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.

Twentieth Century Electronics, Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.

VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.

Wood Counter Laboratory, N., 5491 Blackstone, Chicago 37, Ill.

COUNTERS—Revolution

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 645.

ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. ADV. PG. 426.

ASSOCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. ADV. PG. 669.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Detectron Corp., 5420 Vineland Ave., North Hollywood, Calif.

Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.

Eagle Signal Corp., Mollne, Ill.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.

Pantek Co., Box 212, El Segundo, Calif.

Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.

STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 154.

Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.

Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

Veeder-Root, Inc., Hartford 2, Conn.

WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.

WANG LABORATORIES, 296 Columbus Ave., Boston 16, Mass. ADV. PG. 633.

COUNTING AND SORTING
See **CONTROLS—Counting & Sorting**

COUPLERS—Directional

COUPLINGS—Microwave
See **MICROWAVE ACCESSORIES**

COUPLINGS, SHAFT—Reducers & Extensions

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.

Belock Instrument Corp., 13-11 111th St., College Point, N. Y.

Birnback Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.

Mica Insulator Co., Schenectady 1, N. Y.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.

Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.

Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.

COUPLINGS, SHAFT—Rigid & Flexible

Acme Tool & Specialties Co., 224 N. Loomis St., Chicago 7, Ill.

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.

Belock Instrument Corp., 13-11 111th St., College Point, N. Y.

Birnback Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.

Clifford Mfg. Co., Grove St., Waltham, Mass.

JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.

JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.

Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.

LORD MFG. CO., 1635 W. 12th St., Erie, Pa. ADV. PG. 512.

Mica Insulator Co., Schenectady 1, N. Y.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.

Renbrandt, Inc., 98 Kirkland St., Cambridge 38, Mass.

Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.

Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.

CROSSES—Microwave
See **MICROWAVE ACCESSORIES**

Hybrid Junctions—Microwave

CRYSTAL ANALYSIS EQUIPMENT

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.

Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.

Lehigh Valley Electronic Mfg. Co., 215 S. 3rd St., Allentown, Pa.

MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.

North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.

Pye, Ltd., Cambridge, England.

RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 609.

STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.

TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.

X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

CRYSTAL CARTRIDGES

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.

American Microphone Co., 270 S. Fair Oaks Ave., Pasadena 1, Calif.

Astatic Corporation, The, Conneaut, Ohio.

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

Electro-Voice, Inc., Buchanan, Mich.

Les, Via Bergamo 21, Milan, Italy.

Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.

RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.

Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.

Webster Electric Co., 1900 Clark St., Racine, Wis.

CRYSTAL DETECTORS
See **DETECTORS—Crystal**

CRYSTAL DIODES
See **CRYSTALS—Germanium-Crystals, Silicon**

CRYSTAL MOUNTS & MIXERS
See **MICROWAVE ACCESSORIES**

CRYSTALS—Barium Titanate-Transducer

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.

GLENGO CORP., Metuchen, N. J. ADV. PG. 640.

GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.

International Electronics Corp., 137 Hudson St., New York 13, N. Y.

Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.

Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.

VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.

CRYSTALS—Fused Fibre

Amersil Co., Inc., Hillside, N. J.

CRYSTALS—Germanium-Rectifying & Amplifying

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.

BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 96, 97.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.

INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave., El Segundo, Calif. ADV. PG. 101.

Kemtron Electron Products, Inc., 5 Prince Place, Newburyport, Mass.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

National Union Radio Corp., 237 Jacksonville Rd., Hattboro, Pa.

RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 88, 89.

Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.

Semimetals Co. of America, 2413 Federal St., Philadelphia 1, Pa.

Standard Telephones & Cables Ltd., Connaught House Aldwych, London, W.C. 2, England.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway New York 19, N. Y. ADV. PG. 699-706.

Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass.

Transition Electronic Corp., 403-407 Main St., Melrose 76, Mass.

Westinghouse Electric Corp., Electronic Tube Div., EB 500, P. O. Box 284, Elmira 1, N. Y.

CRYSTALS—Quartz-Frequency Control

Aeronautical Electronics, Inc., Raleigh-Durham Airport P. O. Box 6043, Raleigh, N. C.

Andersen Laboratories, Inc., 39 Talcott Rd., West Hartford 10, Conn.

Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.

BILILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 375.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

Bulova Watch Co., Quartz Crystal Div., 630 Fifth Ave., New York 20, N. Y.

CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 581.

Cryo, Inc., 1138 Mission St., South Pasadena, Calif.

Crystal Laboratories, 640 N. Main St., Wichita, Kansas.

DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.

Dallons Laboratories, Inc., 5066 Santa Monica Blvd., Los Angeles 29, Calif.

Eidson Electronics Co., 1902 N. Third St., Temple, Texas.

General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.

HUNT CORP., 453 Lincoln St., Carlisle, Pa. ADV. PG. 533.

Intellectron, Inc., 1114 3rd St., S.E., Cedar Rapids, Iowa.

INTERNATIONAL CRYSTAL MFG. CO., 18 N. Lee St., Oklahoma City, Okla. ADV. PG. 147.

Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.

KEYSTONE ELECTRONICS CO., 114 Manhattan St., Stamford, Conn. ADV. PG. 552.

KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 634.

LEWIS CO., E. B., 11 Bragg St., East Hartford 8, Conn. ADV. PG. 590.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

McCOY ELECTRONICS CO., Mount Holly Springs, Pa. ADV. PG. 525.

MIDLAND MFG. CO., Sunshine & Fiberglass, Kansas City, Kansas. ADV. PG. 209.

Miller Labs., August E., 9226 Hudson Blvd., Nor Bergen, N. J.

Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.

Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 1, N. Y.

Pan-Electronics Corp., 901 W. Peachtree St., Atlanta, Ga.

Piezo Products Co., Whitney St., Framingham, Mass.

Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.

Precision Crystal Laboratory, 2223 Warwick Ave., Saratoga, Calif.

Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.

Premier Research Laboratories, Inc., 79-89 Seventh Ave., New York 11, N. Y.

Pye, Ltd., Cambridge, England.

RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.

Radio Specialty Mfg. Co., 2023 S.E. 6th Ave., Portland 14, Ore.

REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 343.

Scientific Radio Products, Inc., 215 South 11th, Omaha, Neb.

Scientific Radio Service, 4301 Sheridan St., University Park, Md.

Sherold Crystals, Inc., 1401 Fairfax Trafficway, Kansas City, Kan.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Standard Crystal Co., 1714 Locust St., Kansas City, Mo.

STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.

Standard Telephones & Cables Ltd., Connaught House Aldwych, London, W.C. 2, England.

VALPEY CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.

Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.

CRYSTALS—Quartz-Transducer

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.

ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 375.

Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

RAM INSTRUMENTS, INC., 438 Fairfield Ave., Stord, Conn. ADV. PG. 557.

RUS ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

Watch Co., Quartz Crystal Div., 630 Fifth Ave., New York 20, N. Y.

CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 581.

nc., 1138 Mission St., South Pasadena, Calif.

Laboratories, Inc., 5066 Santa Monica Blvd., Los Angeles 29, Calif.

ircuits, Inc., 401 E. Green St., Pasadena, Calif.

EVNS ELECTRONICS CO., 114 Manhattan St., Stord, Conn. ADV. PG. 552.

CO., E. B., 11 Bragg St., East Hartford 8, Conn. ADV. PG. 590.

DL MFG. CO., Sunshine & Fiberglass, Kansas City, Mo. ADV. PG. 209.

iller, abs., August E., 9226 Hudson Blvd., North Berk, N. J.

onit; Products Co., 815 Fremont Ave., South Pasadena, Calif.

Overseas Ltd., Equipment Div., Century House, Shasbury Ave., London, W.C. 2, England.

Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

ducts Co., Whitney St., Framingham, Mass.

Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.

Crystal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.

Research Laboratories, Inc., 79-89 Seventh Ave., New York 11, N. Y.

REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 343.

Radio Products, Inc., 215 South 11th, Omaha, Neb.

Coil Products Co., 2329 N. Pulaski Rd., Chicago 9, Ill.

Crystal Co., 1714 Locust St., Kansas City, Mo.

CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.

LS—Raw

Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.

Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Laboratories, 1520 Evergreen Rd., Williamsport, Pa.

ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.

Co., P. A., 233 Broadway, New York 7, N. Y.

Drill Carbon Co., 244 Madison Ave., New York 17, N. Y.

CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 634.

American Corp., 95 Summit Ave., Summit, N. J.

AMERICAN TRADE DEVELOPMENT CORP., 2 Park Jew York 16, N. Y. ADV. PG. 662.

Coil Product Co., 2329 Pulaski Rd., Chicago 9, Ill.

CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.

LS—Rochelle Salts, Transducer

ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

Bergamo 21, Milan, Italy.

Corp., Saw Mill River Rd., P. O. Box 200, Elmsted, N. Y.

Industries, Inc., Camden, Maine.

LS—Scintillation Counter

INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.

Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

LD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 563.

tion Radiac, Inc., 10 Crawford St., Newark, N. J.

Electronic & Vacuum Industries, St. Sauveur des Monts, P. Q., P. O. Box 105M, Canada.

Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.

Research & Development Co., 6425 Etzel, St. Louis 14, Mo.

Chemicals, Inc., 47 Felton St., Waltham 54, Mass.

Special Radiations Instruments, Inc., 2235 S. LaBrea Ave., Los Angeles 16, Calif.

Scientific Instrument Co., Inc., 307 Culver Blvd., Play del Rey, Calif.

Counter Laboratories, Inc., 5122 W. Grove St., Los Angeles, Ill.

Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.

Inc., 130 High St., Boston 10, Mass.

Center Laboratory, N., 5491 Blackstone, Chicago 37, Ill.

LS—Silicon-Rectifying & Amplifying

LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 96, 97.

Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Kemtron Electron Products, Inc., 5 Prince Place, Newburyport, Mass.

MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.

Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.

Semimetals Co. of America, 2413 Federal St., Philadelphia 1, Pa.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 9, N. Y. ADV. PG. 699-706.

Transitron Electronic Corp., 403-407 Main St., Melrose 76, Mass.

CRYSTALS—Tourmaline-Frequency Control

CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 581.

Cryo, Inc., 1138 Mission St., South Pasadena, Calif.

KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 634.

Miller Labs., August E., 9226 Hudson Blvd., North Bergen, N. J.

Polytech Devices, Inc., 1180 E. Grand Ave., Elizabeth, N. J.

Premier Research Laboratories, Inc., 79-89 Seventh Ave., New York 11, N. Y.

REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 343.

VALPEY CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.

Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.

CRYSTALS—Unfinished

Aeronautical Electronics, Inc., Raleigh Durham Airport, P. O. Box 6043, Raleigh, N. C.

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass. ADV. PG. 581.

DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.

Eidson Electronic Co., 1902 N. Third St., Temple, Texas.

Intelectron, Inc., 1114 3rd St., S.E., Cedar Rapids, Iowa.

INTERNATIONAL CRYSTAL MFG. CO., 18 N. Lee St., Oklahoma City, Okla. ADV. PG. 147.

KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 634.

Lesi, Via Bergamo 21, Milan, Italy.

LEWIS CO., E. B., 11 Bragg St., East Hartford 8, Conn. ADV. PG. 590.

MIDLAND MFG. CO., Sunshine & Fiberglass, Kansas City, Mo. ADV. PG. 209.

National Radiac, Inc., 10 Crawford St., Newark, N. J.

Nebel Lab., R. E., 1104 Lincoln Pl., Brooklyn 13, N. Y.

Northern Electronic & Vacuum Industries, St. Sauveur des Monts, P. Q., P. O. Box 105, Canada.

Piezo Products Co., Whitney St., Framingham, Mass.

Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.

Premier Research Laboratories, Inc., 79-89 Seventh Ave., New York 11, N. Y.

REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 343.

Scientific Radio Products, Inc., 215 South 11th, Omaha, Neb.

Sherold Crystals, Inc., 1401 Fairfax Trafficway, Kansas City, Kans.

Standard Crystal Co., 1714 Locust St., Kansas City, Mo.

STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.

VALPEY CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.

Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.

CYCLOTRONS

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

DECADE BOXES—Capacitance

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.

AIRCRAFT-MARINE PRODUCTS, INC., Chemicals & Dielectrics Div., 155 Park Ave., Elizabethtown, Pa. ADV. PG. 526.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Cornell-Dubilier Electron Corp., South Plainfield, N. J.

Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.

HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.

Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

Muirhead & Co., Ltd., Beckenham, Kent, England.

Precise Development Corp., 2 Neil Court, Oceanside, N. Y.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.

SOUTHERN ELECTRONICS CO., 239 W. Orange Grove Ave., Burbank, Calif. ADV. PG. 528.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

DECADE BOXES—Inductance

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.

Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.

Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.

Muirhead & Co., Ltd., Beckenham, Kent, England.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Torocoil Co., 1374 Mobile Court, St. Louis, Mo.

DECADE BOXES—Resistance

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.

Allegany Instrument Co., Inc., Cumberland, Md.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.

BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.

CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.

CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.

Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.

ELECTRO-MEC LABORATORY, INC., 210 43rd Ave., Long Island City 1, N. Y. ADV. PG. 616.

Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.

Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.

Gates Radio Co., Quincy, Ill.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.

Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.

Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

Marma Electronic Co., 703 Willow St., Chicago 14, Ill.

Muirhead & Co., Ltd., Beckenham, Kent, England.

OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

Precise Development Corp., 2 Neil Court, Oceanside, N. Y.

Precision Resistor Co., 109 U. S. Highway #22, Hillside 5, N. J.

Pye Ltd., Cambridge, England.

Rochester Electronics Co., Inc., Box 227, Penfield, N. Y.

Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

DECALCOMANIAS

Meyercord Co., 5323 W. Lake St., Chicago 441, Ill.

DEFLECTION YOKES

See YOKES—Deflection

DEHYDRATORS—Automatic

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.

Communication Products Co., Inc., Marlboro, N. J.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.

DELAY LINES

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pas-saic, N. J. ADV. PG. 645.

Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 American Fused Quartz Co., Inc., 18-20 Salem St., Dover, N. J.
 Andersen Laboratories, Inc., 39 Talcott Road, West Hartford 10, Conn.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BREW & CO., INC., RICHARD D., Airport Rd., Concord, N. H. ADV. PG. 278.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
BURNELL & CO., 45 Warburton Ave., Yonkers, 2, N. Y. ADV. PG. 197.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
 Carad Corp., 2850 Bay Rd., Redwood City, Calif.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 614.
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
 Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
 Communication Products Co., Inc., Marlboro, N. J.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
ESC CO., 534 Bergen Blvd., Palisades Park, N. J. ADV. PG. 586.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
ELECTRONIC COMPUTER DIV., COMPONENT DEPT., UNDERWOOD CORP., 35-10 36th Ave., Long Island City 6, N. Y. ADV. PG. 192.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367.
GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
 May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 334.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 543.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 6, Calif.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

DELAY LINES—Continuously Variable

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pas-saic, N. J. ADV. PG. 645.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Andersen Laboratories, Inc., 39 Talcott Rd., West Hartford 10, Conn.
BREW & CO., INC., RICHARD D., Airport Rd., Concord, N. H. ADV. PG. 278.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

DELAY LINES—Decade

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pas-saic, N. J. ADV. PG. 645.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
ESC CO., 534 Bergen Blvd., Palisades Park, N. J. ADV. PG. 586.
ELECTRONIC COMPUTER DIV., COMPONENT DEPT., UNDERWOOD CORP., 35-10 36th Ave., Long Island City 6, N. Y. ADV. PG. 192.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

DELAY LINES—Solid

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 American Fused Quartz Co., Inc., 18-20 Salem St., Dover, N. J.
 Andersen Laboratories, Inc., 39 Talcott Rd., West Hartford 10, Conn.
ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 571.
BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 375.
BREW & CO., INC., RICHARD D., Airport Rd., Concord, N. H. ADV. PG. 278.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583.

FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Telegraph Construction & Maintenance Co., Ltd., Telco Works, Greenwich, London S.E. 10, England.
VALPEY CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

DELAY LINES—Step Variable

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pas-saic, N. J. ADV. PG. 645.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BREW & CO., INC., RICHARD D., Airport Rd., Concord, N. H. ADV. PG. 278.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
 C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 614.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
ESC CO., 534 Bergen Blvd., Palisades Park, N. J. ADV. PG. 586.
ELECTRONIC COMPUTER DIV., COMPONENT DEPT., UNDERWOOD CORP., 35-10 36th Ave., Long Island City 6, N. Y. ADV. PG. 192.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.

DELAY LINES—Ultrasonic

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Andersen Laboratories, Inc., 39 Talcott Rd., West Hartford 10, Conn.
ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 571.
BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 375.
CLARK CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 483.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
VALPEY CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.

DELAY LINES—Variable

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pas-saic, N. J. ADV. PG. 645.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Andersen Laboratories, Inc., 39 Talcott Rd., West Hartford 10, Conn.
BREW & CO., INC., RICHARD D., Airport Rd., Concord, N. H. ADV. PG. 278.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
 C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 614.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.

AVE CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 SC 7, 534 Bergen Blvd., Palisades Park, N. J. ADV. PG. 586.
 Engineering Research Associates, Div. of Remington Rand, 1902 W. Minnehaha Ave., St. Paul 4, Minn.
 LEVEL COIL PRODUCTS CORP., 43 Roselle St., Mola, N. Y. ADV. PG. 653.
 LEN CORP., Metuchen, N. J. ADV. PG. 640.
 UDIAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
 ay Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.
 ssia Mfg. Co., Box 151A, Ossian, Ind.
 tant Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Summ Electronics, Inc., 7 Industrial Place, Summit, N. J.

STERILIZERS & STILLERS—Water

STERILIZER & STILLER CO., INC., 2 Lanes-ville Terrace, Boston 31, Mass. ADV. PG. 529.
 Industrial Equipment Co., 60 Kentucky Ave., Paxon, N. J.
 ckle Corp., 2107 N. 17th St., Philadelphia, Pa.
 rative Water Conditioner Co., 216 W. 14th St., New York 11, N. Y.
 Industrial Filter & Pump Mfg. Co., 5916 Ogden Ave., Chicago, Ill.
 enfi Mfg. Co., 19 High School Ave., Meriden, Conn.
 ermit Co., The, 330 W. 42nd St., New York 36, N. Y.
 rch Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.

AMPLIFIERS—Electronic

A. R. Products, Inc., 7627 Lake St., River Forest, Ill.
 BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
 Days Instrument Co., Archbald, Pa.
 OPEAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif.
 Jovi Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Pals, Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.

ASSOCIATES, INC., Nashua, N. H. ADV. PG. 621

Electronics Corp., 287 Emmet St., Newark 5, N. J.
 ROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

ANALYZERS—Electronic

& Lomb Optical Co., 614 St. Paul St., Rochester 7, N. Y.
 Co., The, Waterbury 20, Conn.
 Laboratories, Inc., 155 Perry St., New York 14, N. Y.
 it Corp., 95 Madison Ave., New York 16, N. Y.
 Scientific Co., W. M., 1515 Sedgwick St., Chicago 42, Ill.
 WESTERN ELECTRICAL INSTRUMENT CORP., 614 Frehlysen Ave., Newark 5, N. J. ADV. PG. 530.
 Corp., 111 Eighth Ave., New York 11, N. Y.

ASSOCIATES

ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Aviation Corp., Pacific Division, 11600 Sherman Blvd., North Hollywood, Calif.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 95 Old St., New York 38, N. Y.
 College Point, N. Y.
 National Electronics Corp., 137 Hudson St., New York 13, N. Y.
 Engineering Co., 2995 Middlefield Rd., P. O. Box 20, Palo Alto, Calif.
 Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 RAYMON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.

DETECTORS—Crystal

AN, INC., Dept. H, 1117 W. Elizabeth Ave., New York, N. J. ADV. PG. 428.
 AHEC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
 BERTHRE LABORATORIES, 580 Beaver Pond Rd., Lynn, Mass. ADV. PG. 242.
 BOGT MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
 BRU ELECTRONICS CO., 3405 Perkins Ave., Cleveland 13, Ohio. ADV. PG. 406, 407.
 BUDSTANLEY CO., INC., 43-01 22nd St., Long Island City, N. Y. ADV. PG. 151.
 DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Dorrand Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
 Kernin Electron Products, Inc., 5 Prince Place, Newbury Port, Mass.
 MICLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
 MICROWAVE ASSOCIATES INC., 22 Cunningham St., Boston 15, Mass. ADV. PG. 613.

NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
 RADIO RECEIVER CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 88, 89.
 Sierra Electronic Corp., San Carlos, Calif.
 SPECIALTY AUTOMATIC MACHINE CORP., 88 Gerrish Ave., Chelsea, Mass. ADV. PG. 578.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Transiron Electronic Corp., 403-407 Main St., Melrose 76, Mass.
 UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

DETECTORS—Crystal Germanium

See CRYSTALS—Germanium

DETECTORS—Crystal Silicon

See CRYSTALS—Silicon

DETECTORS—Explosive Gas

Bristol Co., The, Waterbury 20, Conn.
 BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 95.
 Johnson-Williams, Ltd., 2526 Third St., Palo Alto, Calif.
 RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.

DETECTORS—Fire, Electronic

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
 De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Fenwal, Inc., 60 Pleasant St., Ashland, Mass.
 Fireye Corp., 718 Beacon St., Boston 15, Mass.
 GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 458.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

DETECTORS—Flaw & Defect, Electronic

ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 571.
 BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Dice Co., J. W., Englewood, N. J.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Magnetic Analysis Corp., 42-44 12th St., Long Island City 1, N. Y.
 Menlo Research Laboratory, Menlo Park, Calif.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Radar Engineers, 4528 Fifth Ave., N.E., Seattle 5, Wash.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 Special Products Co., 9118 Brookville Road, Silver Spring, Md.
 Sperry Products, Inc., Danbury, Conn.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.

DETECTORS—Flaw, Ultrasonic

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.
 Dice Co., J. W., Englewood, N. J.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.

DETECTORS—Galena

Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

DETECTORS—Impedance

C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.

DETECTORS—Leak

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Consolidated Vacuum Corp., Rochester 3, N. Y.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
 FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
 Fisher Research Labs., Inc., 1961 University Ave., Palo Alto, Calif.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Johnson-Williams, Ltd., 2526 Third St., Palo Alto, Calif.
 Menlo Research Laboratory, Menlo Park, Calif.
 Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.

DETECTORS—Null

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pas-saic, N. J. ADV. PG. 645.
 Airmec Ltd., High Wycombe, Buckinghamshire, England.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Benson Lehner Corp., 2340 Sawtelle Blvd., Los Angeles 64, Calif.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 COMPUTER CO. OF AMERICA, DIV. OF BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Daystrom Instrument Co., Archbald, Pa.
 Deltron, Inc., P. O. Box 192, Glenside, Pa.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.
 INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 563.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

DETECTORS—Null—r-f

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pas-saic, N. J. ADV. PG. 645.
 Airmec Ltd., High Wycombe, Buckinghamshire, England.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Deltron, Inc., P. O. Box 192, Glenside, Pa.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

DETECTORS—Null—VTVM

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pas-saic, N. J. ADV. PG. 645.
Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
COMPUTER CO. OF AMERICA, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Deltrom, Inc., P. O. Box 192, Glenside, Pa.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91, 177-180.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

DETECTORS—Radiation

See COUNTERS—Geiger

DETECTORS—Smoke, Electronic

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Bristol Co., The Waterbury 20, Conn.
Combustion Control Corp., 718 Beacon St., Boston 15, Mass.
Deltz Co., S. J., 38 River Edge Rd., River Edge, N. J.
De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J. Electrical Service Co., 1271 Mission St., San Francisco, Calif.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
Photobell Company, 116 Nassau St., New York 38, N. Y.
Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
WÖRNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

DETECTORS—Standing Wave

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
AIRTRON, INC., Dept H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 519.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
FEDERAL TELEPHONE & RADIO CO., A Div. of IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, Conn.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
Roflin Co., 2010 Lincoln Ave., Pasadena 3, Calif.
Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.

UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
Weston Laboratories, Inc., Harvard, Mass.

DETECTORS—Vibration

C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
CALIDYNE CO., P. O. Box 72, Winchester, Mass. ADV. PG. 509.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 554.
Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 90, 91, 177-180.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 386.
Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.

DETECTORS—Water Leak

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
Bristol Co., The Waterbury 20, Conn.
Detectron Corp., 5420 Vineland Ave., North Hollywood, Calif.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
Dice Co., J. W., Englewood, N. J.
Electrical Service Co., 1271 Mission St., San Francisco, Calif.
Fisher Research Labs, Inc., 1961 University Ave., Palo Alto, Calif.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
Menlo Research Laboratory, Menlo Park, Calif.

DIAL CRYSTALS

Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
Lancaster Lens Co., Lancaster, Ohio.
PARISIAN NOVELTY CO., 3510 South Western Ave., Chicago 9, Ill. ADV. PG. 590.
PRINTLOID, INC., 93 Mercer St., New York 1, N. Y. ADV. PG. 198.

DIAL LIGHTS

See LIGHTS—Dial, Panel and Pilot

DIALS—Instrument

Ackerman Engravers, 458 Broadway, New York, N. Y.
Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
Anderson & Sons, Inc., Westfield, Mass.
Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 647.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 251.
BRILHART PLASTICS CORP., Old Country Rd., Mineola, N. Y. ADV. PG. 653.
Bristol Co., The Waterbury 20, Conn.
California Bent Glass Corp., Torrance, Calif.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.
Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
Duramark, Inc., 2 Secatoag Ave., Port Washington, N. Y.
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
Filmwood Corp., 33 N. 23rd St., Camden 5, N. J.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
Glass & Bro., Harry, 10 Van Cortlandt Ave., E., Bronx 68, N. Y.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
Hopp Press, Inc., 460 W. 34th St., New York, N. Y.

Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
Master Etching Corp., 50 Honeck St., Englewood, N. J.
Mica Insulator Co., Schenectady 1, N. Y.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Muirhead & Co., Ltd., Beckenham, Kent, England.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
Pfeffer Products, 3901 W. 54th St., Los Angeles, Calif.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
Precision Marking Co., 87 Dorsa Ave., Livingston, N. J.
Premier Metal Etching Co., 21-03 Fourth Ave., Long Island City, N. Y.
Quality Name Plate Inc., Fisher Hill Rd., East Glastonbury, Conn.
Stromberg-Carlson Co., Rochester 3, N. Y.
Tablet & Ticket Co., 1021 W. Adams St., Chicago 7, Ill.
Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.
Transradio, Ltd., 138A Cromwell Rd., London, S. W. 7, England.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 476.
Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

DIALS—Precision

Ackerman Engravers, 458 Broadway, New York, N. Y.
Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 251.
California Bent Glass Corp., Torrance, Calif.
Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
Filmwood Corp., 33 N. 23rd St., Camden 5, N. J.
Ford Engineering Co., 129 East A St., Upland, Calif.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Glass & Bro., Harry, 10 Van Cortlandt Ave., E., Bronx 68, N. Y.
HELIPOT CORP., 916 Meridan Ave., South Pasadena, Calif. ADV. PG. 335.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
Hermes Plastics, Inc., 13-19 University Place, New York 3, N. Y.
Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
INDUSTRIAL ENGRAVERS, INC., 4103 Tenth Ave., Brooklyn 19, N. Y. ADV. PG. 635.
Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
Master Etching Corp., 50 Honeck St., Englewood, N. J.
Mica Insulator Co., Schenectady 1, N. Y.
Muirhead & Co., Ltd., Beckenham, Kent, England.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
Pfeffer Products, 3901 W. 54th St., Los Angeles, Calif.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
Precision Marking Co., 87 Dorsa Ave., Livingston, N. J.
Quality Name Plate Inc., Fisher Hill Rd., East Glastonbury, Conn.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 476.
Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

DIAPHRAGMS

Braun Tool & Instrument Co., Inc., H., 140 Fifth Ave., Hawthorne, N. J.
Bristol Co., The Waterbury 20, Conn.
Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
Garlock Packing Co., Palmyra, N. Y.
Hawley Products Co., St. Charles, Ill.

Manville, 22 E. 40th St., New York 16, N. Y.
OR MFG. CO., 1635 W. 12th St., Erie, Pa. ADV.
 P. 512.
 Insulator Co., Schenectady 1, N. Y.
 Craft Products, Inc., 703 McCarter Highway,
 Newark 5, N. J.
 Los-Manhattan, Inc., 61 Willet St., Passaic, N. J.
 Co., M. J., Delaware County, Roxbury, N. Y.
 Products Inc., 86-88 Main St., East Orange,
 N. J.
 nics, Inc., 5 Forrest Ave., Bedford, Mass.

DIATHERMY & DIATHERMY ACCESSORIES

American Diathermy Products, Inc., 11858 Mississippi
 Ave., Los Angeles 25, Calif.
 Radio Co., Inc., 145 Hudson St., New York 13,
 N. Y.
IR CORP., 4371 Valley Blvd., Los Angeles 32,
 Calif. ADV. PG. 545.
 Corp., Milton, Wis.
 ne Electronics, Inc., 238 William St., New York
 38, N. Y.

of New York, Inc., 44-31 Douglaston Pkwy.,
 Dilston, N. Y.

& Co., R. A., 517 Commercial St., Glendale 3,
 Calif.

Chemical & Mfg. Co., 233 N.J.R.R. Ave.,
 Newark, N. J.

Flarsheim Co., 111 E. Amity Rd., Cincinnati 37,
 Ohio

Electronics Co., 9810 Anza Ave., Inglewood,
 Calif.

Short Wave Diathermy Co., 2758 Whittier Blvd.,
 Los Angeles 23, Calif.

High Frequency Labs., 13 E. Fort Lee Rd.,
 Blairstown, N. J.

RAYEON MFG. CO., MICROWAVE & POWER TUBE
OPERATIONS, Waltham 54, Mass. ADV. PG. 27.

Electronics, Inc., 7 Industrial Place, Summit,
 N. J.

Inc., 27-10 Astoria Blvd., Long Island City
 21, N. Y.

Dept. of General Electric Co., 4855 Electric Ave.,
 Milwaukee 1, Wis.

ELECTRIC HEATING

HEATING—Dielectric

DIELECTRICS—Gas

GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE
CO., 40 Rector St., New York 6, N. Y. ADV.
 P. 168.

DIELECTRICS—Liquid

WIRE CO., New Haven 14, Conn. ADV. PG. 566.

Corp., 740 Belleville Ave., New Bedford, Mass.

Chemical Co., Midland, Mich.

orning Corp., Midland, Mich.

Standard Oil Co., 15 W. 51st St., New York 19,
 N. Y.

INSTRUMENT DIV. OF ROBERTSHAW-FULTON
CONTROLS CO., 2920 N. Fourth St., Philadelphia 33,
 Pa. ADV. PG. 610.

GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE
CO., 40 Rector St., New York 6, N. Y. ADV. PG.

DIELECTRICS—Solid

WIRE CO., New Haven 14, Conn. ADV. PG. 566.

Corp., 740 Belleville Ave., New Bedford, Mass.

AFT-MARINE PRODUCTS, INC., CHEMICALS &
DIELECTRICS DIV., 155 Park Ave., Elizabethtown,
 N. J. ADV. PG. 526.

Glass Works, Corning, N. Y.

Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.

Chemical Co., Midland, Mich.

orning Corp., Midland, Mich.

INSTRUMENT DIV. OF ROBERTSHAW-FULTON
CONTROLS CO., 2920 N. Fourth St., Philadelphia 33,
 Pa. ADV. PG. 610.

Insulator & Seal Corp., 10121 Franklin Ave.,
 Franklin Park, Ill.

Laboratories, Inc., 322 Bush St., Olean, N. Y.

ELECTRONICS CORP., 2432 Grand Concourse, New
 York 58, N. Y. ADV. PG. 655.

Associate Products, Inc., P. O. Box 1681, Wilming-
 ton, Del.

Industrial Corp., Brownville Avenue Plant,
 Weymouth, Mass.

Craft Products, Inc., 703 McCarter Highway, Newark
 5, N. J.

Insulator Co., Schenectady 1, N. Y.

EX CORPORATION OF AMERICA, 125 Clifton
 B., Clifton, N. J. ADV. PG. 136, 137.

CORP., 211 Randolph Ave., Woodbridge, N. J.
 ADV. PG. 564.

GASKET CO., P. O. Box 93, Camden, N. J.
 ADV. PG. 604, 605.

CERAMICS CORP., Metuchen, N. J. ADV. PG.

DIELECTRIC

Tool & Specialties Co., 224 N. Loomis St., Chi-
 cago 7, Ill.

Co., The, 9-13 Morrell St., Elizabeth 4, N. J.

LOYD METAL PRODUCTS CORP., 2973 Cropsey
 Ave., Brooklyn 14, N. Y. ADV. PG. 561.

Bindery Co., 1332 W. Monroe St., Chicago 7,
 Ill.

Mfg. Co., Alden, N. Y.

LOYD DEPT. OF GENERAL ELECTRIC CO., 11139
 Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 22.

E B Metal Products Co., Inc., 12-14 Bridge Plaza S.,
 Long Island City 1, N. Y.

Eltran Corp., St. Anne, Ill.

ENGINEERING CO., 27 Wright St., Newark, N. J. ADV.
 PG. 596.

Erca Tool Die & Stamping Co., 19 Ash St., Brooklyn 22,
 N. Y.

Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chi-
 cago 51, Ill.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919
 Taylor Ave., Rockford, Ill. ADV. PG. 380.

Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke,
 Mich.

KOBZY TOOL CO., 1535 N. Dayton Ave., Chicago 22,
 Ill. ADV. PG. 288.

Laminated Sheet Products Corp., 449 Neponset St.,
 P. O. Box 390, Norwood, Mass.

Maryland Lava Co., Bel Air, Md.

Matthews & Co., James H., 3942 Forbes St., Pittsburgh,
 Pa.

Northern Metal Products Co., 9597 W. Grand Ave.,
 Franklin Park, Ill.

Paul & Beekman, Inc., 1801 Cortland St., Philadelphia
 40, Pa.

PIX MFG. CO., INC., 24 Bedford St., Newark, N. J.
 ADV. PG. 598.

PRECISE MEASUREMENTS CO., 942 Kings Highway,
 Brooklyn 23, N. Y. ADV. PG. 650.

REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y.
 ADV. PG. 300.

Repath Co., Paul R., 641 E. 61st St., Los Angeles 1,
 Calif.

Schmidt, Inc., Geo. T., 1804 Belle Plaine, Chicago 13,
 Ill.

Sheffield Corp., The, Dayton 1, Ohio.

Sinclair Mfg. Co., Charltley, Mass.

South River Metal Products Co., 377-379 Turnpike,
 South River, N. J.

Stone City Machine & Tool Co., Inc., P. O. Box 351,
 1206 Seventh St., Bedford, Ind.

Thomas & Betts Co., Inc., 36 Butler St., Elizabeth 1,
 N. J.

U M & F Manufacturing Corp., 10929 Vanowen St.,
 North Hollywood, Calif.

United Mineral & Chemical Corp., 16 Hudson St., New
 York 13, N. Y.

VOLKERT METAL STAMPINGS, INC., JOHN, 222-34
 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

WENCO MFG. CO., 1133 W. Hubbard St., Chicago 22,
 Ill. ADV. PG. 480.

Whistler & Sons, Inc., S. B., 752 Military Rd., Buffalo
 23, N. Y.

Winzeler Mfg. & Tool Co., 1716 W. Arcade Place, Chi-
 cago 12, Ill.

DIODES—Germanium

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicks-
 ville, N. Y. ADV. PG. 309.

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lin-
 coln, Mass. ADV. PG. 242.

BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass.
 ADV. PG. 96, 97.

CBS-Hytron, a Division of Columbia Broadcasting System,
 Inc., 100 Endicott St., Danvers, Mass.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T,
 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River
 Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

General Electric Co., Radio & Television Dept., Elec-
 tronics Park, Syracuse, N. Y.

Germanium Products Corp., 26 Cornelson Ave., Jersey
 City 4, N. J.

HUGHES AIRCRAFT CO., Culver City, Calif. ADV. PG.
 289.

INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave.,
 El Segundo, Calif. ADV. PG. 101.

INTERNATIONAL RESISTANCE CO., 401 N. Broad St.,
 Philadelphia 8, Pa. ADV. PG. 233-236.

Kemtron Electron Products, Inc., 5 Prince Place, New-
 bury Port, Mass.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J.
 ADV. PG. Inside Back & Back Covers.

RADIO RECEPTOR CO., 251 W. 19th St., New York 11,
 N. Y. ADV. PG. 88, 89.

Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St.,
 Newton 58, Mass.

RED BANK DIVISION, BENDIX AVIATION CORP.,
 Eatontown, N. J. ADV. PG. 110.

Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
 New York 19, N. Y. ADV. PG. 699-706.

Transistor Products, Inc., Snow & Union Sts., Brighton
 35, Mass.

Transitron Electronic Corp., 403-407 Main St., Melrose
 76, Mass.

TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 5,
 N. J. ADV. PG. 385.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pitts-
 burgh 30, Pa. ADV. PG. 113-124.

Westinghouse Electric Corp., Electronic Tube Div. EB-
 500, P. O. Box 284, Elmira, N. Y.

Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.

DIODES—Silicon

CBS-Hytron, A Div. of Columbia Broadcasting System,
 Inc., 100 Endicott St., Danvers, Mass.

HUGHES AIRCRAFT CO., Culver City, Calif. ADV. PG.
 289.

Kemtron Electron Products, Inc., 5 Prince Place, New-
 bury Port, Mass.

Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St.,
 Newton 58, Mass.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway,
 New York 19, N. Y. ADV. PG. 699-706.

Transitron Electronic Corp., 403-407 Main St., Melrose
 76, Mass.

DIRECTION FINDERS

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.

Applied Electronics Co., Inc., 1246 Folsom St., San
 Francisco 3, Calif.

Bludworth Marine Div., National-Simplex-Bludworth, Inc.,
 92 Gold St., New York 38, N. Y.

Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.

Edmund Scientific Co., 502 E. Gloucester Pike, Barring-
 ton, N. J.

Eldico of New York, Inc., 44-31 Douglaston Pkwy.,
 Douglastown, N. Y.

Erco Radio Labs., Inc., E. Stewart Ave., Garden City,
 N. Y.

FAIRCHILD CAMERA & INSTRUMENT CORP., Robbins
 Lane, Syosset, N. Y. ADV. PG. 102, 103.

Federal Telecommunication Labs., A Div. of IT&T, 500
 Washington Ave., Nutley 10, N. J.

Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago
 39, Ill.

Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y.

Kaar Engineering Co., 2995 Middlefield Rd., P. O. Box
 1320, Palo Alto, Calif.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls,
 N. J. ADV. PG. 372.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
 New York 4, N. Y.

Mullard Overseas Ltd., Equipment Div., Century House,
 Shaftesbury Ave., London, W.C. 2, England.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Wal-
 tham 54, Mass. ADV. PG. 26.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike,
 New Hyde Park, N. Y. ADV. PG. 69-72.

Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W.C. 2, England.

DISCS—Blank Recording

Allied Recording Products Co., 32-32 Greenpoint Ave.,
 Long Island City, N. Y.

Audio Devices, Inc., 444 Madison Ave., New York 22,
 N. Y.

Duotone Co., Inc., Keyport, N. J.

Home Recording Products Corp., Freeport, N. Y.

PRESTO RECORDING CORP., Paramus, N. J. ADV. PG.
 139.

Recoton Corp., 147 W. 22nd St., New York 11, N. Y.

Reeves Soundcraft Corp., 10 E. 52nd St., New York 22,
 N. Y.

Sonic Recording Products, Inc., 58 Mill Road, Freeport,
 N. Y.

Soundscriber Corp., 146 Munson St., New Haven 4,
 Conn.

Zephyr Products Co., 129 E. 124th St., New York 35,
 N. Y.

DIVIDERS—Voltage

Birklan Corp., 200 E. Third St., Mt. Vernon, N. Y.

BORG EQUIPMENT DIVISION, THE GEORGE W. BORG
CORP., Janesville, Wis. ADV. PG. 251.

CALIDYNE CO., P. O. Box 72, Winchester, Mass. ADV.
 PG. 509.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E.
 Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342,
 574, 607, 659.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
 Livingston, N. J. ADV. PG. 572.

DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.
 PG. 243.

DUBROW DEVELOPMENT CO., 235 Penn St., Burlington,
 N. J. ADV. PG. 536.

Electro-Measurements, Inc., 4312 S.E. Stark St., Port-
 land 15, Ore.

GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 177-180.

GUIDELINE ASSOCIATES, 57 State St., Newark, N. J.
 ADV. PG. 505.

Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chi-
 cago 39, Ill.

JENNINGS RADIO MFG. CO., 970 McLaughlin Ave.,
 P. O. Box 1278, San Jose 8, Calif. ADV. PG. 268,
 269.

MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV.
 PG. 670.

OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV.
 PG. 44, 45.

PRECISE MEASUREMENTS CO., 942 Kings Highway,
 Brooklyn 23, N. Y. ADV. PG. 650.

Precision Resistor Co., 109 U. S. Highway #22, Hill-
 side 5, N. J.

PRESS WIRELESS LABORATORIES, INC., 25 Prospect
 Place, West Newton 65, Mass. ADV. PG. 92.

Square Root Mfg. Corp., 391 Saw Mill River Rd.,
 Yonkers, N. Y.

DOSIMETERS

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave.,
 Cambridge 39, Mass. ADV. PG. 481.

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32,
 N. Y.

Bendix Aviation Corp., Cincinnati Div., 203 W. Third
 St., Cincinnati 2, Ohio.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Corning Glass Works, Corning, N. Y.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Menlo Research Laboratory, Menlo Park, Calif.
 Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 NUCLEONIC COMPANY OF AMERICA, 196 DeGraw St., Brooklyn 31, N. Y. ADV. PG. 646.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
 R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa del Rey, Calif.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.
 VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

DRAFTING EQUIPMENT

Arkwright Finishing Co., Providence, R. I.
 Dietzgen Co., Eugene, 2425 Sheffield Ave., Chicago, Ill.
 Eagle Pencil Co., 703 E. 13th St., New York, N. Y.
 Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N. Y.
 EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
 Griffin Co., John, 2157 James Ave., St. Paul 5, Minn.
 Hamilton Mfg. Co., Two Rivers, Wis.
 Holliston Mills Inc., Norwood, Mass.
 Keuffel & Esser Co., Hoboken, N. J.
 Koh-I-Noor Pencil Co., Bloomsbury, N. J.
 Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, Ill.
 Peerless Photo Products, Shoreham, N. Y.
 Post Co., Frederick, 3650 N. Avondale Ave., P. O. Box 803, Chicago 90, Ill.
 PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
 Staedtler Inc., J. S., 25 Dicarolis Court, Hackensack, N. J.
 Universal Drafting Machine Corp., 7960 Lorain Ave., Cleveland 2, Ohio.

DRILL PRESSES—Precision

Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
 High Speed Hammer Co., Rochester, N. Y.
 International Electronics Corp., 137 Hudson St., New York 13, N. Y.
 Phillips & Hiss Co., Inc., 1155 N. McCadden Place, Hollywood 38, Calif.

DRIVERS—Recording

CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
 EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 Lesa, Via Bergamo 21, Milan, Italy.
 Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

DRIVES—Small Electric Drive Mechanisms

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Airborne Accessories Corp., 1414 Chestnut Ave., Hillside, N. J.
 American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif.
 BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524.
 BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 BOWMAR INSTRUMENT CORP., 2415 Pennsylvania Ave., Fort Wayne, Ind. ADV. PG. 657.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 CRAMER CO., INC., R. W. Box 13, Centerbrook, Conn. ADV. PG. 272.
 Custom Gear Co., South Bend, Ind.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill.
 Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.
 Electro-Mechanical Div. of General Riveters, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
 Electronic Manufacturing Engineers Co., 2410 Beacon St., Seattle 44, Wash.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

Gorrell & Gorrell, Haworth, N. J.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lesa, Via Bergamo 21, Milan, Italy.
 MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212
 Racon Electric Co., 1261 Broadway, New York 1, N. Y.
 Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.
 Servo-Tek Products Co., Inc., 1086 Goffle Rd., Hawthorne, N. J.

DRUMS—Memory, Magnetic Recording

Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y.
 Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
 AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. J. ADV. PG. 490.
 Bendix Computer Division, Bendix Aviation Corp., 5630 Arbor Vitae St., Los Angeles 45, Calif.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 Daystrom Instrument Co., Archbald, Pa.
 Digital Products, Inc., 7643 Fay Ave., La Jolla, Calif.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha St., St. Paul 4, Minn.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
 Insuline Corp., of America, 186 Granite St., Manchester, N. H.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 LIBRASCOPE, INC., 1607 Flower St., Glendale, Calif. ADV. PG. 531.
 Logistics Research Inc., 141 S. Pacific Ave., Redondo Beach, Calif.
 MACDONALD CO., INC., W. S., 33 University Rd., Cambridge 38, Mass. ADV. PG. 563.
 MAGNECORP, INC., 225 W. Ohio St., Chicago 10, Ill. ADV. PG. 220.

DRYERS, ELECTRONIC—Deydration & Drying

Air Control Installations, Ltd., Ruislip, Middlesex, England.
 Fostoria Pressed Steel Corp., Fostoria, Ohio.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
 Young Brothers Co., 1829 Columbus Rd., Cleveland, Ohio.

DUPLEXERS—Microwave

See MICROWAVE ACCESSORIES

DYNAMOMETERS

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Dillon & Co. Inc., W. C., 14620 Z Keswick St., Van Nuys, Calif.
 Electro-Mechanical Div. of General Riveters, Inc., 785 Hertel Ave., Buffalo 7, N. Y.
 Endeveco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gilmore Industries, 5713 Euclid Ave., Cleveland, Ohio.
 L. A. B. Corporation, Skaneateles, N. Y.
 Mission-Western Engineers, Inc., 132-134 W. Colorado St., Pasadena 1, Calif.
 Scherr Co., Inc., George 200 Lafayette St., New York 12, N. Y.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617
 Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

DYNAMOTORS

CARTER MOTOR CO., 2644 N. Maplewood Ave., Chicago 47, Ill. ADV. PG. 219.
 CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. ADV. PG. 612.
 EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. ADV. PG. 636.
 ELECTRIC SPECIALTY CO., 300 South St., Stamford, Conn. ADV. PG. 649.
 ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 292.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Mission-Western Engineers, Inc., 132-134 W. Colorado St., Pasadena 1, Calif.
 Motor-dyne, Inc., 2661 S. Myrtle Ave., Monrovia, Calif.
 Pioneer Gen-E-Motor Corp., Dept. EBG, 5841 W. Dickens, Chicago 39, Ill.
 RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
 Redmond Co., Inc., 201 Monroe St., Owosso, Mich.

Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 WINCHARGER CORP., E. 7th & Division Sts., Sioux City, Iowa. ADV. PG. 257.

ELBOWS

See MICROWAVE ACCESSORIES
 BENDS—Microwave

ELECTROCARDIOGRAPHS

Burdick Corp., Milton, Wis.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Electro-Physical Laboratories, Inc., 65 Harvard Ave., Stamford, Conn.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.
 VOLKERS & SCHAFFER MFG. CORP., P. O. Box 996, Schenectady, N. Y. ADV. PG. 484.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

ELECTRODES—High Frequency

Induction Heating Corp., 181 Wythe Ave., Brooklyn 11 N. Y.
 Lektra Laboratories, 154 11th Ave., New York 11 N. Y.
 Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
 MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Short Wave Plastic Forming Co., 2921 W. Alameda, Burbank, Calif.
 Wappler, Inc., 27-10 Astoria Blvd., Long Island City 2, N. Y.
 Woodwelding, Inc., 3000 W. Olive, Burbank, Calif.

ELECTROENCEPHALOGRAPHS

EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
 VOLKERS & SCHAFFER MFG. CORP., P. O. Box 996, Schenectady, N. Y. ADV. PG. 484.

ELECTRO MAGNETS

See MAGNETS

ELECTROMETERS

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.

ELECTROMYOGRAPHS

Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.

ELECTROPLETHYSMOGRAPHS

Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

ELECTRO-SHOCK THERAPY APPARATUS

Burdick Corp., Milton, Wis.
 Electrodyne Co., Endicott St., Norwood, Mass.
 Equipment Laboratory, Rt. 2, Box 407, Morgan Hill, Calif.
 Lektra Laboratories, 154 11th Ave., New York 11, N. Y.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.

ELECTRO-SURGICAL APPARATUS

BIRTEK CORP., 4371 Valley Blvd., Los Angeles 32, Calif. ADV. PG. 545.
Burdell Laboratories, Inc., 5066 Santa Monica Blvd., Los Angeles 29, Calif.
Electro Laboratories, Rt. 2, Box 407, Morgan Hill, Calif.
Electro Laboratories, 154 11th Ave., New York 11, N. Y.
High Frequency Labs., 13 E. Fort Lee Rd., Boonville, N. J.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Research & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
Wappeler Inc., 27-10 Astoria Blvd., Long Island City 2, N. Y.

HEATING

Electric Heating Co., 1217 Washington St., Boston, Mass.
Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
Mica Insulation Co., Manasquan, N. J.
Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
Resistors, Inc., 23 W. Washington Ave., Pearl River, N. Y.
CO., INC., 115 E. 23rd St., New York 10, N. Y. ADV. PG. 539.
Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Oven Co., Minneapolis, Minn.
Harrison Co., 201 Middlesex St., Harrison, N. J.
Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S. O. Box 19, Long Island City, N. Y.
Son Electric Corp., C. C., 450 Avenue of the Americas, New York 11, N. Y.
EDEL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Product Products, Inc., 703 McCarter Highway, Newark 5, N. J.
Infra-Red Co., E. 73rd St. & Grand Ave., Cleveland 4, Ohio.
Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
WE CO., 43 Darcy St., West Hartford 6, Conn. ADV. PG. 228.
HALROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Kitz, 1823 N. Monitor St., Chicago 39, Ill.
Corp., 7300 Huron River Drive, Dexter, Mich.
ELECTRIC CO., 88 Holten St., Danvers, Mass. ADV. PG. 479.
Electric Mfg. Co., 1376 Ferguson Ave., St. Louis 14, Mo.
Co., Edwin L., 7606 Thomas Blvd., Pittsburgh 8, Pa.

HEATING—Crystal Oven

CO., INC., 115 E. 23rd St., New York 10, N. Y. ADV. PG. 539.
Infra-Red Co., E. 73rd St. & Grand Ave., Cleveland 4, Ohio.
HALROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.

EMBEDDED ASSEMBLIES

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
Transformer Corp., West & Willow Aves., Long Branch, N. J.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
Hegeman Electric Co., 103 Hawthorne St., Harvard 6, Conn.
Avor Corp., 450 Broome St., New York 13, N. Y.
Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 54, Calif.
Laboratories, 550 Fifth Ave., New York 19, N. Y.
Coils, Inc., Wabash, Ind.
DEVELOPMENT CO., 235 Penn St., Burlington, J. ADV. PG. 536.
ELECTRONIC SERVICE CORP., 221 W. Lake St., Oak Park, Ill. ADV. PG. 590.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550.
FOREST ELECTRIC CO., 7216 Circle Ave., Forest Park, Ill. ADV. PG. 644.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
Industrial Development & Mfg. Corp., P. O. Box 48, Needham, Mass.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
3171 S. Bundy Drive, Los Angeles 34, Calif.
AGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
ORTHOFILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.

PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
VECTRON, INC., 404 Main St., Waltham, 54, Mass. ADV. PG. 474, 475.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

EMBEDDED COMPONENTS

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 54, Calif.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
ELECTRONIC SERVICE CORP., 221 W. Lake St., Oak Park, Ill. ADV. PG. 590.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550.
FOREST ELECTRIC CO., 7216 Circle Ave., Forest Park, Ill. ADV. PG. 644.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
Industrial Development & Mfg. Corp., P. O. Box 48, Needham, Mass.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
ORTHOFILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
Ossian Mfg. Co., Box 151A, Ossian, Ind.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 88, 89.
Randall, Inc., Douglas, 102 High St., Westerly, R. I.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
VECTRON, INC., 404 Main St., Waltham, 54, Mass. ADV. PG. 474, 475.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

ENCAPSULATION SERVICES

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
Avor Corp., 450 Broome St., New York 13, N. Y.
Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif.
Codetypex Laboratories, 550 Fifth Ave., New York 19, N. Y.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill.
ELECTRONIC SERVICE CORP., 221 W. Lake St., Oak Park, Ill. ADV. PG. 590.
Ellanar Chemical Co., 2308 Oakton St., Evanston, Ill.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550.
Forman Co., B. G., 238 William St., New York 38, N. Y.
H-LAB., 53 Industrial Rd., Berkeley Heights, N. J. ADV. PG. 661.
Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
Industrial Development & Mfg. Corp., P. O. Box 48, Needham, Mass.
Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
LaPointe Electronics Inc., Rockville, Conn.
May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.
Nuclear Research & Development Co., 6425 Etzel, St. Louis 14, Mo.
ORTHOFILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
Ossian Mfg. Co., Box 151A, Ossian, Ind.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
Randall, Inc., Douglas, 102 High St., Westerly, R. I.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
Technical Operations, Inc., 6 Schouler Court, Arlington, Mass.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
Topper Mfg. Co., P. O. Box 198, Great Neck, N. Y.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138.

ENGRAVING & PROFILING—Services

Hermes Engraving Co., 13 University Place, New York 3, N. Y.
INDUSTRIAL ENGRAVERS, INC., 4103 Tenth Ave., Brooklyn 19, N. Y. ADV. PG. 635.

ESCUTCHEONS

AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
Anderson & Sons, Inc., Westfield, Mass.
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
Lancaster Lens Co., Lancaster, Ohio.
NORTH SHORE NAMEPLATE CO., Bank of Manhattan Bldg., Bayside 61, N. Y. ADV. PG. 526.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
Precision Plastic Products, Inc., 628-30 W. Lake St., Chicago 6, Ill.
Quality Name Plate Inc., Fisher Hill Rd., East Glensonton, Conn.
ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 260.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

EYELETS

American Brass Co., 414 Meadow St., Waterbury 20, Conn.
American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
Atlas Tack Corp., Pleasant St., Fairhaven, Mass.
Barrett Bindery Co., 1332 W. Monroe St., Chicago 7, Ill.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
Corning Glass Works, Corning, N. Y.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.
Metro, Inc., R. I., 230 Toronto Ave., Providence, R. I.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 328.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

FABRIC

See INSULATION MATERIALS

FACSIMILE

See RECORDERS—Facsimile

FACSIMILE RECORDING PAPERS

See RECORDERS—Facsimile

FASTENERS & FASTENING DEVICES

Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago, Ill.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALLMETAL SCREW PRODUCTS CO., INC., 821 Stewart Ave., E. Garden City, N. Y. ADV. PG. 457.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 American Screw Co., Willimantic, Conn.
 Anti-Corrosive Products Co., Castleton-on-Hudson, N. Y.
 Banc-Lok Div. of Boots-Aircraft Nut Corp., Newton Ave., Norwalk, Conn.
 Bristol Co., The, Waterbury 20, Conn.
 Camloc Fastener Corp., 22 Sprig Valley Rd., Paramus, N. J.
 Central Screw Co., 3501 Shields Ave., Chicago 9, Ill.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 Dzus Fastener Co., Inc., Box 185, Babylon, N. Y.
 Eaton Mfg. Co., Reliance Div., Massillon, Ohio.
 Elastic Stop Nut Corp., 2330 Vauxhall Rd., Union, N. J.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
 Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.
 Gries Reproducer Corp., 151 Beechwood St., New Rochelle, N. Y.
 Groov-Pin Corp., 1125 Hendricks Causeway, Ridgefield, N. J.
 Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
 Heli-Coil Corp., Shelter Rock Rd., Danbury, Conn.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
 Lion Fastener, Inc., Honeoye Falls, N. Y.
 Milford Rivet & Machine Co., Milford, Conn.
 National Screw & Mfg. Co., The, Cleveland 4, Ohio.
 Nylok Corp., Box 341, Elmira, N. Y.
 Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.
 Parker-Kalon Division of General American Transportation Corp., 200 Varick St., New York 14, N. Y.
 Penn Engineering & Mfg. Corp., Box 311, Doylestown, Pa.
 Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
 Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
 Scovill Manufacturing Co., Waterbury 20, Conn.
 Set Screw Mfg. Co., 470 Main St., Bartlett, Ill.
 Shakeproof, Div. of Illinois Tool Works, 2501 N. Keeler Ave., Chicago 39, Ill.
SIMMONS FASTENER CORP., 1752 N. Broadway, Albany 1, N. Y. ADV. PG. 432.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Southco Division, South Chester Corp., 1417 Finance Bldg., Philadelphia 2, Pa.
 South River Metal Products Co., 377-379 Turnpike, South River, N. J.
 Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 631.
TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 82.
 Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.
TUBULAR RIVET & STUD CO., Linden St., Quincy, Mass. ADV. PG. 300.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 328.
 United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.
 Waldes Kohinoor Inc., 47-16 Austel Place, Long Island City 1, N. Y.
WENCO MFG. CO., 11333 W. Hubbard St., Chicago 22, Ill. ADV. PG. 480.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

FELT & FELT PARTS

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 Felters Co., 210 South St., Boston, Mass.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 Western Felt Works, 4029 Ogden Ave., Chicago, Ill.

FILMS—Plastic for Wound Insulation

Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Landon Chemical Co., 325 W. 32nd St., Chicago 16, Ill.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
RESIN INDUSTRIES, INC., Santa Barbara, Calif. ADV. PG. 154.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.

FILTERS—Antenna

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
 Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
 American Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y.
 Atlas Coil, Inc., Cottage St., Derby, Conn.
 Balco Research Laboratories, 49-53 Edison Place, Newark 2, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 519.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 54, Calif.
 C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CENTRONICS CORP., 21-04 122 St., College Point, N. Y. ADV. PG. 598.
 Channel Master Co., Ellenville, N. Y.
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Daystrom Instrument Co., Archbald, Pa.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
 Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
ELECTRALAB, INC., 76 Atherton St., Boston 30, Mass. ADV. PG. 264.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 Gates Radio Co., Quincy, Ill.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
 LaPointe Electronics Inc., Rockville, Conn.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
 Motorola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 5, Ill.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Technical Materiel Corp., P.O. Box 142, Mamaroneck, N. Y.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

FILTERS—Band Elimination

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
 Acro Transformer Mfg. Corp., 26-04 Fourth St., Astoria 2, N. Y.
 Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.
 American Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y.
 Atlas Coil, Inc., Cottage St., Derby, Conn.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. ADV. PG. 510.
 Balco Research Laboratories, 49-53 Edison Place, Newark 2, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Basler Electric Co., 601 Fifth St., Highland, Ill.

BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
 Carad Corp., 2850 Bay Rd., Redwood City, Calif.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567.
CENTRONICS CORP., 21-04 122 St., College Point, N. Y. ADV. PG. 598.
 Channel Master Co., Ellenville, N. Y.
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Daystrom Instrument Co., Archbald, Pa.
 DeCoursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
ELECTRALAB, INC., 76 Atherton St., Boston 30, Mass. ADV. PG. 264.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
ELECTRONIC TRANSFORMER CO., 207 W. 25th St., New York, N. Y. ADV. PG. 166.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
FRED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif. ADV. PG. 671.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
 Jobbins Electronic Enterprises, Menlo Park, Calif.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
 Lenkurt Electric Co., Inc., 1113 County Road, Sausalito, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lesa, Via Bergamo 21, Milan, Italy.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Palmer, Inc., M. V., 4002 Fruit Valley Rd., Van-couver, Wash.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.

TELEPHONE, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

TELEVISION LABORATORIES, INC., 921 Providence Highway, Needham, Mass. ADV. PG. 513.

Transformer Engineers, 161 E. California, Pasadena 1, Calif.

TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417.

Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif.

TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.

Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

United Technical Laboratories, Box 425-V, Morristown, N. J.

UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

WESTERN-ELECTRO-ACOUSTIC LABS., 204 S. Beverly Drive, Beverly Hills, Calif.

Yonkers Industries, 28 School St., Yonkers, N. Y.

WIRELESS—Band Pass

Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.

Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.

Products Co., 369 Shurs Lane, Philadelphia 28, Pa.

Transformer Mfg. Corp., 26-04 Fourth St., Astoria 2, Oreg.

Inc., 24 Cliff St., Jersey City, N. J.

Corp., 740 Belleville Ave., New Bedford, Mass.

Transformer Corp., West & Willow Aves., Long Branch, N. J.

RDIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479.

Laboratories, Inc., 14185 Skyline Drive, Puente, Calif.

Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y.

Inc., Cottage St., Derby, Conn.

DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. ADV. PG. 510.

Research Laboratories, 49-53 Edison Place, New York 2, N. J.

& WILLIAMSON, 235 Fairfield Ave., Upper Pa. ADV. PG. 174, 175.

Electric Co., 601 Fifth St., Highland, Ill.

Aviation Corp., Pacific Division, 11600 Sherman North Hollywood, Calif.

& CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.

Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.

Corp., 2850 Bay Rd., Redwood City, Calif.

CONSTANTINE ENGINEERING LABORATORIES, 100 Highland Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.

LAB DIV. OF GLOBE-UNION, INC., 914Y E. Keesee Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.

TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567.

IGS CORP., 21-04 122 St., College Point, N. Y. ADV. PG. 598.

STANDARD TRANSFORMER CORP., 3580 Elm Ave., Chicago 18, Ill. ADV. PG. 453.

Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.

LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Whers, Inc., 100 New York Ave., Westbury, N. Y.

COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hillman Hills, Mo. ADV. PG. 141-144.

ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.

Aviation Electric Corp., South Plainfield, N. J. ADV. PG. 2841 Canon St., San Diego 6, Calif.

Instrument Co., Archbald, Pa.

Cocoy Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.

DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 0.

DEVELOPMENT CO., 235 Penn St., Burlington, N. Y. ADV. PG. 536.

C 534 Bergen Blvd., Palisades Park, N. J. ADV. PG. 586.

Inc., New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

LAB, INC., 76 Atherton St., Boston 30, Mass. ADV. PG. 264.

TRANSFORMER CO., 207 W. 25th St., New York, N. Y. ADV. PG. 166.

STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.

PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 47, N. Y. ADV. PG. 490.

o Labs., Inc., E. Stewart Ave., Garden City, N. Y.

Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.

Filttron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.

GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.

GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. ADV. PG. 287.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif. ADV. PG. 671.

GLENCO CORP., Metuchen, N. J. ADV. PG. 640.

Gombos Co., Inc., John, 103 Montgomery Ave., Irvington 11, N. J.

GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.

GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.

GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.

Harder Co., Donald C., 3338 India St., San Diego 1, Calif.

Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.

Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.

INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.

Jefferson Electric Co., Bellwood, Ill.

Jobbins Electronic Enterprises, Menlo Park, Calif.

Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.

Lenkurt Electric Co., INC., 1113 County Road, San Carlos, Calif.

LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.

Les, Via Bergamo 21, Milan, Italy.

Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.

MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.

MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.

Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.

Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.

Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.

Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.

PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.

Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.

Pulse Techniques, Inc., 1411 Palisades Ave., West Englewood, N. J.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.

Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.

Radio Music Corp., 84 S. Water St., Port Chester, N. Y.

Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.

Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.

Saratoga Industries, Inc., Saratoga Springs, N. Y.

Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.

Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.

SOUTHERN ELECTRONICS CO., 239 W. Orange Grove Ave., Burbank, Calif. ADV. PG. 528.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.

Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.

Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

Television Laboratories, Inc., Mill St., Wauconda, Ill.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.

TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.

TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.

Transformer Engineers, 161 E. California, Pasadena 1, Calif.

TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.

TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417.

Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif.

TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.

Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

United Technical Laboratories, Box 425-V, Morristown, N. J.

UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.

Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

Western-Electro-Acoustic Labs., 204 S. Beverly Drive, Beverly Hills, Calif.

Yonkers Industries, 28 School St., Yonkers, N. Y.

FILTERS—Continuously Variable

Allison Laboratories, Inc., 14185 Skyline Drive, Puente, Calif.

Balco Research Laboratories, 49-53 Edison Place, Newark 2, N. J.

C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.

Daystrom Instrument Co., Archbald, Pa.

DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.

INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.

KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.

LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.

Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W.C. 2, England.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.

Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

FILTERS—Crystal

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.

Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.

BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.

CLARK CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

LEWIS CO., E. B., 11 Bragg St., East Hartford 8, Conn. ADV. PG. 590.

Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.

Precision Crystal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.

REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 343.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

VALPEY CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.

VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

FILTERS—Detonation

DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

FILTERS—Electric Wave Section

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.
 Acro Transformer Mfg. Corp., 26-04 Fourth St., Astoria 2, N. Y.
 Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
 CENTRAL TRANSFORMER CO., 908 W. Jackson Ave., Chicago, Ill. ADV. PG. 567.
 CENTRONICS CORP., 21-04 122nd St., College Point, N. Y. ADV. PG. 598.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
 De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.
 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
 Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.
 KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
 KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 437.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 SOUTHERN ELECTRONICS CO., 239 W. Orange Grove Ave., Burbank, Calif. ADV. PG. 528.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
 Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif.
 TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.

FILTERS—Equalizer

Acro Transformer Mfg. Corp., 26-04 Fourth St., Astoria 2, N. Y.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.
 AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 510.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
 Carad Corp., 2850 Bay Rd., Redwood City, Calif.
 CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
 CENTRAL TRANSFORMER CO., 908 W. Jackson Ave., Chicago, Ill. ADV. PG. 567.
 CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
 Fisher Radio Corp., 21-21 Forty-Fourth Drive, Long Island City 1, N. Y.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 Gates Radio Co., Quincy, Ill.
 GRAY RESEARCH & DEVELOPMENT CO., INC., 658 Hilliard St., Manchester, Conn. ADV. PG. 126.
 H-LAB., 53 Industrial Rd., Berkeley Heights, N. J. ADV. PG. 661.
 Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.
 INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Jobbins Electronic Enterprises, Menlo Park, Calif.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
 Lesa, Via Bergamo 21, Milan, Italy.
 MAGNECORD, INC., 225 W. Ohio St., Chicago 10, Ill. ADV. PG. 220.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Pulse Techniques, Inc., 1411 Palisade Ave., West Englewood, N. J.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Shields Laboratories, Inc., 810 N. Lincoln Ave., Pittsburgh 12, Pa.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
 Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif.
 TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

FILTERS—High Pass

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.
 Acme Electronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
 Acro Transformer Mfg. Corp., 26-04 Fourth St., Long Island City 2, N. Y.
 Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.
 AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 548.
 Allison Laboratories, Inc., 14185 Skyline Drive, Puente, Calif.
 American Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y.
 AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 510.
 Balco Research Laboratories, 49-53 Edison Place, Newark 2, N. J.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Basler Electric Co., 601 Fifth St., Highland, Ill.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
 Camfil Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
 Carad Corp., 2850 Bay Rd., Redwood City, Calif.
 CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
 CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567.
 CENTRONICS CORP., 2104 122nd St., College Point, N. Y. ADV. PG. 598.
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
 CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.

DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 Daystrom Instrument Co., Archbald, Pa.
 De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.
 Deytronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 ESC CO., 534 Bergen Blvd., Palisades Park, N. J. ADV. PG. 586.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
 ELECTRONIC TRANSFORMER CO., 207 W. 25th St., New York, N. Y. ADV. PG. 166.
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
 Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
 GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
 GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.
 INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Jefferson Electric Co., Bellwood, Ill.
 Jobbins Electronic Enterprises, Menlo Park, Calif.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
 LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lesa, Via Bergamo 21, Milan, Italy.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
 MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
 NATIONAL CAPACITOR CO., 60 Washington Court, Quincy 69, Mass. ADV. PG. 286.
 National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.
 PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
 Pulse Techniques, Inc., 1411 Palisade Ave., West Englewood, N. J.
 PYRAMID ELECTRIC CO., 1445 Hudson Blvd., North Bergen, N. J. ADV. PG. 195.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 SOUTHERN ELECTRONICS CO., 239 W. Orange Grove Ave., Burbank, Calif. ADV. PG. 528.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Suporex Electronics Corp., 23 Atherton Ave., Yonkers, N. Y.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.

W. ELECTRONICS, INC., 965 Frelinghuysen Ave., 5, N. J. ADV. PG. 496.
W. ENGINEERS, 161 E. California, Pasadena 1, Calif. ADV. PG. 416, 417.
W. MERRIMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417.
W. INC., 808 Sixteenth St., Box 96A, Bakersfield, Calif. ADV. PG. 398.
W. TRANSFORMER CORP., 4055 Redwood Ave., San Francisco, Calif. ADV. PG. 398.
W. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
W. TECHNICAL LABORATORIES, Box 425-V, Morristown, Tenn. ADV. PG. 493.
W. TRANSFORMER CO., 150 Varick St., New York 3, N. Y. ADV. PG. Inside Front Cover.
W. TRANSFORMER CO., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
W. ELECTRONICS MFG. CO., 576 W. Merrick Rd., Lynbrook, N. Y. ADV. PG. 493.
W. ENGINEERING & CONSTRUCTION CO., P. O. Box 590, Camden 1, N. J. ADV. PG. 493.
W. INDUSTRIES, 28 School St., Yonkers, N. Y. ADV. PG. 493.

Lighting (for radio towers)

W. CORP., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 513.
W. & WILLIAMSON, 235 Fairfield Ave., Upper Merioneth, Pa. ADV. PG. 174, 175.
W. CO., 131-05 Fowler Ave., Flushing, N. Y. ADV. PG. 493.
W. CO., E. F. Waseca, Minn., III. ADV. PG. 493.
W. CO., J. W., 5917 S. Main St., Los Angeles 3, Calif. ADV. PG. 493.
W. FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
W. TRANSFORMER CO., 150 Varick St., New York 3, N. Y. ADV. PG. Inside Front Cover.
W. RADIO CO., 2 Fifth Ave., New York 11, N. Y. ADV. PG. 493.

Microwave

MICROWAVE ACCESSORIES

Needle Scratch

W. CORP., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 513.
W. DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
W. RADIO CORP., 21-21 Forty Fourth Drive, Long Island City 1, N. Y. ADV. PG. 536.
W. ELECTRONICS CORP., 2432 Grand Concourse, New York 24, N. Y. ADV. PG. 655.
W. RADIO CORP., 1087 Flushing Ave., Brooklyn 33, N. Y. ADV. PG. 352.
W. CO., J. W., 5917 S. Main St., Los Angeles 3, Calif. ADV. PG. 493.
W. FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
W. ELECTRONICS, INC., 643 Milwaukee Ave., Chicago 12, Ill. ADV. PG. 286.
W. HERMAN HOSMER, 385 Putnam Ave., Cambridge 39, Mass. ADV. PG. 493.
W. COIL PRODUCTS CO., 2329 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 312.
W. TRANSFORMER CORP., 4055 Redwood Ave., San Francisco, Calif. ADV. PG. 398.
W. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
W. TRANSFORMER CO., 150 Varick St., New York 3, N. Y. ADV. PG. Inside Front Cover.

Radio Interference

W. ELECTRONICS, INC., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 493.
W. INC., 24 Cliff St., Jersey City, N. J. ADV. PG. 493.
W. CORP., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 513.
W. PRODUCTS, INC., 4802 N. Broad St., Philadelphia 1, Pa. ADV. PG. 83.
W. ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
W. CONDENSER CORP., 10905 Chandler Blvd., North Hollywood, Calif. ADV. PG. 493.
W. CO., 2 Secatoag Ave., Port Washington, N. Y. ADV. PG. 493.
W. CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 419.
W. CO., Cottage St., Derby, Conn. ADV. PG. 493.
W. RESEARCH LABORATORIES, 49-53 Edison Place, New York 17, N. Y. ADV. PG. 493.
W. & WILLIAMSON, 235 Fairfield Ave., Upper Merioneth, Pa. ADV. PG. 174, 175.
W. ELECTRIC CO., 601 Fifth St., Highland, Ill. ADV. PG. 493.
W. WINDERS, INC., 100 New York Ave., Westbury, N. Y. ADV. PG. 493.
W. DUBILIER ELECTRIC CORP., South Plainfield, N. J. ADV. PG. 493.
W. CO., INC., Henry L., 1 Central Ave., West Orange, N. J. ADV. PG. 493.
W. MFG. CORP., 126 Eleventh Ave., New York 11, N. Y. ADV. PG. 493.
W. AIRPLANE & MARINE INSTRUMENTS, INC., 15 Wilmette, New York 5, N. Y. ADV. PG. 493.
W. CENTRAL CORP., Moline, Ill. ADV. PG. 493.
W. CO., New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y. ADV. PG. 493.
W. CO., INC., 131-05 Fowler Ave., Flushing, N. Y. ADV. PG. 493.
W. RADIO CORP., 21-21 Forty-Fourth Drive, Long Island City 1, N. Y. ADV. PG. 493.
W. & CO., INC., EDWIN I., 15 S. Throop St., New York 7, Ill. ADV. PG. 196.
W. ELECTRONIC PRODUCTS CO., 55 Nassau St., Brooklyn 22, N. Y. ADV. PG. 624.
W. ENGINEERING CO., 2082 Lincoln Ave., Altadena, Calif. ADV. PG. 493.

Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill. ADV. PG. 493.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif. ADV. PG. 493.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. ADV. PG. 493.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. ADV. PG. 493.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif. ADV. PG. 493.
NATIONAL CAPACITOR CO., 60 Washington Court, Quincy 69, Mass. ADV. PG. 286.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H. ADV. PG. 493.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
Potter Co., 1850 Sheridan Rd., North Chicago, Ill. ADV. PG. 493.
Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill. ADV. PG. 286.
Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif. ADV. PG. 493.
Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y. ADV. PG. 493.
Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y. ADV. PG. 493.
Sprague Electric Co., 125 Marshall St., North Adams, Mass. ADV. PG. 493.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 493.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 312.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. ADV. PG. 493.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
Superex Electronics Corp., 23 Atherton Ave., Yonkers, N. Y. ADV. PG. 493.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
Televisto Corp., 7466 W. Irving Park Rd., Chicago 34, Ill. ADV. PG. 493.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
United Technical Laboratories, Box 425-V, Morristown, N. J. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y. ADV. PG. 493.
Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind. ADV. PG. 493.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich. ADV. PG. 493.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif. ADV. PG. 493.
Yonkers Industries, 28 School St., Yonkers, N. Y. ADV. PG. 493.

FILTERS—Radio Range

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 493.
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 513.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479.
ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 419.
Basler Electric Co., 601 Fifth St., Highland, Ill. ADV. PG. 493.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. ADV. PG. 493.
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J. ADV. PG. 493.
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. ADV. PG. 493.
Daystrom Instrument Co., Archbald, Pa. ADV. PG. 493.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill. ADV. PG. 493.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill. ADV. PG. 493.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 493.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind. ADV. PG. 493.

FILTERS—Television

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio. ADV. PG. 493.
Aerocoil, Inc., 24 Cliff St., Jersey City, N. J. ADV. PG. 493.

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 513.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479.
Ajax Condenser Corp., 10905 Chandler Blvd., North Hollywood, Calif. ADV. PG. 493.
ASTRON CORP., 255 Grant Ave., East Newark, N. J. ADV. PG. 419.
Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y. ADV. PG. 493.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio. ADV. PG. 493.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
Channel Master Co., Ellenville, N. Y. ADV. PG. 493.
Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England. ADV. PG. 493.
Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif. ADV. PG. 493.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. ADV. PG. 493.
Cornell-Dubilier Electric Corp., South Plainfield, N. J. ADV. PG. 493.
Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J. ADV. PG. 493.
Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y. ADV. PG. 493.
Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J. ADV. PG. 493.
Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y. ADV. PG. 493.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
H-LAB., 53 Industrial Rd., Berkeley Heights, N. J. ADV. PG. 661.
Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill. ADV. PG. 493.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa. ADV. PG. 493.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. ADV. PG. 493.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. ADV. PG. 493.
Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. ADV. PG. 493.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif. ADV. PG. 493.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H. ADV. PG. 493.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
Raypar, Inc., 7800 W. Addison St., Chicago, Ill. ADV. PG. 493.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. ADV. PG. 493.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 312.
Superex Electronics Corp., 23 Atherton Ave., Yonkers, N. Y. ADV. PG. 493.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
United Technical Laboratories, Box 425-V, Morristown, N. J. ADV. PG. 493.
Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y. ADV. PG. 493.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif. ADV. PG. 493.
Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J. ADV. PG. 493.
Yonkers Industries, 28 School St., Yonkers, N. Y. ADV. PG. 493.

FILTERS—uhf & vhf

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio. ADV. PG. 493.
Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. ADV. PG. 493.
Aerocoil, Inc., 24 Cliff St., Jersey City, N. J. ADV. PG. 493.
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 513.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479.
American Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y. ADV. PG. 493.
Atlas Coil, Inc., Cottage St., Derby, Conn. ADV. PG. 493.
Balco Research Laboratories, 49-53 Edison Place, Newark 2, N. J. ADV. PG. 493.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Merioneth, Pa. ADV. PG. 174, 175.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 519.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CENTRONICS CORP., 21-04 122 St., College Point, N. Y. ADV. PG. 598.
Channel Master Co., Ellenville, N. Y. ADV. PG. 493.

GAGES—Ionization

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Consolidated Vacuum Corp., Rochester 3, N. Y.
 EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y. Pye, Ltd., Cambridge, England.
 R-C Scientific Instrument Co., 307 Culver Blvd., Playa Del Rey, Calif.
 Research Electronics Laboratory, Roslyn, Pa.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

GAGES—Paint Depth

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.
 BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

GAGES—Photoelectric Dimension

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

GAGES—Pirani

Consolidated Vacuum Corp., Rochester 3, N. Y.
 Continental Electric Co., Geneva, Ill.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Pye, Ltd., Cambridge, England.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

GAGES—Pressure, Electronic

Atlantic Research Corp., 901 N. Columbus, Alexandria, Va.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Endeavor Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 Foxboro Co., The, Foxboro, Pa.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
 GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
 GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.
 Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
 Trans-Sonics, Inc., 5 Forrest Ave., Bedford, Mass.

GAGES—Spring Tension

Imtra Corp., 58 Charles St., Cambridge 41, Mass.
 Rockwell Engineering Co., 4063 N. New Jersey St., Indianapolis 5, Ind.

GAGES—Strain

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Control Components Co., 46 Walnut St., Brookline 47, Mass.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 FIELDEN INSTRUMENT DIV OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Grass Instrument Co., 101 Old Colony Rd., Quincy, Mass.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Pratt & Whitney Div., Miles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
 Technograph Printed Electronics Inc., 191 Main St., Tarrytown, N. Y.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Trans-Sonics, Inc., 5 Forrest Ave., Bedford, Mass.

GAGES—Ultrasonic Thickness

ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. ADV. PG. 426.
 ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 571.
 BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.
 Dice Co., J. W., Englewood, N. J.
 Electro Circuits, Inc., 401 E. Green St., Pasadena, Calif.
 International Electronics Corp., 137 Hudson St., New York 13, N. Y.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Sperry Products, Inc., Danbury, Conn.
 VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.

GAGES—Vacuum

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Consolidated Vacuum Corp., Rochester 3, N. Y.
 Continental Electric Co., Geneva, Ill.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
 Pye, Ltd., Cambridge, England.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back and Back Covers.
 Research Electronics Laboratory, Roslyn, Pa.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
 Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

GALVANOMETERS

See INSTRUMENTS—Electrical Measuring

GASES—Nitrogen

LINDE AIR PRODUCTS CO., DIVISION OF UNION CARBIDE AND CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 502.

GASES—Rare

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 LINDE AIR PRODUCTS CO., DIVISION OF UNION CARBIDE AND CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 502.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

GASKETS

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Brady Co., W. H., 727 W. Glendale Ave., Milwaukee 12, Wis.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Dewey and Almy Chemical Co., 62 Whittemore Ave., Cambridge 40, Mass.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
 Garlock Packing Co., Palmyra, N. Y.
 Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.
 JAN HARDWARE MFG. CO., Inc., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 653.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minor Rubber Co., 49 Ackerman St., Bloomfield, N. J.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Rogers Corporation, Goodyear, Conn.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.
 Thomas & Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 Vulcanized Rubber Products Co., Morrisville, Pa.
 Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

GEARS—Precision

Ahrend Instrument Co., 4910 Calvert Rd., College Park, Md.
 AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. ADV. PG. 426.
 Arch Gear Works, Inc., North Quincy, Mass.
 Beaver Gear Works, Inc., 1034 Parmelee St., Rockford, Ill.
 Bellmore Gear Corp., 2307 Bellmore Ave., Bellmore, N. Y.
 Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
 BOWMAR INSTRUMENT CORP., 2415 Pennsylvania Ave., Fort Wayne, Ind. ADV. PG. 657.
 Control Engineering Corp., Providence Highway, Norwood, Mass.
 Custom Gear Co., South Bend, Ind.
 Daco Machine Tool Co., 202 Tillary St., Brooklyn 1, N. Y.
 Daystrom Instrument Co., Archbald, Pa.
 Dexter Machine Products, Inc., Box 328, Chelsea, Mich.
 DYNAMIC GEAR CO., INC., Amity Harbor, Amityville, N. Y. ADV. PG. 561.
 EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.
 FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. 460.
 Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill.
 Gear Specialties, Inc., 2635 W. Medill Ave., Chicago 47, Ill.

& Gorrell, Haworth, N. J.
 Reproducible Corp., 151 Beechwood St., New Rochelle, N. Y.
AVIATION, INC., Binghamton, N. Y. ADV. PG. 57.
 Instrument Co., 432 Lincoln St., Denver 9, Colo.
 Co., 55 Elm St., Manchester, Conn.
 Western Engineers, Inc., 132-134 W. Colorado Pasadena 1, Calif.
 Id-Linden Corp., 4400 Austin Blvd., Island Park, N. Y.
 City Gear Works, Red Lion & Philmont Rd., Bryans, Pa.
RES INSTRUMENT CORP., 215 E. 91st St., New York 17, N. Y. ADV. PG. 597.
 Corp., Miller St., Sterling, Ill.
CORP. OF AMERICA, 20-20 Jericho Turnpike, Hyde Park, N. Y. ADV. PG. 69-72.
MECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.
 Div. of Illinois Tool Wks, 2501 N. Keeler Chicago 39, Ill.
 American Precision Instrument Corp., 34-17 Law St., Flushing 54, N. Y.
GEAR CORP., 71 Broadway, Wakefield, Mass. ADV. PG. 441.
UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 391, 552.
WESTERN GEAR WORKS, 2600 E. Imperial Highway, Los Angeles, Calif. ADV. PG. 263.
 Mfg. of Tool Co., 1716 W. Arcade Place, Chicago 12, Ill.
AND TOWNE MFG. CO., POWDERED METAL PROD. DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

GENERATORS—Electronic

- AM-FM
- Harmonic Frequency
- Microwave
- Pulse
- Variable Frequency
- Ultrasonic
- Waveform
- Picture Signal
- Square Wave
- Signal, a-f
- Signal, f-m
- Signal, r-f
- Signal, shf
- Signal, Sweeping
- Signal, Television Synchronizing
- Signal, uhf or vhf

F. Products, Inc., 7627 Lake St., River Forest, Ill. 5-11-12.
ASSOCIATES, INC., Teterboro, N. J. 4-6-10-11-16. ADV. PG. 83.
 Instruments Lab., Inc., 160 Old Country Rd., Plainfield, N. Y. 5-12-16.
RAFT RADIO CORP., Boonton, N. J. 12-16. ADV. PG. 83.
 Ltd., High Wycombe, Buckinghamshire, England. 10-12.
INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. 6. ADV. PG. 426.
C, INC., 116 Topsfield Rd., Wenham, Mass. 3-4-9. ADV. PG. 383.
 Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa. 4-9.
 Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass. 6.
MECHAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 36, N. Y. 10. ADV. PG. 322.
 Onix Inc., 280 Ninth Ave., New York 1, N. Y. 9.
 Electronic Instrument Corp., 928 Broadway, New York 10, N. Y. 11-12-14-16.
BERG ULTRASONIC LABORATORY, 94 Green St.,永嘉 Plain 30, Mass. 4-6. ADV. PG. 571.
INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. 4-7. ADV. PG. 481.
INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. Y. 11-12-14-16. ADV. PG. 490.
AND WILLIAMSON, 235 Fairfield Ave., Upper Merion, Pa. 9-10. ADV. PG. 174, 175.
LEY DIVISION, BECKMAN INSTRUMENTS, INC., 21 Wright Ave., Richmond, Calif. 4. ADV. PG. 26.
HIRE LABORATORIES, 580 Beaver Pond Rd., Lynn, Mass. 4-7. ADV. PG. 242.
KIRK CORP., 4371 Valley Blvd., Los Angeles 32, Calif. 6. ADV. PG. 545.
OG ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. Y. 2-4-5-7. ADV. PG. 323.
OODEN RADIO CORP., Boonton, N. J. 1-11-12-16. ADV. PG. 158.
ON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. 6. ADV. PG. 557.
 Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y. 16.
RIEL ENGINEERING CORP., Beaver Dam Rd. & Oak Le Bristol 1, Pa. 4-7-9-10. ADV. PG. 592.
 Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 54, Calif. 4.
RU-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. 1-3-4-5-10-11-12-13-16. ADV. PG. 201.
URUGHS CORP., ELECTRONIC INSTRUMENTS DIV., 15 Vine St., Philadelphia, Pa. 4-9. ADV. PG. 495.

C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn. 14.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif. 5-14.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. 5-10.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif. 3.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S.E. 26, England. 4-5-7-9-10.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. 1-4-5-7-9-10-14-15. ADV. PG. 572.
 Clough-Brengle Co., 6014 N. Broadway, Chicago, Ill. 10-12-14.
 Codetypor Laboratories, 550 Fifth Ave., New York 19, N. Y. 4.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y. 2-5-9.
 Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J. 5.
COMPUTER CONTROL CO., INC., Dept. L4, 92 Broad St., Babson Park 57, Mass. 4. ADV. PG. 639.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. 1-4-10-12-16.
 Crosby Labs., Inc., Box 233, Robbins Lane, Hicksville, N. Y. 12.
 Crystal Research Labs., Inc., 29 Allyn St., Hartford, Conn. 6.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif. 9.
 Dage Electronics Div. of Thompson Products, Inc., 69 N. Second St., Beech Grove, Ind. 15.
DAVEN CO., 191 Central Ave., Newark 4, N. J. 10-12. ADV. PG. 243.
 Daystrom Instrument Co., Archbald, Pa. 4-7-9.
DECADE INSTRUMENT CO., Box 153, Caldwell, N. J. 5-6-14. ADV. PG. 448.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif. 3.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill. 4-9.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. 3. ADV. PG. 344.
 Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo. 4-9.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. 1-2-4-5-7-9-10-11-12-14. ADV. PG. 536.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J. 15.
ELECTRIC INDICATOR CO., INC., Camp Avenue, Springdale, Conn. 5. ADV. PG. 346.
ELECTRICAL & PHYSICAL INSTRUMENT CORP., 42-19 27th St., Long Island City 1, N. Y. 4-9. ADV. PG. 558.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. 16. ADV. PG. 408, 409.
 Electro-Mechanical Research, Inc., Ridgefield, Conn. 9.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y. 1-9-10-11-12-14.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. 5-10-16. ADV. PG. 431.
 Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif. 16.
 Electronic Research Associates, Inc., 715 Main St., North Caldwell, N. J. 4.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y. 5-9-10.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa. 4-5-9-10.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. 3-4. ADV. PG. 277.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. 4-10-11-12-13-14.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. 1-2-3-4-5-10-11-12-16. ADV. PG. 642.
 Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J. 15.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. 1-2-3-4-5-7-8-10-11-12-13-14-16.
 Ferris Instrument Co., 110 Cornelia St., Boonton, N. J. 12-16.
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. 4. ADV. PG. 550.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif. 12-16.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. 10-12-14. ADV. PG. 371.
 Gates Radio Co., Quincy, Ill. 1-5.
GENERAL COMMUNICATION CO., 681 Beacon St., Boston 15, Mass. 3-4-5-9-14. ADV. PG. 542.
 General Devices, Inc., P. O. Box 253, Princeton, N. J. 7.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd. Schenectady 5, N. Y. 6. ADV. PG. 1-20.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. 5-11-12-14-16. ADV. PG. 1-20.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y. 11-14.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 1-4-5-6-7-9-10-12-16. ADV. PG. 177-180.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y. 16.
 Grand Transformers, Inc., Grand Haven, Mich. 6.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass. 4-10.
HEATH CO., Benton Harbor, Mich. 1-5-8-9-10-12. ADV. PG. 73-76.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. 3-4-5-6-7-9-10-12-13-14-16. ADV. PG. 29-36.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. 1-5-8-10-11-12-14-16. ADV. PG. 459.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp.; Electric Motor Corp., Racine, Wis. 5-10-11-12-13-14-16. ADV. PG. 643.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif. 1-3-5-14-15-16.
 Industrial Television, Inc., 369 Lexington Ave., Clifton, N. J. 16.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H. 1-2-3-4-5-9-10-11-12-13-14-16.
 International Electronics Corp., 137 Hudson St., New York 13, N. Y. 6.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif. 9-14-15.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio. 10-11-12-14-16.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa. 1-2-5.
 Kahn Research Labs., Elizabeth Bldg., 22 Pine St., Freeport, N. Y. 2.
 Katolight Corp., 624 Front St., Mankato, Minn. 5.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. 3-4-5-6-8-12-14-16. ADV. PG. 420, 421.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. 1-3-4-5-12-13-14-16. ADV. PG. 199.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. 5-6-7-9-10-12. ADV. PG. 40, 41.
 Kybernetes Co., 1100 Raymond Blvd., Newark, N. J. 15.
LAVOIE LABORATORIES, Morganville, N. J. 4-16. ADV. PG. 433.
LEE LABORATORIES, INC., Genesee, Pa. 4-7-9. ADV. PG. 639.
 Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio. 12.
 Linear Equipment Labs., Brightwater Place, Massapequa, N. Y. 9-14.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif. 4.
MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. 3-4. ADV. PG. 647.
 Manufacturers Engineering & Equipment Co., York & Mill Rds., Hatboro, Pa. 14.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. 1-2-3-4-5-10-11-12-13-16. ADV. PG. 150.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y. 7-15.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. 3. ADV. PG. 250.
 Measurement Engineering Ltd., Arnprior, Ontario, Canada. 9-10.
MEASUREMENTS CORP., Boonton, N. J. 4-9-10-11-12-16. ADV. PG. 319.
 Mercury Electronic Co., Box 450, Red Bank, N. J. 5.
MICROLAB, 71 Okner Parkway, Livingston, N. J. 2. ADV. PG. 670.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn. 4.
 Muirhead & Co., Ltd., Beckenham, Kent, England. 5-10.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W.C. 2, England. 4-6.
NEW LONDON INSTRUMENT CO., P. O. Box 189, New London, Conn. 1-3-9-11-12-14. ADV. PG. 451.
 Norman Laboratories, Ernst, Williams Bay, Wis. 2.
 Northeastern Engineering, Inc., Manchester, N. H. 3-4-5-12-16.
 Nuclear Instrumenting & Chemical Corp., 223 W. Erie St., Chicago 10, Ill. 4.
 Ohio Crankshaft Co., Tocco Div., 3800 Harvard Ave., Cleveland 1, Ohio. 6.
 Pacific Transducer EBG Corp., 11921 W. Plco Blvd., Los Angeles 64, Calif. 14.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. 14. ADV. PG. 660.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa. 10-11-12-14-16.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif. 5.
 Piezo Products Co., Whitney St., Framingham, Mass. 6.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. 1-3-5-7-8-11-12-13-14-15. ADV. PG. 54-56.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. 3-14. ADV. PG. 244, 245.
 Precise Development Corp., 2 Neil Court, Oceanside, N. Y. 1-9-10-11-12.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y. 9-10-11-12-14.
PRODUCTION RESEARCH CORP., Thornwood, N. Y. 3. ADV. PG. 578.
 Pye Ltd., Cambridge, England 8-10-15.
 Radiation, Inc., Melbourne, Fla. 3-4-16.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa. 1-8-10-11-12-14-15-16.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. 8-10-12-14-15-16. ADV. PG. Inside Back & Back Covers.
RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. 5-6. ADV. PG. 631.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. 6. ADV. PG. 26.
 Reiner Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa. 9.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif. 6-10.
 Research Electronics Laboratory, Roslyn, Pa. 4-8-15.

Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn. 6.
 Rollin Co., 2010 Lincoln Ave., Pasadena 3, Calif. 3-5-12-16.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif. 4-9.
 Seaboard Electric Co., 417 Canal St., New York 13, N. Y. 10-13.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. 2-5-7-9-11-12. ADV. PG. 69-72.
 Short Wave Plastic Forming Co., 2921 W. Alameda, Burbank, Calif. 3-5-6.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. 5. ADV. PG. 50, 51.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. 5-6-10.
 Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y. 4-10.
SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. 4-9-14. ADV. PG. 555.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. 3. ADV. PG. 331, 332.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. 12-13-14.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y. 2-6.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 2-10-11-12-13-14-15-16.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J. 2-9.
 Superior Instrument Co., 227 Fulton St., New York 7, N. Y. 10-11-12.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-11-12-14-15-16. ADV. PG. 699-706.
 Technical Measurement Corp., P. O. Box 1947, New Haven, Conn. 4.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. 4. ADV. PG. 543.
 Tektronix, Inc., P. O. Box 831, Portland 7, Ore. 4-5-7-9-12.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. 1-2-4-7-8-9-11-12-15-16. ADV. PG. 303.
 Telequip Radio Co., 2559 W. 21st St., Chicago 8, Ill. 15.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. 1-4-5-9-10. ADV. PG. 447.
 Televiso Corp., 7466 W. Irving Park Rd., Chicago 34, Ill. 6.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. 7-8-11-12-14-15-16. ADV. PG. 540.
TELONIC INDUSTRIES, 444 S. Rural St., Indianapolis 1, Ind. 5-12-14-16. ADV. PG. 568.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. 12. ADV. PG. 663.
 Transstron, Inc., 154 Spring St., New York 12, N. Y. 3.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y. 5-8-13-14-16.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio. 14-16.
 Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill. 6.
 United Technical Laboratories, Box 425-V, Morristown, N. J. 8.
VARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. 3. ADV. PG. 163.
VECTRON, INC., 404 Main St., Waltham 54, Mass. 3-5-16. ADV. PG. 474, 475.
 Video Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind. 16.
 Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa. 5-10-12.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. 4-9. ADV. PG. 467.
WANG LABORATORIES, 296 Columbus Ave., Boston 16, Mass. 4-7. ADV. PG. 633.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. 5-10-12-14. ADV. PG. 560.
WAVELINE, INC., Box 470, Caldwell, N. J. 3. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass. 3-4-5.
 Wheeler Laboratories, Inc., Great Neck, N. Y. 13-16.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J. 8-15.
 Wilcox-Gay Corp., Charlotte, Mich. 10-12-14-15.
 Woodwelding, Inc., 3000 W. Olive, Burbank, Calif. 3-5-6.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y. 1-5-16.

GENERATORS—Engine Driven

Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
 Allis-Chalmers Mfg. Co., 735 S. 70th St., Milwaukee 1, Wis.
 American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif.
 Buda Co., The, Harvey, Ill.
 Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. ADV. PG. 612.
 Detroit Diesel Engine Div. of General Motors Corp., Detroit 28, Mich.
ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.

EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. ADV. PG. 636.
 Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 292.
 Fidelity Instrument Corp., 1320 W. Market St., York, Pa.
 Gaston Power Tools, Inc., 14829 Loomis St., Harvey, Ill.
 Georator Corp., Box 463, Manassas, Va.
 Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
 Hallett Mfg. Co., 1601 W. Florence Ave., Inglewood, Calif.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.
 Homelite Corp., Port Chester, N. Y.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 643.
INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. ADV. PG. 628.
INSTRUMENT MOTORS, Acosta St., Stamford, Conn. ADV. PG. 536.
 Jack & Heintz, Inc., Cleveland 1, Ohio.
 Kato Engineering Co., 1415 First Ave., Mankato, Minn.
 Katolight Corp., 624 Front St., Mankato, Minn.
 Midco Mfg. & Distributing Co., Inc., 1129 S. 13th St., Sheboygan, Wis.
 Motordyne, Inc., 2661 S. Myrtle Ave., Monrovia, Calif.
 Motoresearch Co., 1600 Junction Ave., Racine, Wis.
 Onan & Sons Inc., D. W., University Ave. at 25th St., S.E., Minneapolis 14, Minn.
 Pioneer Electric Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
 Pioneer Gen-E-Motor Corp., Dept. EBG, 5841 W. Dickens, Chicago 39, Ill.
 Ready Power Co., The Power Plant Div., 11231 Freud Ave., Detroit 14, Mich.
 U. S. Motors Corp., Oshkosh, Wis.
 Universal Motor Co., 456 Universal Drive, Oshkosh, Wis.
WINCHARGER CORP., E. 7th & Division Sts., Sioux City, Iowa. ADV. PG. 257.

GENERATORS—Hand Driven

Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. ADV. PG. 636.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 292.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 643.
INSTRUMENT MOTORS, Acosta St., Stamford, Conn. ADV. PG. 536.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
 Redmond C., Inc., 201 Monroe St., Owosso, Mich.
 Stromberg-Carlson Co., Rochester 3, N. Y.

GENERATORS—Motor

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Allis-Chalmers Mfg. Co., 735 S. 70th St., Milwaukee 1, Wis.
 American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
 Columbia Electric Mfg. Co., 4519 Hamilton Ave., N.E., Cleveland 14, Ohio.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. ADV. PG. 612.
EASTERN AIR DEVICES, INC., 15 Washington St., Dover, N. H. ADV. PG. 315.
 Eastern Motor & Specialties, Inc., King & Hamsher Sts., Garrett, Ind.
ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. ADV. PG. 636.
ELECTRIC INDICATOR CO., INC., Camp Avenue, Springfield, Conn. ADV. PG. 346.
 Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn.
ELECTRIC SPECIALTY CO., 300 South St., Stamford, Conn. ADV. PG. 649.
ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 292.
G-M LABORATORIES, INC., 4336 N. Knox Ave., Chicago, Ill. ADV. PG. 608.
 Gaston Power Tools, Inc., 14829 Loomis St., Harvey, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Georator Corp., Box 463, Manassas, Va.
 Globe Industries, Inc., P. O. Box 101, North Dayton Station, Dayton 4, Ohio.

Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
 Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 643.
INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. ADV. PG. 628.
INSTRUMENT MOTORS, Acosta St., Stamford, Conn. ADV. PG. 536.
 Jack & Heintz, Inc., Cleveland 1, Ohio.
 Kato Engineering Co., 1415 First Ave., Mankato, Minn.
 Katolight Corp., 624 Front St., Mankato, Minn.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 Mission-Western Engineers, Inc., 132-134 W. Colorado St., Pasadena 1, Calif.
 Motordyne, Inc., 2661 S. Myrtle Ave., Monrovia, Calif.
 Motoresearch Co., 1600 Junction Ave., Racine, Wis.
 National Pneumatic Co., Inc., and Holtzer-Cabot Divisions, 125 Amory St., Boston 19, Mass.
 Pioneer Electric Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
RED BANK DIVISION, BENDIX AVIATION CORP., Easton, N. J. ADV. PG. 110.
 Redmond Co., Inc., 201 Monroe St., Owosso, Mich.
WINCHARGER CORP., E. 7th & Division Sts., Sioux City, Iowa. ADV. PG. 257.

GENERATORS—Winddriven Generating Equipment

ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. ADV. PG. 292.
 Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.
 Katolight Corp., 624 Front St., Mankato, Minn.
HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis. ADV. PG. 643.
 Redmond Co., Inc., 201 Monroe St., Owosso, Mich.
WINCHARGER CORP., E. 7th & Division Sts., Sioux City, Iowa. ADV. PG. 257.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

GEOPHYSICAL APPARATUS

AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 98, 99.
 Benson-Lehner Corp., 2340 Sawtelle Blvd., Los Angeles 4, Calif.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 658.
 Dresden-Barnes Corp., 750 N. Vinedo Ave., Pasadena, Calif.
 Fisher Research Labs., Inc., 1961 University Ave., Palo Alto, Calif.
 Georator Corp., Box 463, Manassas, Va.
 Gorrell & Gorrell, Haworth, N. J.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Pye, Ltd., Cambridge, England.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.

GERMANIUM CRYSTALS

See **CRYSTALS**

GERMANIUM DIODES

See **DIODES—Germanium**

GERMANIUM RECTIFIERS

See **RECTIFIERS—Germanium**

GETTERS

See **TUBE PARTS**

GLASS

See **INSULATION MATERIALS**

GLASS BONDED MICA

See **INSULATION MATERIALS**

GLASS FIBRE

See **INSULATION MATERIALS**

GLASS—Metal-to-Glass Seals

See **SEALS—Metal-to-Glass**

GRAPHIC RECORDING INSTRUMENTS

See **INSTRUMENTS—Graphic Recording**

APPLIANCE—Colloidal

Colloids Co., 1950 Washington Ave., Port Huron, Mich.
CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Oids Corp., Sharon, Pa.
 Lake Graphite Co., 33 S. Clark St., Chicago 3, Ill.

INDUSTRIAL GRID SUPPORTS SEE PAGE PARTS

WIRE—Metal

ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 net Mfg Co., Alden, N. Y.
 Industries Corp., 164 Duane St., New York 13, N. Y.
 d Re, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 ss & Copper Co., Inc., 236 Grand St., Waterbury Conn.
 Inc., 3701 Ravenswood Ave., Chicago, Ill.
 p., St. Anne, Ill.
 ss Co., Inc., 373 Main Ave., Norwalk, Conn.
CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 g. Co., 173 N. Peoria St., Chicago 7, Ill.
LDI MFG. CORP., HELDOR BUSHING & TERMINAL CO., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 n Products, Inc., 430 E. 102nd St., New York, N. Y.
 f., Walter L. 3225 Exposition Pl., Los Angeles 18, Calif.
 Metal Products Co., 377-379 Turnpike, South River, N. J.
 Metal Specialty Co., 429 W. Broadway, New York, N. Y.

WIRE—Molded Plastic

& Sons, Inc., G. 4100 W. Grand Ave., Chicago 11, Ill.
 Mfg Corp., 4600 W. Huron St., Chicago 44, Ill.
 lation Co., 335 E. Price St., Philadelphia 44, Pa.
NOVELTY CO., 3510 S. Western Ave., Chicago 11, Ill. ADV. PG. 590.
CHARLTON CO., THE, 27th Ave. and Lake St., Melrose Park, Ill. ADV. PG. 546.
 Ornamental Co., Inc., 581 S. Clinton St., Chicago, N. Y.

WIRE—Speaker

Industries Corp., 164 Duane St., New York 13, N. Y.
 Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Inc., 3701 Ravenswood Ave., Chicago, Ill.
 p., St. Anne, Ill.
 & Sons, Inc., G. 4100 W. Grand Ave., Chicago 11, Ill.
 ss Co., Inc., 373 Main Ave., Norwalk, Conn.
CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 g. Co., 173 N. Peoria St., Chicago 7, Ill.
LDI MFG. CORP., HELDOR BUSHING & TERMINAL CO., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
NOVELTY CO., 3510 S. Western Ave., Chicago 11, Ill. ADV. PG. 590.
 Corporation, Goodyear, Conn.

WIRE—Cables

ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Brass Co., 414 Meadow St., Waterbury 20, Conn.
 Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
INDIA RUBBER WORKS, INC., Dept. EL, 771 Polk St., Chicago 7, Ill. ADV. PG. 608.
 g. Co., Pease Ave. & Stack St., Middletown, Conn.
 ss & Copper Co., Inc., 236 Grand St., Waterbury Conn.
 Finner Co., Inc., Box 185, Babylon, N. Y.
LO CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
 Procts Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
G. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 ber Co., 424 N. Wood St., Chicago 22, Ill.
 Co., R. I., 230 Toronto Ave., Providence, R. I.
 ator Co., Schenectady 1, N. Y.
 Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.
CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 atwood Mfg. Co., 220 Broadway, New York, N. Y.
 io Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.

Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Rogers Corporation, Goodyear, Conn.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Shakeproof Div., Illinois Tool Works, 2501 N. Keeler Ave., Chicago 39, Ill.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Stevens Products, Inc., 86-88 Main St., East Orange, N. J.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
UNITED CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 328.
 United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

GROMMETS—Fibre

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 I. E. Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Rogers Corporation, Goodyear, Conn.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.
 Wilmington Fibre Specialty Co., P.O. Drawer 1028, Wilmington 99, Del.

GUN MOUNTS—Television

FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
 Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
 I. E. Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
 Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
SUPERIOR ELECTRONICS, 295-297 Crooks Ave., Clifton, N. J. ADV. PG. 524.
 Thomas Electronics, Inc., 118 Ninth St., Passaic, N. J.
GUNS—Soldering
 Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Ill.
 Wall Mfg. Co., Grove City, Pa.
 Weller Electric Corp., 808 Packer St., Easton, Pa.
 Wen Products, Inc., 5808 Northwest Highway, Chicago 31, Ill.

GYROSCOPES—Rate

American Gyro Corp., 3030 Nebraska Ave., Santa Monica, Calif.
 Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
 Control Engineering Corp., Providence Highway, Norwood, Mass.
 Daystrom Instrument Co., Archbald, Pa.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
GYROMECHANISMS, INC., Halesite, N. Y. ADV. PG. 544.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 Kinetix Instrument Div., Ketay Mfg. Corp., 902 Broadway, New York 12, N. Y.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgeway Rd., Minneapolis 13, Minn.
OSTER MFG. CO., JOHN, 1 N. Main St., Racine, Wis. ADV. PG. 425.
 Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 U. S. Time Corp., 500 Fifth Ave., New York 36, N. Y.

HAND TOOLS

See **TOOLS—Hand or Mechanical**

HARDWARE—Electronic

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Hopkins Engineering Co., 2082 Lincoln Ave., Altadena, Calif.
 Judd Co., J. L., 87 Chambers St., New York 7, N. Y.
NIELSEN HARDWARE CORP., 770 Wethersfield Ave., Hartford 14, Conn. ADV. PG. 418.
 Precision Metal Products Co. of Malden, 41 Elm St., Stoneham 80, Mass.
 Wilmington Fibre Specialty Co., P. O. Drawer 1098, Wilmington 99, Del.

HARNESSES—Wire

See Also **Cable Assemblies**

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
 Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
ASSOCIATED ENGINEERING CORP. OF BOSTON, 65 Kent St., Brookline 46, Mass. ADV. PG. 591, 625.
ATLAS RESISTOR CO., 24 E. Coulter St., Philadelphia 44, Pa. ADV. PG. 470.
 B & M Electric Co., 838 Fourth Ave., Brooklyn N. Y.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BAYSHORE WOOD PRODUCTS CO., INC., 234 Creek Rd., Keansburg, N. J. ADV. PG. 508.
BERNCO ENGINEERING CORP., 5232 W. 10th St., Indianapolis 24, Ind. ADV. PG. 529.
 Bliss Electronic Corp., Box 123, Sussex, N. J.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
 Breeze Corp., Inc., 41 S. Sixth St., Newark 7, N. J.
 Bright Radio Labs, Inc., 24-28 45th St., Long Island City 3, N. Y.
 Cable Electric Products Inc., Providence, R. I.
 Cable Specialists Inc. of Conn., 166 Palisade Ave., Bridgeport, Conn.
 Cadre Industries Corp., Box 117, 19 Delaware Ave., Endicott, N. Y.
CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.
 Cherry Electrical Products Corp., 3080 Skokie Valley Rd., Highland Park, Ill.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
COLUMBIA TECHNICAL CORP., 5 E. 57th St., New York 22, N. Y. ADV. PG. 614.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.
 ConRay Corp., 1225 Ray St., Dayton 4, Ohio.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Courter Electric Products, Inc., Boyne City, Mich.
 Daystrom Instrument Co., Archbald, Pa.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 645.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Harrison & Co., Philip H., Matawan, N. J.
 Haven Harness Co., Grand Haven, Mich.
 Hindle Transformer Co., Inc., Woods Church Rd., Flemington, N. J.
 Holyoke Wire & Cable Co., 720 Main St., Holyoke, Mass.
HOU LIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.

Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
 Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.
MODELECTRIC PRODUCTS CORP., 1500 Bangs Ave., Asbury Park, N. J. ADV. PG. 140.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
 P. M. Industries, Inc., Stamford, Conn.
 Pacific Electriccord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
PARAPLEGIS MFG. CO., INC., 10068 Franklin Ave., Franklin Park, Ill. ADV. PG. 472.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
 Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.
RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Reiner Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
SCINTILLA DIVISION, BENDIX AVIATION CORP., Sidney, N. Y. ADV. PG. 109.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Special Products Co., 9118 Brookville Road, Silver Spring, Md.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Superex Electronics Corp., 23 Atherton Ave., Yonkers, N. Y.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
ELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
 Telechron Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Television Laboratories, Inc., Mill St., Wauconda, Ill.
TENSOLITE INSULATED WIRE CO., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
 Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 United Manufacturing & Service Co., 405 S. Sixth St., Milwaukee 4, Wis.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PAGE 604, 605.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138.
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.
 Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

HEADPHONES & HEADSETS

Audio-Master Corp., 17 E. 45th St., New York 17, N. Y.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 British Electric Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Cannon Co., C. F., Springwater, N. Y.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Dyna Labs., Inc., 1075 Stewart Ave., Garden City, N. Y.
 Ectro, Inc., Delaware, Ohio.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Lesa, Via Bergamo 21, Milan, Italy.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Pacific Electriccord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Super Ear Products Co., 675 Merrick Rd., Lynnbrook, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449.
TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.
 U. S. Instrument Corp., 409 Broad St., Summit, N. J.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

HEADS—Recording

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Audak Co., 500 Fifth Ave., New York, N. Y.
 Bendix Computer Division, Bendix Aviation Corp., 5630 Arbor Vitae St., Los Angeles 45, Calif.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
 Duotone Co., Inc., Keyport, N. J.
 Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
 Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Lipps, E. A., 5485 W. Washington Blvd., Los Angeles, Calif.
LIBRASCOP, INC., 1607 Flower St., Glendale, Calif. ADV. PG. 531.
 Logistics Research Inc., 141 S. Pacific Ave., Redondo Beach, Calif.
 Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
 Marchant Research, Inc., 1475 Powell St., Emeryville, Calif.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 United Pressed Products Co., 741 W. Harrison St., Chicago 7, Ill.

HEADS—Wire or Tape Recording

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Carron Mfg. Co., 415 S. Aberdeen Ave., Chicago, Ill.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
 Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Lipps, E. A., 5485 W. Washington Blvd., Los Angeles, Calif.
 Magnasyn Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
MAGNECORD, INC., 225 W. Ohio St., Chicago 10, Ill. ADV. PG. 220.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Maurer, Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.

HEARING AID TUBES

See **TUBES—Hearing Aid**

HEARING AIDS

Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 Beltone Hearing Aid Co., 2900 W. 36th St., Chicago 32, Ill.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Fortiphone Ltd., 247 Regent St., W1, London, England
 Gem Ear Phone Co., Inc., 50 W. 29th St., New York 1, N. Y.
 Grason-Stadler Co., Engineering Service Dept., Hampshire St., Cambridge 39, Mass.
 Hofmann Corp., C. L., 643 Liberty Ave., Pittsburgh Pa.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Laurehk Radio Mfg. Co., 3931 Monroe Ave., Waukegan, Mich.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago 41, Ill.
 Microtone Co., Ford Parkway on the Mississippi, Paul 5, Minn.
 Modern Hearing Aids Laboratory, The, 6805 Franklin St., Vancouver, B. C., Canada.
 Myers & Sons, Inc., E. A., 306 Beverly Road, Radnor Building, Pittsburgh 16, Pa.
 Pacific Mercury Television Mfg. Corp., 5955 Van Ness Blvd., Van Nuys, Calif.
 Paravox, Inc., 2056 E. Fourth St., Cleveland 15, Ohio
 Rochester Acoustical Laboratories, Inc., Rochester, Mich.
 Scotone Corp., Saw Mill River Road, P. O. Box 20, Elmsford, N. Y.
TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449.
TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.

HEATING, ELECTRONIC—Accessories and Associated Equipment

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 2, N. J. ADV. PG. 323.
 Columbia Resistors, Inc., 23 W. Washington Ave., Peapack, N. Y.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
 General Controls Co., Glendale 1, Calif.
HOUHLIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
 Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.
KAHLE ENGINEERING CO., 1307 Seventh St., New Bergen, N. J. ADV. PG. 439.
 Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 National Research Corp., 160 Charlemont St., New Highlands 61, Mass.
 New Rochelle Tool Corp., 320 Main St., New Rochelle, N. Y.
ORTHO ENGINEERING CORP., Transformer Div., 27 Wallace St., Orange, N. J. ADV. PG. 612.
 Peeco Corp., 2760 Whittier Blvd., Los Angeles 23, Calif.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Radio Frequency Co., 44 Park St., Medfield, Mass.
 Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
 Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 20, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Woodwelding, Inc., 3000 W. Olive, Burbank, Calif.

HEATING, ELECTRONIC—Dielectric

Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 4, Wis.
 Columbia Resistors, Inc., 23 W. Washington Ave., Peapack, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pl., Douglaston, N. Y.
 Electronic Processes Corp., 1021 San Antonio Road, Altos, Calif.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-PATTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 Riverside Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Girdler Company, The, Thermex Div., A Div. of National Cylinder Gas Co., 224 E. Broadway, Louisville 1, Ind.
 Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.
 Merit Short Wave Diathermy Co., 2758 Whittier Blvd., Los Angeles 23, Calif.
 Mytron Mfg. Co., 4504 Brazil St., Los Angeles 39, Calif.
 New Rochelle Tool Corp., 320 Main St., New Rochelle, N. Y.
 Peeco Corp., 2760 Whittier Blvd., Los Angeles 23, Calif.
 Radio Frequency Co., 44 Park St., Medfield, Mass.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 88, 89.

Electronic, Inc., 609 W. Lake St., Chicago 6, Ill.
Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
Strugated Quenched Gap Co., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J.
SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.
Telephones & Cables Ltd., Connaught House, Aldrich, London, W.C. 2, England.
HOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
Wooding, Inc., 3000 W. Olive, Burbank, Calif.

EAING, ELECTRONIC—Induction

rm Ltd., High Wycombe, Buckinghamshire, England.
Ilmsers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.
dicof New York, Inc., 44-31 Douglaston Pkwy., Doerston, N. Y.
ectric Processes Corp., 1021 San Antonio Road, Los Altos, Calif.
NEL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Chenectady 5, N. Y. ADV. PG. 1-20.
Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.
igh Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
helle Tool Corp., 320 Main St., New Rochelle, N. Y.
nkshaft Co., Tocco Div., 3800 Harvard Ave., Cleveland 1, Ohio.
ioquency Co., 44 Park St., Medfield, Mass.
DIRECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 88, 89.
Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.
Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
Strugated Quenched Gap Co., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J.
Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.
Telephones & Cables Ltd., Connaught House, Aldrich, London, W.C. 2, England.
HOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

ATING ELEMENTS

Heating

OBINOMETERS—Electronic

OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

S—Crystal

INC., Dept. H, 1117 W. Elizabeth Ave., New York 19, N. Y. ADV. PG. 428.
PRODUCTS CO., 112 N. Main St., Brockton 4, Mass. ADV. PG. 440.
E CORP., Bedford Airport, Bedford, Mass. ADV. PG. 674.
Inc., Rex, 1314 N.E. 17th Court, P. O. Box 759, Fort Lauderdale, Fla.
SLEY CO., INC., 43-01 22nd St., Long Island City 11, N. Y. ADV. PG. 151.
AB DIV. OF GLOBE-UNION INC., 914 Y E. Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 347, 659.
CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.
FIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. ADV. PG. 167.
AL INDUSTRIES, INC., 44 Summer Ave., New York 17, N. Y. ADV. PG. 229.
Inc., John, 103 Montgomery Ave., Irvington, N. Y.
SEAL PRODUCTS CO., 29-37 S. 6th St., Newark 17, N. J. ADV. PG. 223.
Manufacturing Corp., Stirling, N. J.
3171 S. Bundy Drive, Los Angeles 34, Calif.
Via Bergamo 21, Milan, Italy
Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
Insulation Co., 335 E. Price St., Philadelphia 4, Pa.
Electronic Mfg. Corp., 186 Granite St., Manchester 1, N. H.
R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
Mfg. Co., Inc., 113 University Place, New York 17, N. Y.
Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Research Laboratories, Inc., 79-89 Seventh Ave., New York 11, N. Y.

Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
Pye Ltd., Cambridge, England
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 587.
STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
Warren Plastics Corp., Warren, Pa.

HOLDERS—Fuse

See BLOCKS, FUSE BLOCKS & HOLDERS

HORNS—Microwave

See MICROWAVE ACCESSORIES

HORNS—Speaker Projector

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 98, 99.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Dilks Co., The, Seymour, Conn.
Hawley Products Co., St. Charles, Ill.
Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
Les, Via Bergamo 21, Milan, Italy.
Racon Electric Co., 1261 Broadway, New York 1, N. Y.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
Stromberg-Carlson Co., Rochester 3, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 556

HOUSINGS—Antenna

Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
Gates Radio Co., Quincy, Ill.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
Keller Products Co., 41 Union St., Manchester, N. H.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
P.M. Industries, Inc., Stamford, Conn.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
Wright-Hepp Associates, Inc., 251 West St., South Hackensack, N. J.

HOUSINGS—Automobile Radio

Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Hawley Products Co., St. Charles, Ill.
Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.

HOUSINGS—Instrument

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.
ART-LLOYD METAL PRODUCTS CORP., 2973 Croysey Ave., Brooklyn 14, N. Y. ADV. PG. 561.
Baltic Metal Products Co., 120 Sutton St., Brooklyn 22, N. Y.
Bennett Mfg. Co., Alden, N. Y.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.
Blender-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.
BRILHART PLASTICS CORP., Old Country Rd., Mineola, N. Y. ADV. PG. 653.
Bristol Co., The, Waterbury 20, Conn.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CHASSIS TRAK CORP., 6250 E. Iona Rd., Indianapolis, Ind. ADV. PG. 629.
CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 470.
Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
Corry-Jamestown Mfg. Co., Corry, Pa.
Dahstrom Metallic Door Co., Jamestown, N. Y.
Elgin Metalformer Corp., 901 N. Liberty St., Elgin, Ill.

FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV. PG. 450.
Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
KARP METAL PRODUCTS CO., DIV. OF H & B MACHINE CO., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 265.
Keller Products Co., 41 Union St., Manchester, Conn.
Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
Metalcraft, Inc., 86-08 130th St., Richmond Hill 18, N. Y.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.
OLYMPIC METAL PRODUCTS CO., INC., Phillipsburg, N. J. ADV. PG. 224.
PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 230.
PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 242.
Product Engineering Laboratories Co., Inc., 314 Adams St., Newark 5, N. J.
Scientific Wood Cabinet Co., 88 Holmes St., Belleville, N. J.
Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
Stromberg-Carlson Co., Rochester 3, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.
Wright-Hepp Associates, Inc., 251 West St., South Hackensack, N. J.

HOUSINGS—Plug-In

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
ELDEMA CORP., 5827 E. Beverly Blvd., Los Angeles 22, Calif. ADV. PG. 539.
Gates Radio Co., Quincy, Ill.
Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

HOUSINGS—Public Address System

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Hawley Products Co., St. Charles, Ill.
KARP METAL PRODUCTS CO., DIV. OF H & B MACHINE CO., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 230.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.
Western Sound & Electric Labs, Inc., 805 S. Fifth St., Milwaukee 4, Wis.

HOUSINGS—Speaker

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
Bennett Co., Inc., R. P., Frederick, Md.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
British Industries Corp., 164 Duane St., New York 13, N. Y.
Brociner Electronics Laboratory, 344 E. 32nd St., New York 16, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Butler Mfg. Co., Inc., B. B. 3150 Randolph St., Bellwood, Ill.

Electro-Voice, Inc., Buchanan, Mich.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
 Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
 KARP METAL PRODUCTS CO., DIV. OF H & B MACHINE CO., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
 Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
 Pickard & Burns, Inc., Needham, Mass.
 PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 242.
 Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
 UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 556.
 UTAH RADIO PRODUCTS CO., INC., 1123 E. Franklin St., Huntington, Ind. ADV. PG. 654.
 Walter Co., Inc., S. 1400 Atlantic Ave., Brooklyn 16, N. Y.
 Zenith Aircraft Div. of Zenith Plastics Co., P. O. Box 91, Gardena, Calif.

HUMIDITY

See INDICATORS

HYBRID JUNCTIONS—Microwave

See MICROWAVE ACCESSORIES

IGNITION SYSTEMS—Electronic

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 MODELECTRIC PRODUCTS CORP., 1500 Bangs Ave., Asbury Park, N. J. ADV. PG. 140.
 Photon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 ORTHON CORP., 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
 SCINTILLA DIVISION, BENDIX AVIATION CORP., Sidney, N. Y. ADV. PG. 109.
 Whitaker Cable Corp., Kansas City 16, Mo.

IGNITRON

See TUBES

ILLUMINATION CONTROLS

See CONTROLS—Illumination

IMPEDANCE

See DETECTORS

IMPREGNATING COMPOUNDS

See INSULATING COMPOUNDS

IMPREGNATING MACHINES

See MACHINES

INDICATORS—Antenna Position

Daystrom Instrument Co., Archbald, Pa.
 ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
 KEARFOOT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 657.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.

INDICATORS—Arc Back

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

INDICATORS—Broadcast Volume

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Burlington Instrument Co., Burlington, Iowa.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Gates Radio Co., Quincy, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

INDICATORS—Capacitor Leakage

Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.

Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
 PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

INDICATORS—Density

See INDICATORS—Specific Gravity

INDICATORS—Detonation Indicators & Meters

Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.

INDICATORS—Dew Point

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 Bristol Co., The, Waterbury 20, Conn.
 Foxboro Co., The, Foxboro, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Thermo Instruments Co., Box 335, Belmont, Calif.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

INDICATORS—Dielectric Constant

Central Research Laboratories, Inc., Red Wing, Minn.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

INDICATORS—Film Thickness

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.
 BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Instrument Development Labs., Inc., 163 Highland Ave., Needham Heights, Mass.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Tracerlab, Inc., 130 High St., Boston 10, Mass.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

INDICATORS—Fluid Conductivity

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 WORNOR ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

INDICATORS—Fluid Flow, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Bristol Co., The, Waterbury 20, Conn.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.

Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 Fischer & Porter Co., 476 Warmminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 KETAY MFG. CORP., 555 Broadway, New York 1, N. Y. ADV. PG. 253-256.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
 Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.

INDICATORS—Frequency

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Merion, Pa. ADV. PG. 174, 175.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P.O. Box 175, Fort Lauderdale, Fla.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Burlington Instrument Co., Burlington, Iowa.
 Cinema-Television Ltd., Worsley Bridge Rd., London S. E. 26, England.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Detectron Corp., 5420 Vineland Ave., North Hollywood, Calif.
 DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 Filitors, Inc., 30 Sagamore Hill Drive, Port Washington, N. Y.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Pantek Co., Box 212, El Segundo, Calif.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 SENSITIVE RESEARCH INSTRUMENT CORP., 919 Mt. Vernon, N. Y. ADV. PG. 617.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331-332.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 TELETRONICS LABORATORY, INC., Kinkel St., Waterbury, N. Y. ADV. PG. 447.
 WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
 WANG LABORATORIES, 296 Columbus Ave., Boston 17, Mass. ADV. PG. 633.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Weston Laboratories, Inc., Harvard, Mass.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

INDICATORS—Hardness

Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

INDICATORS—Humidity, Electronic

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Boston 17, Mass.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth St., Minneapolis, Minn.
 Serdex, Inc., 91 Cambridge St., Boston, Mass.
 Thermo Instruments Co., Box 335, Belmont, Calif.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 WORNOR ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

INDICATORS—Illumination

ALDEN PRODUCTS CO., 112 N. Main St., Brockton, Mass. ADV. PG. 440.
 AUTOTRON CO., P.O. Box 722-H, Danville, Ill. ADV. PG. 446.

EG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 MELO CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
 Instrument Div., Bendix Aviation Corp., Baltimore, Md.
 H. Co., 110 Bartholomew Ave., Hartford 1, Conn.
 Photo Company, 116 Nassau St., New York 38, N. Y.
 Light Co., Inc., Herman H., 27 Park Place, New York, N. Y.
 EST ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 ORN ELECTRONIC DEVICES, Rankin, III. ADV. PG. 22.

INDICATORS—Liquid Level, Electronic

Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 TON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 46.
 Knickerbocker, Inc., 58-15 Northern Blvd., Woodside 7, N. Y.
 Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 GUELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 The Waterbury 20, Conn.
 EG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Cooper, Clark, 349 N. Market St., Palmyra, N. J. ADV. PG. 52.
 Inc., 221 N. Hermitage Ave., Trenton, N. J.
 PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 Service Co., 1271 Mission St., San Francisco, Calif.
 Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 LD INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Porter Co., 476 Warminster Road, Hatboro, Pa.
 The, Foxboro, Mass.
 Instrument Div., Bendix Aviation Corp., Baltimore, Md.
 Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Electronics Co., 57 William St., New York 5, N. Y.
 Electronic Mfg. Co., Inc., Union Bldg., 119 E. Walnut, Pasadena 1, Calif.
 Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

Maxwell & Moore, Inc., Stratford, Conn.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
 Research Corp., 2653 Grays Ferry Ave., Philadelphia 46, Pa.
 Company, 116 Nassau St., New York 38, N. Y.
 Inc., 77 Broadway, Cambridge 42, Mass.
 Laboratories, 1240 Main St., Hartford 3, Conn.
 O., INC., Middletown, Conn. ADV. PG. 557.
 SSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Instruments Co., Box 362, Belmont, Calif.
 ivery Systems Co., 2820 N. Alameda, P.O. Box 31, Hampton, Calif.
 ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 ELECTRONIC DEVICES, Rankin, III. ADV. PG. 22.
 t. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

INDICATORS—Materials Thickness

Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 KE LABORATORIES, 580 Beaver Pond Rd., Boston, Mass. ADV. PG. 242.
 INSTRUMENTS, INC., 438 Fairfield Ave., Bridgeport, Conn. ADV. PG. 557.
 SH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 10, Ohio. ADV. PG. 406, 407.
 Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 ERA ELECTRIC CO., Apparatus Sales Div., 1 Teterboro, N. J. ADV. PG. 1-20.
 ore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Instrument Co., 1315 S. Clarkson St., Denver 1, Colo.
 Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Research Corp., 2653 Grays Ferry Ave., Philadelphia 46, Pa.
 & Whitney Div., Niles-Bement-Pond Co., Charter Oak Bldg., West Hartford 1, Conn.
 Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 lar Inc., 130 High St., Boston 10, Mass.
 Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

INDICATORS—Moisture, Electronic

Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.

BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

INDICATORS—Null

Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
 BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 58.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Control Components Co., 46 Walnut St., Brookline 47, Mass.
 Deltron, Inc., P. O. Box 192, Glenside, Pa.
 Develronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 DELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 Electro-Measurements, Inc., 4312 S.E. Satrk St., Portland 15, Ore.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.
 INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.
 KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Richardson Scale Co., Clifton, N. J.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Ultrasonic Corp., 640 Memorial Drive, Cambridge 39, Mass.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

INDICATORS—Null-Balance, Potentiometer Type

Avien-Knickerbocker, Inc., 58-15 Northern Blvd., Woodside 77, N. Y.
 Bristol Co., The, Waterbury 20, Conn.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Courter Electric Products, Inc., Boyne City, Mich.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio
 INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. ADV. PG. 667.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Richardson Scale Co., Clifton, N. J.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

INDICATORS—Ocean Depth

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Telephonics Corp., Park Ave., Huntington, N. Y.

INDICATORS—Oxygen

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.

INDICATORS—pH

Analytical Measurements, Inc., 585 Main St., Chatham, N. J.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 La Motte Chemical Products Co., Towson 4, Baltimore, Md.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 Pye Ltd., Cambridge, England.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 WESTON ELECTRICAL INSTRUMENT CORP., 641 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

INDICATORS—Photographic Exposure

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENT CORP., 641 Frelinghuysen Ave., Newark 5, N. Y. ADV. PG. 530.

INDICATORS—Positioning

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.
 AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Avien-Knickerbocker, Inc., 58-15 Northern Blvd., Woodside 77, N. Y.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.

BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
 Bristol Co., The, Waterbury 20, Conn.
 Courter Electric Products, Inc., Boyne City, Mich.
 ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 554.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 FORD INSTRUMENT CO., DIV. OF THE SPERRY CORP., 31-10 Thomson Ave., Long Island City 1, N. Y. ADV. PG. 614.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
 KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 Kybernetes Co., 110 Raymond Blvd., Newark, N. J.
 Richardson Scale Co., Clifton, N. J.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.

INDICATORS—Power Level, Electronic

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 Bristol Co., The, Waterbury 20, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington N. J. ADV. PG. 536.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Gates Radio Co., Quincy, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 HEWLETT-PACKARD CO., 395 Page Mill Rd. Palo Alto, Calif. ADV. PG. 29-36.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.

INDICATORS—Pressure

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
 Bristol Co., The, Waterbury 20, Conn.
 Colvin Labs., Inc., 364 Glenwood Ave., East Orange, N. J.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Control Engineering Corp., 560 Providence Highway, Norwood, Mass.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. Y.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 554.
 Endevo Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Giannini & Co., G.M., Pasadena 1, Calif.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.

Richardson Scale Co., Clifton, N. J.
 Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.

INDICATORS—Pulse Time Riser

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 ESC CO., 534 Bergen Blvd., Palisades Park, N. J. ADV. PG. 586.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.

**INDICATORS—Radiation
See COUNTERS—Geiger****INDICATORS—Recording Engine**

Bristol Co., The, Waterbury 20, Conn.
 Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

INDICATORS—rf Probe

BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Granco Products, Inc., 36-17 29th Ave., Long Island City, N. Y.
 Gyro Electronics Co., 325 Canal St., New York, N. Y.
 Javex, P. O. Box 646, Redlands, Calif.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.

INDICATORS—Shorted Turn

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 KARTRON, INC., Box 472, Huntington Beach, Calif. ADV. PG. 671.

INDICATORS—Smoke & Combustion, Electronic

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Combustion Control Corp., 718 Beacon St., Boston 15, Mass.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Photoswitch Inc., 77 Broadway, Cambridge 42, Mass.
 RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.
 WORNOR ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.

INDICATORS—Sound Level

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Gates Radio Co., Quincy, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.

SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Bridge 39, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Summit Electronics, Inc., 7 Industrial Place, South Plainfield, N. J.
 Voron & Co., George, 835 N. 18th St., Philadelphia, Pa.
 Western Sound & Electric Labs., Inc., 805 S. St., Milwaukee 4, Wis.
 WESTON ELECTRICAL INSTRUMENT CORP., 600 Hinghuysen Ave., Newark 5, N. J. ADV. PG. 572.

INDICATORS—Specific Gravity

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

INDICATORS—Strain

Anderson, Arthur R., 517 North 1 St., Tacoma 1, Wash.
 Bristol Co., The, Waterbury 20, Conn.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Control Components Co., 46 Walnut St., Brookline, Mass.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 Polyphase Instrument Co., 705 Haverford Rd., Mawr, Pa.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Oak Blvd., West Hartford 1, Conn.
 Richardson Scale Co., Clifton, N. J.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

INDICATORS—Temperature

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Avien-Knickerbocker, Inc., 58-15 Northern Blvd., Flushing 17, N. Y.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Control Engineering Corp., Providence Highway, Norwood, Mass.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. Y.
 Courter Electric Products, Inc., Boyne City, Mich.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 EDISON, INC., THOMAS A., INSTRUMENT LAKESIDE AVE., West Orange, N. J. ADV. PG. 393.
 Eisler Engineering Co., Inc., 740 S. 13th St., Chicago 3, N. J.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 11, Ill.
 International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.
 Kybernetes Co., 1100 Raymond Blvd., Newark 1, N. J.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 MARION ELECTRICAL INSTRUMENT CO., 400 N. St., Manchester, N. H. ADV. PG. 390.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S. Minneapolis, Minn.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia, 44, Pa. ADV. PG. 52, 53.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul 2, Minn.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
 Richards Co., Inc., Arklay S., 38 Winchester St., Newton Highlands 61, Mass.
 Richardson Scale Co., Clifton, N. J.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 Streeter-Amel Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
TELEVISION ACCESSORIES CO., P. O. Box 6001, Arlington 6, Va. ADV. PG. 515.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.
VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

INDICATORS—Timing

Advanced Electronics, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mount Vernon, N. Y. ADV. PG. 360.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Bristol Co., The, Waterbury 20, Conn.
 Burlington Instrument Co., Burlington, Iowa.
 Cary Multiplier Corp., Electronics Div., San Gabriel, Calif.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
 Electron Corp., 5420 Vineland Ave., North Hollywood, Calif.
 Electro-Gray Co., 207 E. Sixth St., Dayton, Ohio.
ELECTRONIC PRODUCTS LABS., 4501 N. Raverwood Ave., Chicago 40, Ill. ADV. PG. 554.
 Evidin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Hale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
RAYDON CO., A. W., The, 232 N. Elm St., Waterbury 20, Conn. ADV. PG. 477.
RAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
 Selenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
 zetek Co., Box 212, El Segundo, Calif.
UTTER INSTRUMENT CO., INC., 115 Cullter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 154.
 Streeter-Amel Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
ELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

INDICATORS—Torque

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
CLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Inghamway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Synphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.

INDICATORS—Turbidity

Bristol Co., The, Waterbury 20, Conn.
 Electronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
 Ss Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hotobell Company, 116 Nassau St., New York 38, N. Y.

INDICATORS—Vacuum

Beiley Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.

Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
 Consolidated Vacuum Corp., Rochester 3, N. Y.
 Continental Electric Co., Geneva, Ill.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
 Elster Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 Lilton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
 Pye Ltd., Cambridge, England.
 Research Electronics Laboratory, Roslyn, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
 Vacuum Tube Products, 506-S. Cleveland St., Oceanside, Calif.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

INDICATORS—Volume

Bristol Co., The, Waterbury 20, Conn.
 Gates Radio Co., Quincy, Ill.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

INDICATORS—Weight

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Bristol Co., The, Waterbury 20, Conn.
 Control Engineering Corp., Providence Highway, Norwood, Mass.
 Dillon & Co., Inc., W. C., 14620Z Keswick St., Van Nuys, Calif.
 Foxboro Co., The, Foxboro, Mass.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Richardson Scale Co., Clifton, N. J.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 Streeter-Amel Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

INDICATORS—Wind Direction—Electronic

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
 LaPointe Electronics Inc., Rockyville, Conn.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 U. M. & F. Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.

INDICATORS—Wind Speed—Electronic

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
 Hastings Instrument Co., Inc., Hampton 9, Va.
 International Testing Service, 321 N. Hamilton St., Saginaw, Mich.

Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.

INDUCTANCE ASSEMBLIES

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496.
 Aerocoll, Inc., 24 Cliff St., Jersey City, N. J.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
 American Relay & Controls, Inc., 3621 Howard St., Skokie, Ill.
 Automatic Mfg. Co., 65 Gouverneur St., Newark 4, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Belleaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 Bradford Components, Inc., Bradford, Pa.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
 Carad Corp., 2850 Bay Rd., Redwood City, Calif.
CELCO CONSTANTINE ENGINEERING LABORATORIES, CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567.
 Call Winders, Inc., 100 New York Ave., Westbury, N. Y.
COILCRAFT, INC., Cary, Ill. ADV. PG. 534.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 DeWitt Development Co., 3008 W. 117th St., Blue Island, Ill.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
ELECTRONIC COILS, INC., P. O. Box 1665, 33 Lyman St., Springfield, Mass. ADV. PG. 603.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
FIVE STAR CO., West Main St., Plantsville, Conn. ADV. PG. 517.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Hadley Co., Robert M., 5112 S. Mower St., Los Angeles 37, Calif.
 Harnett Electric Corp., 138 Haven Ave., Fort Washington, N. Y.
HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
 Jobbins Electronic Enterprises, Menlo Park, Calif.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lectrom, Inc., 5561 Northwest Highway, Chicago 30, Ill.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 549.
MAGNAVOX CO., COMPONENT SALES, INDUSTRIAL & DEFENSE PRODUCTS, Fort Wayne 4, Ind. ADV. PG. 181.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
 Magnet Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 376.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 1, Calif.
MODELECTRIC PRODUCTS CORP., 1500 Bangs Ave., Asbury Park, N. J. ADV. PG. 140.
MORAN ELECTRONIC COMPONENTS, INC., 10515 Metropolitan Ave., Kensington, Md. ADV. PG. 498.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
NORTH HILLS ELECTRIC CO., INC., 246-32 54th Ave., Douglass 62, N. Y. ADV. PG. 645.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 334.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Sickles, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass.

- INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
- Jobbins Electronic Enterprises, Menlo Park, Calif.
- Jowll Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
- Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
- MODELECTRIC PRODUCTS CORP., 1500 Bangs Ave., Asbury Park, N. J. ADV. PG. 140.
- ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
- ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
- PRECISION, INC., 730 Lyndale Ave., N., Minneapolis, Minn. ADV. PG. 637.
- Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
- Randall Inc., Douglas, 102 High St., Westerly, R. I.
- Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
- Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
- Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
- TEL-RAD MFG. CO., INC., 7th & Madison St., Fennimore, Wis. ADV. PG. 545.
- Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
- TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
- Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
- Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
- UNION ELECTRIC PRODUCTS CO., 24 Edison Pl., Newark 2, N. J. ADV. PG. 663.
- U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
- Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
- Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
- Wurlitzer Co., Rudolph, North Tonawanda, N. Y.
- INDUCTANCES—Metalized Glass**
- BEL FUSE, INC., 311 Mountain Rd., Union City, N. J. ADV. PG. 635.
- Corning Glass Works, Corning, N. Y.
- PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
- INDUCTANCES—Motor & Generator Field**
- AIR-MARINE MOTORS, INC., 369 Bay View Ave., Amityville, N. Y. ADV. PG. 290.
- BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
- CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
- ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
- Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
- HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
- Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
- MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
- U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
- INDUCTANCES—Multiple Wound**
- ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496.
- Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. ADV. PG. 210, 211.
- Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
- American Relay & Controls, Inc., 3621 Howard St., Skokie, Ill.
- Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind.
- Atlas Coil, Inc., Cottage St., Derby, Conn.
- BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
- Basler Electric Co., 601 Fifth St., Highland, Ill.
- BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
- CADELL-BURNS MFG. CO., 40 E. Second St., Mineola, N. Y. ADV. PG. 602.
- California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
- CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
- CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
- Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
- Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
- COILCRAFT, INC., Cary, Ill. ADV. PG. 534.
- Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
- Coto-Coil Co., Inc., 65 Pavilion Ave., Providence 5, R. I.
- DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
- DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 394.
- DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
- Electran Mfg. Co., 1901 N. Claybourn, Chicago, Ill.
- Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
- ELECTRONIC COILS, INC., P. O. Box 1665, 33 Lyman St., Springfield, Mass. ADV. PG. 603.
- ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
- Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
- EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490.
- Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
- FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
- FIVE STAR CO., West Main St., Plantsville, Conn. ADV. PG. 517.
- FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
- FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367.
- GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
- GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
- Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.
- Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
- HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603.
- HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau St., Brooklyn 22, N. Y. ADV. PG. 624.
- HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
- Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
- INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
- Jobbins Electronic Enterprises, Menlo Park, Calif.
- Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
- Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
- MAGNAVOX CO., Component Sales Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
- Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
- Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
- Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
- MORAN ELECTRONIC COMPONENTS, INC., 10515 Metropolitan Ave., Kensington, Md. ADV. PG. 498.
- National Coil Co., P. O. Box 1237, Sheridan, Wyo.
- NORTH HILLS ELECTRIC CO., INC., 246-32 54th Ave., Douglaston 62, N. Y. ADV. PG. 645.
- ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
- ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
- Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
- POWER INDUSTRIES CO., 2511 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
- Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
- Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
- Randall, Inc., Douglas, 102 High St., Westerly, R. I.
- REDMAN ELECTRONICS CORP., Box 72, Thompsonville, Conn. ADV. PG. 334.
- Sickles, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass.
- Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
- Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
- Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
- Stonite Coil Corp., Route 25, Yardville, N. J.
- Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
- TEL-RAD MFG. CO., INC., 7th & Madison St., Fennimore, Wis. ADV. PG. 545.
- Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
- Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
- Torocoil Co., 1374 Mobile Court, St. Louis, Mo.
- Transformer Engineers, 161 E. California, Pasadena 1, Calif.
- TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
- Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
- Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
- U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
- UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
- Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
- Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
- Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
- Wirt Co., 5221 Greene St., Philadelphia 44, Pa.
- Wurlitzer Co., Rudolph, North Tonawanda, N. Y.
- INDUCTANCES—Pickup**
- ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496.
- Atlas Coil, Inc., Cottage St., Derby, Conn.
- Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
- California Magnetic Control Corp., 7245 Atoll North Hollywood, Calif.
- Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
- Control Components Co., 46 Walnut St., Brookline, Mass.
- DeWitt Development Co., 3008 W. 127th St., Island, Ill.
- ELECTRONIC COILS, INC., P. O. Box 1665, 33 Lyman St., Springfield, Mass. ADV. PG. 603.
- ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
- HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
- Lesla, Via Bergamo 21, Milan, Italy.
- MORAN ELECTRONIC COMPONENTS, INC., 10515 Metropolitan Ave., Kensington, Md. ADV. PG. 498.
- ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
- ORTHO FILTER CORP., 198 Albion Ave., Paterson, N. J. ADV. PG. 312.
- REDMAN ELECTRONICS CORP., Box 72, Thompsonville, Conn. ADV. PG. 334.
- Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
- Transformer Engineers, 161 E. California, Pasadena, Calif.
- Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
- Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
- U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
- UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
- Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
- INDUCTANCES—Power & a-f Coil Windings**
- A. P. W. Co., 72 W. Main St., Rockaway, N. J.
- ACME ELECTRIC CORP., 21 Water St., Cuba, N. Y. ADV. PG. 260.
- Acme Electronics, Inc., 300 N. Lake Ave., Pasadena, Calif.
- ACME WIRE CO., New Haven 14, Conn. ADV. PG. 603.
- Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
- AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
- ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. ADV. PG. 210, 211.
- ASSOCIATED AMERICAN TRADING DIVISION, Empire State Bldg., New York 1, N. Y. ADV. PG. 603.
- Atlantic Transformer Co., Groton, Conn.
- Atlas Coil, Inc., Cottage St., Derby, Conn.
- ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230.
- Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
- California Magnetic Control Corp., 7245 Atoll North Hollywood, Calif.
- CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
- CENTRAL TRANSFORMER CO., 908 W. Jackson St., Chicago, Ill. ADV. PG. 567.
- Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
- Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
- Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
- DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
- Daystrom Instrument Co., Archbald, Pa.
- DeLuxe Coils, Inc., Wabash, Ind.
- DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
- DeWitt Development Co., 3008 W. 127th St., Island, Ill.
- Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
- Electran Mfg. Co., 1901 N. Claybourn, Chicago, Ill.
- Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
- Electro Engineering Works, 6021 College Ave., Oak Brook, Ill.
- ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
- EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490.
- Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
- FEDERAL TELEPHONE & RADIO CO., A DIV. OF I.T. & T., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
- FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
- FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
- GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
- Goodmans Industries Ltd., Axiom Works, Wembley, Middlesex, England.
- Grand Transformers, Inc., Grand Haven, Mich.
- Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.
- HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603.
- Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.
- Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
- INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
- Jobbins Electronic Enterprises, Menlo Park, Calif.
- LANDEVIN MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 152, 153.

LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Magnavox Co., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. ADV. PG. 532.
 Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
 ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I.
 Richmond Engineering Co., Inc., Concord St., South Norwalk, Conn.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
 TERLING TRANSFORMER CORP., 297 N. Seventh St., Brooklyn 7, N. Y. ADV. PG. 662.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
 Trocilo Co., 1374 Mobile Court, St. Louis, Mo.
 Transformer Engineers, 161 E. California, Pasadena 1, Calif.
 TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.
 TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417.
 TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 Vokar Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138.

INDUCTANCES—r-f & i-f Receiving or Transmitting

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496.
 Aero Coil, Inc., 24 Cliff St., Jersey City, N. J.
 AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Atlas Coil, Inc., Cottage St., Derby, Conn.
 Automatic Mfg. Co., 65 Gouveneur St., Newark 4, N. J.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Merion, Pa. ADV. PG. 174, 175.
 Bradford Components, Inc., Bradford, Pa.
 Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 BDELL-BURNS MFG. CO., 40 E. Second St., Mineola, N. Y. ADV. PG. 602.
 Best Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 BRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 CRAFT, INC., Cary, Ill. ADV. PG. 534.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill.
 DETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
 DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill.
 ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
 GLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367.
 GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
 SLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637.
 THMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Vokar Electric Corp., 138 Haven Ave., Port Washington, N. Y.
 WILBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 624.
 HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.

Insuline Corp. of America, 36-02 35th Ave., Long Island City, N. Y.
 JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 LaPointe Electronics Inc., Rockville, Conn.
 Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
 LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lewis Spring & Mfg. Co., 2646 W. North Ave., Chicago 47, Ill.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
 NORTH HILLS ELECTRIC CO., INC., 246-32 54th Ave., Douglaston 62, N. Y. ADV. PG. 645.
 ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
 PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
 POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 334.
 Sickle, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Summit Coil Co., 4 Claremont Rd., Bernardsville, N. J.
 Superex Electronics Corp., 23 Atherton Ave., Yonkers, N. Y.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
 Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.
 Wirt Co., 5221 Greene St., Philadelphia 44, Pa.

INDUCTANCES—Relay

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496.
 AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 ALLIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. ADV. PG. 210, 211.
 Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
 American Relay & Controls Inc., 3621 Howard St., Skokie, Ill.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
 CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
 Ceto-Coil Co., Inc., 65 Pavilion Ave., Providence 5, R. I.
 DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 394.
 DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill.
 ELECTRONIC COILS, INC., P. O. Box 1665, 33 Lyman St., Springfield, Mass. ADV. PG. 603.
 ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490.
 FIVE STAR CO., West Main St., Plantsville, Conn. ADV. PG. 517.
 HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
 May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.

MORAN ELECTRONIC COMPONENTS, INC., 10515 Metropolitan Ave., Kensington, Md. ADV. PG. 498.
 ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Randall, Inc., Douglas, 102 High St., Westerly, R. I.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Richmond Engineering Co., Inc., Concord St., South Norwalk, Conn.
 Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

INDUCTANCES—Solenoid
See INDUCTANCES—Magnet

INDUCTANCES—Speaker (Voice Coil)

California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 DANO ELECTRIC CO., Main St., Winsted, Conn. ADV. PG. 394.
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Goodmans Industries Ltd., Axiom Works, Wembley, Middlesex, England.
 HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
 POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

INDUCTANCES—Television Focusing

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496.
 Atlas Coil, Inc., Cottage St., Derby, Conn.
 Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
 GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 377.
 Halldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 RADIO CORP. OF AMERICA, TUBE DEPT., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 130258, Houston 19, Texas.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Television Laboratories, Inc., Mill St., Wauconda, Ill.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

INDUCTANCES—Toroidal

A. P. W. Co., 72 W. Main St., Rockaway, N. J.
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.

Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
ASSOCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. ADV. PG. 669.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Basler Electric Co., 601 Fifth St., Highland, Ill.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
 Coast Coil Co., 5332 W. Washington Blvd., Los Angeles 16, Calif.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
ELECTRONIC COILS, INC., P. O. Box 1665, 33 Lyman St., Springfield, Mass. ADV. PG. 603.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.
 Harder Co., Donald C., 3338 India St., San Diego 1, Calif.
 Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lesa, Via Bergamo 21, Milan, Italy.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
MAGNETICS RESEARCH CO., 142 King St., Chappaqua, N. Y. ADV. PG. 651.
MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 376.
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
 Sickles, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.O. 2, England.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
 Torocoil Co., 1374 Mobile Court, St. Louis, Mo.

TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.
 Transformer Engineers, 161 E. California, Pasadena 1, Calif.
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 391, 552.
VARI-L CO., INC., 432 Fairfield Ave., Stamford, Conn. ADV. PG. 192.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

INDUCTANCES—Variable
1. Saturable Reactors
2. Mechanical

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. 2. ADV. PG. 496.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn. 1-2.
CADELL BURNS MFG. CO., 40 East Second St., Mineola, N. Y. 2. ADV. PG. 602.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. 1-2. ADV. PG. 547, 549, 551.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. 1.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. 2. ADV. PG. 380.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. 1-2.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. 2. ADV. PG. 653.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 2. ADV. PG. 177-180.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. 1. ADV. PG. 212.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore. 2.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo. 2.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. 1. ADV. PG. 612.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. 1. ADV. PG. 650.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. 1-2.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. 1. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. 1-2. ADV. PG. Inside Front Cover.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif. 2.
VARI-L CO., INC., 432 Fairfield Ave., Stamford, Conn. 1-2. ADV. PG. 192.
 Wirt Co., 5221 Greene St., Philadelphia 44, Pa. 2.

INDUCTANCES—Width Control

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
CADELL-BURNS MFG. CO., 40 E. Second St., Mineola, N. Y. ADV. PG. 602.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COILCRAFT, INC., Cary, Ill. ADV. PG. 534.
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637.
GUTHMAN & CO., INC., Edwin I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Halldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 624.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Meissner Mfg. Div., Maquire Industries, Inc., Mt. Carmel, Ill.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.

Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
 Ram Electronics, Inc., S. Buckout St., Irvington, Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
REDMAN ELECTRONICS CORP., P. O. Box 72, Yonkersville, Conn. ADV. PG. 334.
 Sickles, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Summit Coil Co., 4 Claremont Rd., Bernardsville, Pa.
 Superex Electronics Corp., 23 Atherton Ave., Yonkers, N. Y.
TEL-RAD MFG. CO., INC., 7th & Madison St., Milwaukee, Wis. ADV. PG. 545.
 Teleradio Engineering Corp., 99 Wall St., New York 1, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Wirt Co., 5221 Greene St., Philadelphia 44, Pa.

INDUCTION HEATING
 See **HEATING—Induction**

INDUCTORS
 See **CHOKES and INDUCTANCES—Choke**

INFRA-RED DRYING OVENS
 See **OVENS**

INSPECTION EQUIPMENT—Lighting

Cable Electric Products Inc., Providence, R. I.
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
 Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.
 Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.

INSTRUMENT PARTS—Precision

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Brooklyn 1, N. J. ADV. PG. 614.
 Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
 American Optical Co., Box A, Buffalo 15, N. Y.
 Aremac Associates, 329 W. Washington St., Pasadena, Calif.
 Arma Corp., Old Country Rd., Garden City, N. Y.
ART WIRE & STAMPING CO., 227 High St., New York 1, N. Y. ADV. PG. 497.
 Autoscrew Co., 216-222 W. 18th St., New York 11, N. Y.
 Avor Corp., 450 Broome St., New York 13, N. Y.
 Belock Instrument Corp., 13-11 111th St., Queens, N. Y.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 251.
 Braun Tool & Instrument Co., Inc., 140 Fifth Ave., New York 1, N. Y.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord St., Cambridge 38, Mass. ADV. PG. 240.
 Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 91 Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 574, 607, 659.
 Custom Gear Co., South Bend, Ind.
 Daco Machine Tool Co., 202 Tillary St., Brooklyn 1, N. Y.
 Diamond Instrument Co., 40 North Ave. at Brookline, Wakefield, Mass.
 Eastern Specialty Co., Philadelphia 40, Pa.
 Edmund Scientific Co., 502 E. Gloucester Pike, Boston, N. J.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
 Felsenthal & Sons Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Gombos Co., Inc., John, 103 Montgomery St., Irvington, N. J.
 Gorrell & Gorrell, Haworth, N. J.
 Gries Reproducer Corp., 151 Beechwood St., Rochelle, N. Y.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
H. & H. PRODUCTS CO., 766 Ramsey Ave., Hudson, N. J. ADV. PG. 668.
 Hoffman Needle Works, Inc., 635 59th St., Westchester, N. Y.
 Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
 Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
KENT CO., F. C., 64 Howard St., Irvington, N. J. ADV. PG. 578.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
LINK AVIATION, INC., Binghamton, N. Y. ADV. PG. 507.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 New Rochelle Precision Grinding Corp., 162 E. Main St., New Rochelle, N. Y.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
 Northfield-Linden Corp., 4400 Austin Blvd., Island Park, N. Y.
PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 Pye Ltd., Cambridge, England.
 Serdex, Inc., 91 Cambridge St., Boston, Mass.
 Sinclair Mfg. Co., Chartley, Mass.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Tensitron, Inc., Harvard, Mass.
 Trans-American—Precision Instrument Corp., 34-17 Lawrence St., Flushing 54, N. Y.
UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 391, 552.
 Wallorbs Jewel Co., Lancaster, Pa.
WALTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Waltham Screw Co., Waltham, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wenth Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 U. S. Gauge Div., American Machine and Metals, Inc., Sellersville, Pa.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

AMMETERS—r-f

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

AUDIOMETERS

Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
 Beltone Hearing Aid Co., 2900 W. 36th St., Chicago 32, Ill.
 DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Maico Co., Inc., 21 North Third St., Minneapolis, Minn.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago, 41, Ill.
 Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449.

BRIDGES—Electrical

Allegheny Instrument Co., Inc., Cumberland, Md.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230.
 Bristol Co., The Waterbury 20, Conn.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Cinema-Television Ltd., Worsley Bridge Rd., London S. E. 26, England.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
 International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 McShan Development Corp., 71 Murray St., New York 7, N. Y.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—Impedance

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 158.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663.
 Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 McShan Development Corp., 71 Murray St., New York 7, N. Y.
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
 Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—Inductance

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
 Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 319.
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Pye Ltd., Cambridge, England.

BRIDGES—v-hf

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 158.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

CALIBRATORS—Sweep

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Daystrom Instrument Co., Archbald, Pa.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Jowill Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
 Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.

INSTRUMENTS—ELECTRICAL MEASURING

Ammeters to Wattmeters inclusive

AMMETERS

See also Microammeters

Micro-Microammeters Milliammeters

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Aude Electrical Instrument Co., Inc., Penacook, N. H.
 Bristol Co., The Waterbury 20, Conn.
 Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio.
JUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 Metric Design & Mfg. Corp., Burlington, Iowa.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
 Hartline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.
 Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GILSON CORP., Metuchen, N. J. ADV. PG. 640.
INTLON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
MAKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
MAVIT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
INTERNATIONAL INSTRUMENTS INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H., ADV. PG. 390.
 Strindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Teters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Hamid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
 Hio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Rier Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.
 Finance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
 Her-Smith Corporation, Bethlehem, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
STRITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 657.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
WELRING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 373.
 Wht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
ASSOCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. ADV. PG. 669.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Basler Electric Co., 601 Fifth St., Highland, Ill.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
 Coast Coil Co., 5332 W. Washington Blvd., Los Angeles 16, Calif.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480.
ELECTRONIC COILS, INC., P. O. Box 1665, 33 Lyman St., Springfield, Mass. ADV. PG. 603.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.
 Harder Co., Donald C., 3338 India St., San Diego 1, Calif.
 Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lesa, Via Bergamo 21, Milan, Italy.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
MAGNETICS RESEARCH CO., 142 King St., Chappaqua, N. Y. ADV. PG. 651.
MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 376.
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
 Sickles, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
 Torocoil Co., 1374 Mobile Court, St. Louis, Mo.

TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.
 Transformer Engineers, 161 E. California, Pasadena 1, Calif.
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 391, 552.
VARI-L CO., INC., 432 Fairfield Ave., Stamford, Conn. ADV. PG. 192.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

INDUCTANCES—Variable
1. Saturable Reactors
2. Mechanical

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. 2. ADV. PG. 496.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn. 1-2.
CADDELL BURNS MFG. CO., 40 East Second St., Mineola, N. Y. 2. ADV. PG. 602.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. 1-2. ADV. PG. 547, 549, 551.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. 1.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. 2. ADV. PG. 380.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. 1-2.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. 2. ADV. PG. 653.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 2. ADV. PG. 177-180.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. 1. ADV. PG. 212.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore. 2.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo. 2.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. 1. ADV. PG. 612.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. 1. ADV. PG. 650.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. 1-2.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. 1. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. 1-2. ADV. PG. Inside Front Cover.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif. 2.
VARI-L CO., INC., 432 Fairfield Ave., Stamford, Conn. 1-2. ADV. PG. 192.
 Wirt Co., 5221 Greene St., Philadelphia 44, Pa. 2.

INDUCTANCES—Width Control

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
CADDELL-BURNS MFG. CO., 40 E. Second St., Mineola, N. Y. ADV. PG. 602.
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
COILCRAFT, INC., Cary, Ill. ADV. PG. 534.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. Y. ADV. PG. 380.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637.
GUTHMAN & CO., INC., Edwin I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Hallderson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 624.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Meissner Mfg. Div., Maquire Industries, Inc., Mt. Carmel, Ill.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.

Radio Industries, Inc., 5225 Ravenswood Ave., 40, Ill.
 Ram Electronics, Inc., S. Buckout St., Irvington
 Raypar, Inc., 7800 W. Addison St., Chicago
REDMAN ELECTRONICS CORP., P. O. Box 72, Sonville, Conn. ADV. PG. 334.
 Sickles, F. W., Div. General Instrument Corp., St., Chicopee, Mass.
 Square Root Mfg. Corp., 391 Saw Mill Rd., Yonkers, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh
 Summit Coil Co., 4 Claremont Rd., Bernardsville
 Superex Electronics Corp., 23 Atherton Ave., N. Y.
TEL-RAD MFG. CO., INC., 7th & Madison St., more, Wis. AV. PG. 545.
 Teleradio Engineering Corp., 99 Wall St., New York, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Wirt Co., 5221 Greene St., Philadelphia 44, Pa.

INDUCTION HEATING
 See HEATING—Induction

INDUCTORS
 See CHOKES and INDUCTANCES—Chokes

INFRA-RED DRYING OVENS
 See OVENS

INSPECTION EQUIPMENT—Lighting

Cable Electric Products Inc., Providence, R. I.
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
 Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.
 Scherr Co., Inc., George, 200 Lafayette St., New York, N. Y.

INSTRUMENT PARTS—Precision

Aerovox Corp., 740 Belleville Ave., New Bedford
AIRFLYTE ELECTRONICS CO., 21 Cottage St., New York, N. J. ADV. PG. 614.
 Allied Products Div., Hamilton Watch Co., Lancaster
 American Optical Co., Box A, Buffalo 15, N. Y.
 Aremac Associates, 329 W. Washington St., Park Ridge, Calif.
 Arma Corp., Old Country Rd., Garden City, N. Y.
ART WIRE & STAMPING CO., 227 High St., New York, N. J. ADV. PG. 497.
 Autoscrew Co., 216-222 W. 18th St., New York
 Avor Corp., 450 Broome St., New York 13, N. Y.
 Belock Instrument Corp., 13-11 111th St., Queens, N. Y.
BORG EQUIPMENT DIVISION, THE GEORGE CORP., Janesville, Wis. ADV. PG. 251.
 Braun Tool & Instrument Co., Inc., 140 F. Hawthorne, N. J.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Terminal, New York 17, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Bridge 38, Mass. ADV. PG. 240.
 Canadian Radium & Uranium Corp., 630 Fillmore, New York 20, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., Keefe Ave., Milwaukee 1, Wis. ADV. PG. 574, 607, 659.
 Custom Gear Co., South Bend, Ind.
 Daco Machine Tool Co., 202 Tillary St., Brooklyn, N. Y.
 Diamond Instrument Co., 40 North Ave. at Wakefield, Mass.
 Eastern Specialty Co., Philadelphia 40, Pa.
 Edmund Scientific Co., 502 E. Gloucester Pike, Edison, N. J.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 210th St., New York 70, N. Y. ADV. PG. 460.
 Felsenthal & Sons Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Gombos Co., Inc., John, 103 Montgomery St., Chicago 11, N. J.
 Gorrell & Gorrell, Haworth, N. J.
 Gries Reproducer Corp., 151 Beechwood St., Rochelle, N. Y.
GRAPHITE METALLIZING CORP., 1041 Nepperlyon, Yonkers, N. Y. ADV. PG. 388, 389.
H. & H. PRODUCTS CO., 766 Ramsey Ave., New York, N. J. ADV. PG. 668.
 Hoffman Needle Works, Inc., 635 59th St., New York, N. Y.
 Instrument Laboratories, 315 W. Walton Pl., Chicago 10, Ill.
 Johnson Engineering Co., Inc., Welton V., 9500 Ave., Summit, N. J.
KENT CO., F. C., 64 Howard St., Irvington, N. Y. ADV. PG. 578.

ELECTRONIC and ALLIED PRODUCTS

INSTRUMENTS—ELECTRICAL MEASURING

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
LINK AVIATION, INC., Binghamton, N. Y. ADV. PG. 507.
Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
New Rochelle Precision Grinding Corp., 162 E. Main St., New Rochelle, N. Y.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
Northfield-Linden Corp., 4400 Austin Blvd., Island Park, N. Y.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
Pye Ltd., Cambridge, England.
Serdex, Inc., 91 Cambridge St., Boston, Mass.
Sinclair Mfg. Co., Chartley, Mass.
Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
Tensitron, Inc., Harvard, Mass.
Trans-American Precision Instrument Corp., 34-17 Lawrence St., Flushing 54, N. Y.
UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 391, 552.
Walthors Jewel Co., Lancaster, Pa.
ELECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
Waltham Screw Co., Waltham, Mass.
Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
U. S. Gauge Div., American Machine and Metals, Inc., Sellersville, Pa.
Wallace & Tiernan Co., Inc., Belleville 9, N. J.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

AMMETERS—r-f

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

AUDIOMETERS

Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.
Beltone Hearing Aid Co., 2900 W. 36th St., Chicago 32, Ill.
DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill.
Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
Maico Co., Inc., 21 North Third St., Minneapolis, Minn.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago 41, Ill.
Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449.

BRIDGES—Electrical

Allegany Instrument Co., Inc., Cumberland, Md.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230.
Bristol Co., The Waterbury 20, Conn.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Cinema-Television, Ltd., Worsley Bridge Rd., London S. E. 26, England.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
McShan Development Corp., 71 Murray St., New York 7, N. Y.
Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Tech Laboratories, Inc., Bergen & Edsall Bldgs., Palisades Park, N. J.
Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—Impedance

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 158.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663.
Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.
Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
McShan Development Corp., 71 Murray St., New York 7, N. Y.
Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.
Muirhead & Co., Ltd., Beckenham, Kent, England.
Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

BRIDGES—Inductance

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Clough Bregle Co., 6014 N. Broadway, Chicago, Ill.
Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 319.
Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
Pye Ltd., Cambridge, England.

BRIDGES—v-hf

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 158.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

CALIBRATORS—Sweep

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
Daystrom Instrument Co., Archbald, Pa.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
Jowill Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif.
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 557.

INSTRUMENTS—ELECTRICAL MEASURING

Ammeters to Wattmeters inclusive

AMMETERS

See also Microammeters

Micro-Microammeters Milliammeters

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Aurex Electrical Instrument Co., Inc., Penacook, N. H.
Bristol Co., The Waterbury 20, Conn.
Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio.
JUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
Metric Design & Mfg. Corp., Burlington, Iowa.
Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
Furline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.
Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENCO CORP., Metuchen, N. J. ADV. PG. 640.
MILTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
KOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
LIT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
INTERNATIONAL INSTRUMENTS INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
Marindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Rimand Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
Rio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
Ryer Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.
Science Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
Sier-Smith Corporation, Bethlehem, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
WRITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 657.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
SRLING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 373.
Steel Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
 Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
 TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
 TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.

CALIBRATORS—uhf

Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
 MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.

COMPARATORS—Automatic Resistance

Barnes Development Co., 213 W. Baltimore Pike, Lansdowne 1, Pa.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.
 Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
 Foxboro Co., The, Foxboro, Mass.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

COMPARATORS—Circuit Linearity

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

COMPARATORS—Crystal

Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.

COMPARATORS—Voltage

Arma Corp., Old Country Rd., Garden City, N. Y.
 Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Dressen-Barnes Corp., 250 N. Vinado Ave., Pasadena 8, Calif.
 ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 General Devices, Inc., P. O. Box 253, Princeton, N. J.
 KEPCO LABS., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 23-25.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

GALVANOMETERS

Berndt-Bach, Inc., Auricon Div., 6914 Romaine St., Hollywood 38, Calif.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 G-M LABORATORIES, INC., 4336 N. Knox Ave., Chicago, Ill. ADV. PG. 608.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GREIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

HELLAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 95.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Pye, Ltd., Cambridge, England.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
 TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

INSTRUMENTS—Panel

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 ART-LOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 561.
 Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Burlington Instrument Co., Burlington, Iowa.
 California Bent Glass Corp., Torrance, Calif.
 Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Cutler Measuring Products Co., 1025 Line St., Camden, N. J.
 DeJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 Electrical Design & Mfg. Co., Burlington, Iowa.
 FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV. PG. 450.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Fischer & Porter Co., 476 Warminster Rd., Hatboro, Pa.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 HOYT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada
 Metalcraft, Inc., 86-08 130th St., Richmond Hill 18, N. Y.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 665.
 Panelcraft, 8027 S.E. 13th Ave., Portland 2, Ore.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

Roller-Smith Corporation, Bethlehem, Pa.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Brighton 35, Mass. ADV. PG. 598.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 657.
 STERLING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 373.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 U. S. Gauge Div., American Machine & Metals Sellersville, Pa.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

INSTRUMENTS—Ultrasonic

ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Lawn, N. J. ADV. PG. 426.
 ARENBERG ULTRASONIC LABORATORY, 94 Green Jamaica Plain 30, Mass. ADV. PG. 571.
 Atlantic Research Corp., 901 N. Columbus, Alexandria, Va.
 BRANSON INSTRUMENTS, INC., 438 Fairfield Stamford, Conn. ADV. PG. 557.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 CLARK CRYSTAL CO., Farm Rd., Marlboro, N. H. ADV. PG. 581.
 Deltron, Inc., P. O. Box 192, Glenside, Pa.
 Dice Co., J. W., Englewood, N. J.
 Electro Circuits, Inc., 401 E. Green St., Pasadena
 EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Bayside, N. Y. ADV. PG. 277.
 GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
 GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 641.
 International Testing Service, 321 N. Hamilton Saginaw, Mich.
 Massa Laboratories, Inc., 5 Fottler Rd., Hingham
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Piezo Products Co., Whitney St., Framingham, Mass.
 RADIO SONIC CORP., 111 Bleeker St., New York 13, N. Y. ADV. PG. 631.
 RAYTHON MFG. CO., EQUIPMENT SALES DIV., 54, Mass. ADV. PG. 26.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 Rich-Roth Laboratories, 1240 Main St., Hartford, Conn.
 Sperry Products, Inc., Danbury, Conn.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 Ultrasonic Engineering Co., P. O. Box 46, Maywood
 VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.
 WAVEFORMS, INC., 333 Sixth Ave., New York 11, N. Y. ADV. PG. 560.

MAGNETOMETERS

ECLIPSE PIONEER DIV., BENDIX AVIATION Teterboro, N. J. ADV. PG. 105-108.
 FISHER ENGINEERING, INC., 2060 U. S. 29, P. O. Box 327, Huntington, Ind. ADV. PG. 59.
 Georator Corp., Box 463, Manassas, Va.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 St., Cambridge 42, Mass. ADV. PG. 436.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
 VARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

MEGOhmmeters

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Biddle Co., James G., 1316 Arch St., Philadelphia
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.
 Earnshaw-Tharp-Christensen Corp., Box 196, Nor Vegas, Nev.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 FREED TRANSFORMER CO., INC., 1736 Weirfield Brooklyn 27, N. Y. ADV. PG. 227.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GENERAL HERMETIC SEALING CORP., 99 E. Thorne Ave., Valley Stream, N. Y. ADV. PG. 641.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 MacLeod & Hanopol, Inc., 10 Roland St., Chardon 29, Mass.
 Martindale Electric Co., Edgewater Branch, Boston, Cleveland 7, Ohio.
 National Pneumatic Co., Inc., and Holtzer-Cabot, 125 Amory St., Boston 19, Mass.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
 Radio City Products Co., Inc., Centre & Glendale Easton, Pa.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Transifron, Inc., 154 Spring St., New York 12, N. Y.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Electronic Capacitance

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
 PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

METERS—Frequency

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 645.
 Airtec, Ltd., High Wycombe, Buckinghamshire, England.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
 BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Conn, Ltd., O. G., Electronics Equipment Div., Elkhart, Ind.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Detron Corp., 5420 Vineland Ave., North Hollywood, Calif.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
 Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Farmers Engineering & Mfg. Co., Irwin, Pa.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Gates Radio Co., Quincy, Ill.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-20.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 35, Mass. ADV. PG. 177-180.
 GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif. ADV. PG. 671.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 LAMPKIN LABORATORIES, INC., Bradenton 1, Fla. ADV. PG. 665.
 LAMVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.

Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
 MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 324-326.
 Pantek Co., Box 212, El Segundo, Calif.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Roller-Smith Corporation, Bethlehem, Pa.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
 WANG LABORATORIES, 296 Columbus Ave., Boston 16, Mass. ADV. PG. 633.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Wheeler Laboratories, Inc., Great Neck, N. Y.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Impedance

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 645.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 158.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
 TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

METERS—f-m Deviation

See also Monitors

A. R. F. Products, Inc., 7627 Lake St., River Forest, Ill.
 AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-20.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. 29-36.
 LAMPKIN LABORATORIES, INC., Bradenton 1, Fla. ADV. PG. 665.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

METERS—Field Strength

Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Springs, Md.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Ferris Instrument Co., 110 Cornelia St., Boonton, N. J.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.
 Gyro Electronics Co., 325 Canal St., New York, N. Y.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Industrial Television, Inc., 369 Lexington Ave., Clifton, N. J.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 319.
 PARAPLEGICS MFG. CO., INC., 10068 Franklin Ave., Franklin Park, Ill. ADV. PG. 472.
 Radion Corp. 1130 Wisconsin Ave., Chicago 14, Ill.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 STODDART AIRCRAFT RADIO CO., 6644 Santa Monica Blvd., Hollywood 38, Calif. ADV. PG. 535.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

METERS—Modulation

See Also Monitors—Modulation

A.R.F. Products, Inc., 7627 Lake St., River Forest, Ill.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Gates Radio Co., Quincy, Ill.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-20.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 LAMPKIN LABORATORIES, INC., Bradenton 1, Fla. ADV. PG. 665.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

METERS—Null

BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 58.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Burlington Instrument Co., Burlington, Iowa.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 COMPUTER CO. OF AMERICA, DIV OF BRUNO-NEW YORK INDUSTRIES, CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 GREIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
 INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
 KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
 ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Output

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Burlington Instrument Co., Burlington, Iowa.
 DAVEN CO., 191 Central Av., Newark 4, N. J. ADV. PG. 243.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Earnshaw-Sharp-Christensen Corp., Box 196, North Las Vegas, Nev.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
FLUKE MFG. CO., INC., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 652.
Gates Radio Co., Quincy, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
Roller-Smith Corporation, Bethlehem, Pa.
Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
Trio Laboratories, P.O. Box 143, Wantagh, N. Y.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

METERS—Panel

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Beede Electrical Instrument Co., Inc., Penacook, N. H.
Bristol Co., The, Waterbury 20, Conn.
Burlington Instrument Co., Burlington, Iowa.
DE JUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
Electric Design & Mfg. Corp., Burlington, Iowa.
FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV. PG. 450.
Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GREIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
HOYT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 657.
Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
STERLING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 373.
Supreme, Inc., Greenwood, Miss.
Trio Laboratories, P. O. Box 143, Wantagh, N. Y.
Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Phase Angle

ADVANCE ELECTRONICS CO., 451 Highland Ave., Passaic, N. J. ADV. PG. 645.
Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
Airmec Ltd., High Wycombe, Buckinghamshire, England.
Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Deltron, Inc., P. O. Box 192, Glenside, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

METERS—Power Factor

Deltron, Inc., P. O. Box 192, Glenside, Pa.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
FLUKE MFG. CO., INC., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 652.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
Roller-Smith Corporation, Bethlehem, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

METERS—Q

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 158.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

METERS—RF Power

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 519.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
Burlington Instrument Co., Burlington, Iowa.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
JONES ELECTRONICS CO., INC., M. C., 185 N. Main St., Bristol, Conn. ADV. PG. 565.
KINGS ELECTRONICS CO., 565 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

METERS—Standing Wave Ratio

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 519.
BROWNING LABORATORIES, INC., Main St., Winchester Mass. ADV. PG. 522.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
EDISON, INC., THOMAS A., INSTRUMENT DIV., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 392, 393.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
JONES ELECTRONICS CO., INC., M. C., 185 N. Main St., Bristol, Conn. ADV. PG. 565.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
NISSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
Rollin Co., 2010 Lincoln Ave., Pasadena 3, Calif.
Sierra Electronic Corp., San Carlos, Calif.

SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CO.
 Great Neck, N. Y. ADV. PG. 331, 332.

METERS—Wave

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. PG. 383.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, ADV. PG. 569.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
Century Metalcraft Corp., Electronic Div., 14806 St., Van Nuys, Calif.
F-R MACHINE WORKS, INC., 26-12 Borough Woodside 77, N. Y. ADV. PG. 169-171.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. Y. ADV. PG. 420, 421.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
Linear Equipment Labs., Brightwater Place, Massachusetts, N. Y.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244
Sightmaster of California Co., Gillespie Airport, S. Calif.
Standard Telephones & Cables Ltd., Connaught Aldwych, London, W.C. 2, England.
THOMPSON PRODUCTS, INC., ELECTRONICS DIV., Clarkwood Ave., Cleveland 3, Ohio. ADV. PG. 370.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
Weymouth Instrument Co., 1440 Commercial St., Weymouth 89, Mass.
Wheeler Laboratories, Inc., Great Neck, N. Y.

METERS—X-Ray Intensity

ANTON ELECTRONIC LABORATORIES, INC., Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 3
Bar-Ray Products, Inc., 209 25th St., Brooklyn 1, N. Y.
Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 29
Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
North American Philips Co., Inc., 750 S. Fulton Mt. Vernon, N. Y.
NUCLEONIC COMPANY OF AMERICA, 196 DeGraaf Brooklyn 31, N. Y. ADV. PG. 646.
Picker X-Ray Corp., 25 S. Broadway, White Plains, R-C Scientific Instrument Co., Inc., 307 Culver Playa del Rey, Calif.
Radioactive Products, Inc., 443 W. Congress Detroit 26, Mich.
VICTOREEN INSTRUMENT CO., COMPONENT DIV., Perkins Ave., Cleveland 14, Ohio. ADV. PG. 8
X-Ray Dept. of General Electric Co., 4855 Electric Milwaukee 1, Wis.

MICROAMMETERS

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Beede Electrical Instrument Co., Inc., Penacook, N. H.
Bristol Co., The, Waterbury 20, Conn.
British Electronic Sales Co., 23-03 45th Rd., Island City 1, N. Y.
Burlington Instrument Co., Burlington, Iowa.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Island City 1, N. Y. ADV. PG. 411, 413.
Earnshaw-Tharp-Christensen Corp., Box 196, North Vegas, Nev.
Electric Design & Mfg. Corp., Burlington, Iowa.
Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
GREIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
HOYT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
Radio City Products Co., Inc., Centre & Glendale Easton, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
Research Electronics Laboratory, Roslyn, Pa.
Roller-Smith Corporation, Bethlehem, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Supreme, Inc., Greenwood, Miss.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

MICROFARADIMETERS

Burlington Instrument Co., Burlington, Iowa.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

MICRO-MICROAMMETERS

Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
ETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 225.
 Hish Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
WELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
REIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
 Edison Electronic Mfg. Co., Inc., Union Bldg., 119 E. Union St., Pasadena 1, Calif.
ETHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.
HILLVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
PHOASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
WESTON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Research Electronics Laboratory, Roslyn, Pa.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

MILLIAMMETERS

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 Bristol Co., The Waterbury 20, Conn.
 Hish Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Burlington Instrument Co., Burlington, Iowa.
 Bridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
DEJUR-AMSCO CORP., Northern Blvd., at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
WELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
 Electric Design & Mfg. Corp., Burlington, Iowa.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
LENCO CORP., Metuchen, N. J. ADV. PG. 640.
REIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
HOYT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
PHOASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Pye Ltd., Cambridge, England.
 Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
 Roller-Smith Corporation, Bethlehem, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Supreme, Inc., Greenwood, Miss.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Trio Laboratories, P. O. Box 143, Wantagh, N. Y.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
STERLING MFG. CO., 7201 Wentworth, Cleveland, Ohio. ADV. PG. 373.
 Supreme, Inc., Greenwood, Miss.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.

MILLIVOLT METERS

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 Bristol Co., The Waterbury 20, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Burlington Instrument Co., Burlington, Iowa.
 Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.
COMPUTER CO. OF AMERICA, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
 Electric Design & Mfg. Corp., Burlington, Iowa.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Foxboro Co., The, Foxboro, Mass.
 Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
LENCO CORP., Metuchen, N. J. ADV. PG. 640.
REIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
HOYT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
PHOASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Pye Ltd., Cambridge, England.
 Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
 Roller-Smith Corporation, Bethlehem, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Supreme, Inc., Greenwood, Miss.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Trio Laboratories, P. O. Box 143, Wantagh, N. Y.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.
WESTON ELECTRICAL INSTRUMENTS CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

OHMMETERS

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Associated Research Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
 Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
 Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
 Esterline-Angus Co., Inc., P. O. Box 586, Indianapolis, Ind.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
PHOASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back and Back Covers.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Roller-Smith Corporation, Bethlehem, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
SHURITE METERS, 35-B Hamilton St., New Haven 8, Conn. ADV. PG. 657.
 Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 Supreme, Inc., Greenwood, Miss.
 Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

RATIOMETERS

CAL-TRONICS CORP., 11307 Hindry Ave., Los Angeles 45, Calif. ADV. PG. 340.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
LINK AVIATION, INC., Binghamton, N. Y. ADV. PG. 507.
 Pye Ltd., Cambridge, England.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Union Switch & Signal Div. of Westinghouse Air Brake Co., General Apparatus Sales, Pittsburgh 18, Pa.

RECORDERS—Frequency

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
BERKELEY DIV., BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
SOUND APPARATUS CO., Stirling, N. J. ADV. PG. 624.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

RECORDERS—Power Level

Bristol Co., The, Waterbury 20, Conn.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
SOUND APPARATUS CO., Stirling, N. J. ADV. PG. 624.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

RECORDERS—Telemetering

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 98, 99.
APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44, Princeton, N. J. ADV. PG. 618.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y.
Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
Bristol Co., The, Waterbury 20, Conn.
Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 658.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
MAGNECORD, INC., 225 W. Ohio St., Chicago 10, Ill. ADV. PG. 220.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
Product Associates, Inc., 318 W. Olympic Blvd., Los Angeles, Calif.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

STANDARDS—Capacitance

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
Plastic Capacitors, Inc., 2511 W. Moffat St., Chicago 47, Ill.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TELETRON INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.

STANDARDS—Frequency

Acme Electronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
Airmec Ltd., High Wycombe, Buckinghamshire, England.
AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 36, N. Y. ADV. PG. 322.
Bassett, Inc., Rex, 1314 N. E. 17 Court, P. O. Box 1759, Fort Lauderdale, Fla.
BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 375.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
CLARK CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.
Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif. ADV. PG. 671.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 634.
NEW LONDON INSTRUMENT CO., P. O. Box 189, New London, Conn. ADV. PG. 451.
Norrman Laboratories, Ernst, Williams Bay, Wis.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.

PHILAMON LABORATORIES, INC., 5717 Third Ave., Brooklyn 20, N. Y. ADV. PG. 514.
Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 662.
Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.

STANDARDS—Inductance

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St., New Rochelle, N. Y. ADV. PG. 601.
FRED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

STANDARDS—Resistance

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORPORATION, 9 Elm Avenue, Mount Vernon, N. Y. ADV. PG. 617.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

TRACERS—Signal

Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

VOLTMETERS

Assembly Products, Inc., Chagrin Falls 6, Ohio.
Beebe Electrical Instrument Co., Inc., Penacook, N. H.
Bristol Co., The, Waterbury 20, Conn.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Burlington Instrument Co., Burlington, Iowa.
Columbia Electric Mfg. Co., 4519 Hamilton Ave., N.E., Cleveland 14, Ohio.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
Electric Design & Mfg. Corp., Burlington, Iowa.
Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GREIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
Gyro Electronics Co., 325 Canal St., New York, N. Y.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
HOYT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
Hycan Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. ADV. PG. 667.
INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis, Ind.
NEUTRONIC ASSOCIATES, 87-16 116th St., Hill N. Y. ADV. PG. 672.
PHOASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Precise Development Corp., 2 Neil Court, Oceanside, Calif.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
Precision Apparatus Co., Inc., 92-27 Horace Blvd., Elmhurst, N. Y.
Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
Pyramid Instrument Corp., 630 Merrick Rd., New York, N. Y.
RADIO CORP. OF AMERICA, TUBE DEPT., N. J. ADV. PG. Inside Back & Back Cover.
RAWSON ELECTRICAL INSTRUMENT CO., 1 St., Cambridge 42, Mass. ADV. PG. 436.
Reliance Instrument Co., 3027 W. Van Es Place, Chicago 12, Ill.
Roller-Smith Corporation, Bethlehem, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORPORATION, 9 Elm Avenue, Mount Vernon, N. Y. ADV. PG. 617.
SHURITE METERS, 35-B Hamilton St., New York, N. Y. ADV. PG. 657.
Simpson Electric Co., Div. of American Gage & Tool Co., 5218 W. Kinzie St., Chicago 44, Ill.
STERLING MFG. CO., 7201 Wentworth, Cleveland 12, Ohio. ADV. PG. 373.
Sticht Co., Inc., Herman H., 27 Park Place, New York, N. Y.
Supreme, Inc., Greenwood, Miss.
Telecomputing Corp., 133 E. Santa Anita Ave., San Jose, Calif.
Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
U. S. Gauge Div., American Machine and Metal Co., Sellersville, Pa.
Welch Scientific Co., W. M., 1515 Sedgwick Ave., Chicago 10, Ill.
Westberg Mfg. Co., 144 S. Coombs St., New York, N. Y.
WESTON ELECTRICAL INSTRUMENT CORP., Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

VOLTMETERS—Crystal

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

VOLTMETERS—Electronic

Airmec Ltd., High Wycombe, Buckinghamshire, England.
AMERICAN CHRONOSCOPE CORP., 316 W. Mt. Vernon, N. Y. ADV. PG. 360.
Automatic Electric Sales Corp., 1033 W. Van Es Place, Chicago 7, Ill.
Authorized Manufacturers Service Co., Inc., 91 Ave., Brooklyn 27, N. Y.
BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 58.
Cambridge Instrument Co., Inc., 3035 Grand Terminal, New York 17, N. Y.
Cinema-Television, Ltd., Worsley Bridge Rd., Leeds, England.
Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
Clippard Instrument Laboratory, Inc., 7390 Colburn Ave., Cincinnati 24, Ohio.
Communication Measurements Labs., Inc., 3900 Ave., Plainfield, N. J.
COMPUTER CO. OF AMERICA, DIV. OF BRONX INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
Deltron, Inc., P. O. Box 192, Glenside, Pa.
DOELCAM CORP., 56 Elmwood St., Newton, Mass. ADV. PG. 85.
Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
ELECTRONIC MEASUREMENTS CO., Lewis St., Eatontown, N. J. ADV. PG. 431.
El Mec Laboratories, Inc., 730 Blvd. Kenilworth, N. J.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
FLUKE MFG. CO., INC., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 652.
FRED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
G & M Equipment Co., Inc., 7309-7327 Van Es Place, North Hollywood, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
GERTSCH PRODUCTS, INC., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif. ADV. PG. 671.
GLENCO CORP., Metuchen, N. J. ADV. PG. 640.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
Hycan Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.

INSTRUMENT ELECTRONICS CORP., 90 Main St., Port Washington, N. Y. ADV. PG. 472.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

Jowll Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.

MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 319.

Mercury Electronic Co., Box 450, Red Bank, N. J.

MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.

NEUTRON ASSOCIATES, 87-16 116th St., Richmond Hill, N. Y. ADV. PG. 672.

PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.

Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.

Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.

Reiner Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.

Research Electronics Laboratory, Roslyn, Pa.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

Sierra Electronic Corp., San Carlos, Calif.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

TELETRON INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.

Trio Laboratories, P. O. Box 143, Wantagh, N. Y.

WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.

Western Electro-Acoustic Labs., 204 S. Beverly Drive, Beverly Hills, Calif.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

Yonkers Industries, 28 School St., Yonkers, N. Y.

VOLT-OHM-MILLIAMMETERS

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 360.

Beebe Electrical Instrument Co., Inc., Penacook, N. H.

Burlington Instrument Co., Burlington, Iowa.

Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.

GLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.

Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.

Douglas Radio Labs, 176 Norfolk Ave., Boston 19, Mass.

Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.

Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

GREIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.

HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.

Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.

Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.

Jowll Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.

Q. V. S. Inc., 20 N. 15th St., East Orange, N. J.

Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.

Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

Superior Instrument Co., 2435 White Plains Rd., New York 67, N. Y.

Supreme, Inc., Greenwood, Miss.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

Yonkers Industries, 28 School St., Yonkers, N. Y.

WATTMETERS

NOTE: e indicates electronic

BIRD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 519.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. (e)

FLUKE MFG. CO., INC., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 652.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.

INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.

JONES ELECTRONICS CO., INC., M. C., 185 N. Main St., Bristol, Conn. ADV. PG. 565.

KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.

Radiation, Inc., Melbourne, Fla. (e)

RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Sierra Electronic Corp., San Carlos, Calif.

Sightmaster of California Co., Gillespie Airport, Santee, Calif.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill. (e)

SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.

Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

Triplet Electrical Instrument Co., Harmon Road, Bluffton, Ohio.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

Weston Laboratories, Inc., Harvard, Mass.

INSTRUMENTS—Electronic Musical

El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.

Massachusetts Institute of Television, Crow's Nest, South Lee, Mass.

Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

Pye Ltd., Cambridge, England.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

Stockman Electronics Research Co., 543 Lexington St., Waltham 54, Mass.

Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

INSTRUMENTS—Graphic Recording

ALDEN ELECTRONIC & IMPULSE RECORDING EQUIPMENT CO., Box 125, Westboro, Mass. ADV. PG. 441.

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.

Bristol Co., The, Waterbury 20, Conn.

Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.

EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.

FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.

Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa.

Foxboro Co., The, Foxboro, Mass.

Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.

Gorrell & Gorrell, Haworth, N. J.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.

L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

LIBRASCOPE, INC., 1607 Flower St., Glendale, Calif. ADV. PG. 531.

LINK AVIATION, INC., Binghamton, N. Y. ADV. PG. 507.

Manning, Maxwell & Moore, Inc., Stratford, Conn.

North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

PRECISE MEASUREMENTS CO., 942 Kings Highway Brooklyn 23, N. Y. ADV. PG. 650.

Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.

INSTRUMENTS—Panel Instruments—Ultrasonic

See INSTRUMENTS—Electrical Measuring

INSULATING COMPOUNDS

Asphalts

BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 505.

BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.

Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.

Johns-Manville, 22 E. 40th St., New York 16, N. Y.

Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

Schenectady Varnish Co., Inc., Schenectady, N. Y.

ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

Coil Dopes

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.

Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.

BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

Insl-X Co., Inc., Water St., Ossining, N. Y.

Moyen Co., C. P., 8157 Monticello Ave., Skokie, Ill.

Schenectady Varnish Co., Inc., Schenectady, N. Y.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Enamel

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.

BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.

Horn Co., Inc., 10th St. & 44th Ave., Long Island City 1, N. Y.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.

Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

Schenectady Varnish Co., Inc., Schenectady, N. Y.

Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.

Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.

Impregnating Compounds

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.

BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 505.

BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.

Ciba Co., Inc., 627 Greenwich St., New York 14, N. Y.

EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 191.

Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.

Forman Co., B. G., 238 William St., New York 38, N. Y.

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.

HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20, N. Y. ADV. PG. 474.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

Insl-X Co., Inc., Water St., Ossining, N. Y.

Javex, P. O. Box 646, Redlands, Calif.

Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

Plastronics, P. O. Box 96, Winter Hill 45, Mass.

Schenectady Varnish Co., Inc., Schenectady, N. Y.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
 Stevenson, Bro. & Co., 110 Race St., Philadelphia 6, Pa.
 Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

Insulating Varnish

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.
 Brooklyn Paint and Varnish Co., Inc., 50 Jay St., Brooklyn, N. Y.
 Dow Corning Corp., Midland, Mich.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Horn Co., Inc., 10th St. & 44th Ave., Long Island City 1, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 Insl-X Co., Inc., Water St., Ossining, N. Y.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N. Y.
 Schenectady Varnish Co., Inc., Schenectady, N. Y.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.

Lacquer

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
 American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.
BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.
 Communication Products Co., Inc., Marlboro, N. J.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.

Phenolic Molding Compounds

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis 4, Ind.

Pitch

Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis 4, Ind.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

Protective Sealers

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.
 Brooklyn Paint & Varnish Co., Inc., 50 Jay St., Brooklyn 1, N. Y.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Horn Co., Inc., The, A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Insl-X Co., Inc., Water St., Ossining, N. Y.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
 Plastronics, P. O. Box 96, Winter Hill 45, Mass.
 Sauereisen Cements Co., Sauereisen Bldg., Pittsburgh 15, Pa.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

Resins

American Monomer Corp., 511 Lancaster St., Leominster, Mass.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Ciba Co., Inc., 627 Greenwich St., New York 14, N. Y.
 Dow Chemical Co., Midland, Mich.
 Dow Corning Corp., Midland, Mich.
EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 191.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Goodrich Chemical Co., B. F., Rose Bldg., 2060 E. Ninth St., Cleveland 15, Ohio.
 Insl-X Co., Inc., Water St., Ossining, N. Y.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Isocyanate Products, Inc., P. O. Box 1681, Wilmington, Del.
 London Chemical Co., 325 W. 32nd St., Chicago 16, Ill.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Plastronics, P. O. Box 96, Winter Hill 45, Mass.
 Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N. Y.
 Schenectady Varnish Co., Inc., Schenectady, N. Y.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

Silicone Compounds

Dow Corning Corp., Midland, Mich.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
LINDE AIR PRODUCTS CO., A DIV. OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 502.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Schenectady Varnish Co., Inc., Schenectady, N. Y.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Varnish Cambric Coatings

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 619.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 New Jersey Wood Finishing Co., Amboy Ave., Woodbridge, N. J.
 Schenectady Varnish Co., Inc., Schenectady, N. Y.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.

Waxes

BIWAX CORP., 3445 Howard St., Skokie, Ill. ADV. PG. 505.
 Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
 Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.
HI-TEST CHEMICAL CORP., 722 64th St., Brooklyn 20, N. Y. ADV. PG. 474.
 Insl-X Co., Inc., Water St., Ossining, N. Y.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.
 Stevenson, Bro. & Co., 110 Race St., Philadelphia 6, Pa.
ZOPHAR MILLS, INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

INSULATION MATERIALS

Aluminum Oxide

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 Baker Chemical Co., J. T., Phillipsburg, N. J.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
FRENCHTOWN PORCELAIN CO., Trenton 9, N. J. ADV. PG. 559.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.

Isolantite Manufacturing Corp., Stirling, N. J.
LINDE AIR PRODUCTS CO., A DIV. OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 502.
 Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield 1, N. J. ADV. PG. 424.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Asbestos

Auburn Mfg. Co., Pease Ave. & Stack St., Middleton, Conn.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Rogers Corporation, Goodyear, Conn.

Bead

CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 345, 574, 607, 659.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Saxenburg Ceramics, Saxenburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.

Ceramic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 345, 574, 607, 659.
 Cook Ceramic Mfg. Co., 505 Prospect St., Trenton 1, N. J.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton 2, N. J.
FRENCHTOWN PORCELAIN CO., Trenton 9, N. J. ADV. PG. 559.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
 Isolantite Manufacturing Corp., Stirling, N. J.
KIRCHBERGER & CO., INC., M., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
MANSOL CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.
 Maryland Lava Co., Bel Air, Md.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Norton Co., 1 New Bond St., Worcester 6, Mass.
 Porcelain Products, Inc., Findlay, Ohio.
 Saxenburg Ceramics, Saxenburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
 Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield 1, N. J. ADV. PG. 424.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Fabric

ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 619.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
 Stevens Products, Inc., 86-88 Main St., East Orange, N. J.

Fibre

American Mica Insulation Co., Manasquan, N. J.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
 Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio.
 Hinde & Dauch, Sandusky, Ohio.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 193.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Rogers Corporation, Goodyear, Conn.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Stevens Products, Inc., 86-88 Main St., East Orange, N. J.
 TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.
 Thompson Fiberglass Co., H. I., 1733 Cordova St., Los Angeles 7, Calif.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Glass

Corning Glass Works, Corning, N. Y.
 ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 619.
 METRIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Sylvania Corp., 37 S. 6th St., Newark 7, N. J.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Mykroy, Inc., Wheeling, Ill.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Pittsburgh Plate Glass Co., 2000 Grant Bldg., Pittsburgh 19, Pa.
 Rogers Corporation, Goodyear, Conn.
 Stevens Products, Inc., 86-88 Main St., East Orange, N. J.
 SUNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 467.
 Smith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

Glass Bonded Mica

Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willamantic, Conn. ADV. PG. 396, 397.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Sylvania Corp., 37 S. 6th St., Newark 7, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Mykroy, Inc., Wheeling, Ill.

Glass Fibre

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Mykroy, Inc., 2255 Barry Ave., West Los Angeles 44, Calif.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 619.
 Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 Keystone Electronics Inc., Rockville, Conn.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Mykroy, Inc., Wheeling, Ill.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
 Pittsburgh Plate Glass Co., 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.
 Thompson Fiberglass Co., H. I., 1733 Cordova St., Los Angeles 7, Calif.
 TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 237.

Glass Mica—Woven or Laminated

American Mica Insulation Co., Manasquan, N. J.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willamantic, Conn. ADV. PG. 396, 397.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Husite Division of The Huse Liberty Mica Co., Huse Washington St., Boston 19, Mass.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Mica Insulator Co., Schenectady 1, N. Y.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Mykroy, Inc., Wheeling, Ill.
 National Electric Coil Co., Columbus 16, Ohio.

Laminates, Woven Glass

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willamantic, Conn. ADV. PG. 396, 397.
 California Bent Glass Corp., Torrance, Calif.
 Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 619.
 EMERSON & CUMING, INC., 869 Washington St., Canton, Mass. ADV. PG. 191.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 Keller Products Co., 41 Union St., Manchester, N. H.
 Mica Insulator Co., Schenectady 1, N. Y.
 Mitchell-Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 193.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
 Stevens Products, Inc., 86-88 Main St., East Orange, N. J.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Synthane Corp., Oaks, Pa.
 TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.
 TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.

Mica

American Mica Insulation Co., Manasquan, N. J.
 Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willamantic, Conn. ADV. PG. 396, 397.
 Brush Beryllium Co., The, 4301 Perkins Ave., Cleveland 3, Ohio.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 Industrial Mica Corp., 223 S. Van Brunt St., Englewood, N. J.
 Integrated Mica Corp., 202 Franklin Place, Woodmere, N. Y.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micacraft Products, Inc., 703 McCarter Highway, Newark 5, N. J.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

Moore Co., Howard J., 266 William St., New York 38, N. Y.
 MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Mykroy, Inc., Wheeling, Ill.
 National Electric Coil Co., Columbus 16, Ohio.
 RELIANCE MICA CO., INC., 341 39th St., Brooklyn 32, N. Y. ADV. PG. 460.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.

Nylon

American Mica Insulation Co., Manasquan, N. J.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minor Rubber Co., 49 Ackerman St., Bloomfield, N. J.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Mykroy, Inc., Wheeling, Ill.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
 Reid Enterprises, 3715 Santa Fe Ave., Los Angeles 58, Calif.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.

Paper

American Mica Insulation Co., Manasquan, N. J.
 Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Cottrell Paper Co., 88 Purchase St., Fall River, Mass.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 HARTFORD CITY PAPER CO., Hartford City, Ind. ADV. PG. 587.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Mica Insulator Co., Schenectady 1, N. Y.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Mosinee Paper Mills Co., Mosinee, Wis.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
 Rogers Corporation, Goodyear, Conn.
 Schweitzer, Inc., Peter J., 405 Lexington Ave., New York 17, N. Y.
 Stevens Paper Mills, Inc., Windsor, Conn.

Plastic See PLASTIC MATERIALS

Rubber

Accurate Mfg. Co., 44 Hepworth Place, Garfield, N. J.
 American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
 American Monomer Corp., 511 Lancaster St., Leominster, Mass.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 General Tire & Rubber Co., Akron, Ohio.
 Gosnet Co., 801 S. Main St., Burbank, Calif.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Lavelle Rubber Co., 424 N. Wood St., Chicago 22, Ill.
 Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minor Rubber Co., 49 Ackerman St., Bloomfield, N. J.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Plastronics, P. O. Box 96, Winter Hill 45, Mass.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

Rubber—Conductive

American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
 General Tire & Rubber Co., The, Akron, Ohio.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

Steatite

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
 CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Y. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Cook Ceramic Mfg. Co., 505 Prospect St., Trenton 1, N. J.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.

FRENCHTOWN PORCELAIN CO., Trenton 9, N. J. ADV. PG. 559.
 GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
 Isolantite Manufacturing Corp., Stirling, N. J.
 KIRCHBERGER & CO., INC., M., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 MANSOL CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.
 NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Saxenburg Ceramics, Saxenburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 Steward Mfg. Co., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
 Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield N. J. ADV. PG. 424.

INSULATION PARTS

Bead Insulation Parts

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
 CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Corning Glass Works, Corning, N. Y.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.
 Isolantite Manufacturing Corp., Stirling, N. J.
 KIRCHBERGER & CO., INC., M., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 MANSOL CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Mykroy, Inc., Wheeling, Ill.
 NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Saxenburg Ceramics, Saxenburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 Steward Mfg. Co., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
 Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.
 SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 467.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

Capacitor Boxes

HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 Isolantite Manufacturing Corp., Stirling, N. J.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Rogers Corporation, Goodyear, Conn.
 Saxenburg Ceramics, Saxenburg, Pa.

Capacitor Films

American Mica Insulation Co., Manasquan, N. J.
 Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Micacraft Products, Inc., 703 McCarter Highway, Newark 5, N. J.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
 RELIANCE MICA CO., INC., 341 39th St., Brooklyn 32, N. Y. ADV. PG. 460.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.

Ceramic Insulation Parts

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
 California Bent Glass Corp., Torrance, Calif.
 CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.

FRENCHTOWN PORCELAIN CO., Trenton 9, N. J. ADV. PG. 559.
 Illinois Electric Porcelain Co., Macomb, Ill.
 Isolantite Manufacturing Corp., Stirling, N. J.
 KIRCHBERGER & CO., INC., M., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.
 Louthan Mfg. Co., East Liverpool, Ohio.
 MANSOL CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Mykroy, Inc., Wheeling, Ill.
 NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Norton Co., 1 New Bond St., Worcester 6, Mass.
 Saxenburg Ceramics, Saxenburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 Steward Mfg. Co., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
 Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Insulating Cord

Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.

Insulating Sleeves

Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Anchor Plastics Co., Inc., 36-36 36th St., Long Island City 6, N. Y.
 BENTLEY-HARRIS MFG. CO., Conshocken, Pa. ADV. PG. 364.
 CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 249.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Crowley & Co., Inc., Henry L. 1 Central Ave., West Orange, N. J.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. ADV. PG. 560.
 Extruders, Inc., 3232 W. El Segundo Blvd., Hawthorne, Calif.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Gries Reproducer Corp., 151 Beechwood St., New Rochelle, N. Y.
 Halogen Insulator & Steel Corp., 10121 Franklin Ave., Franklin Park, Ill.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
 Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
 IRVINGTON VARNISH & INSULATION DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Isolantite Manufacturing Corp., Stirling, N. J.
 J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 MARKEL & SONS, L. FRANK, School House Lane, Norristown, Pa. ADV. PG. 553.
 Maryland Lava Co., Bel Air, Md.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
 Mykroy, Inc., Wheeling, Ill.
 NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 National Electric Coil Co., Columbus 16, Ohio.
 Natvar Corp., 211 Randolph Ave., Woodbridge, N. J.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
 PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 503.
 RESIN INDUSTRIES, INC., Santa Barbara, Calif. ADV. PG. 154.

RESISTOFLEX CORP., 39 Pleasant St., Belleville 9, ADV. PG. 518.
 RICHARDSON CO., THE, 27th Ave. & Lake St., Me Park, Ill. ADV. PG. 546.
 Saxenburg Ceramics, Saxenburg, Pa.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. PG. 293-296.
 TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 2
 Telegraph Construction & Maintenance Co., Ltd., Works, Greenwich, London S.E. 10, England.
 THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
 U. S. GASKET CO., P. O. BOX 93, Camden, ADV. PG. 604, 605.
 VARFLEX CORP., 308 N. Jay St., Rome, N. Y. PG. 237.

Plastic Insulation Parts

1. Extruded
2. Fabricated
3. Laminated
4. Molded
 Accurate Electronics Corp., Courtland Bldg., 1312ario St., Cleveland 13, Ohio. 2-3-4.
 Ace Plastic Co., 91-54 Van Wyck Expressway, Jamaica 35, N. Y. 2.
 Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y. 3.
 AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bay N. J. 4. ADV. PG. 614.
 AIRTRON, INC., Dept H, 1117 W. Elizabeth Ave., den, N. J. 4. ADV. PG. 428.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton Mass. 4. ADV. PG. 440.
 American Mica Insulation Co., Manasquan, N. J. 3-4.
 AMERICAN MOLDED PRODUCTS CO., 1644 N. H St., Chicago 22, Ill. 4. ADV. PG. 638.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y. 2-3-4.
 Anchor Plastics Co., Inc., 36-36 36th St., Long Island City 6, N. Y. 1.
 Auburn Button Works, Inc., Auburn, N. Y. 1-4.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middlefield Conn. 2-3.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif. 2-3-4.
 BIWAX CORP., 3445 Howard St., Skokie, Ill. 4. PG. 505.
 BRAND & CO., INC., WILLIAM, North & Valley Willimantic, Conn. 1. ADV. PG. 396, 397.
 BRILHART PLASTICS CORP., Old Country Rd., Mine N. Y. 4. ADV. PG. 653.
 British Electronic Sales Co., 23-03 45th Rd., Island City 1, N. Y. 1.
 Cable Electric Products Inc., Providence, R. I. 4.
 Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif. 3-4.
 Cast Optics Corp., 1 Post Rd., Riverside, Conn. 2.
 CINGH MFG. CORP., 1026 S. Homan Ave., Chicago 111. 3-4. ADV. PG. 354, 355.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. 2. ADV. PG. 616.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burlingame, Calif. 2-4.
 COLLECTOR CORP., 216 E. 45th St., New York 17, N. Y. 2-3-4. ADV. PG. 599.
 Consolidated Molded Products Corp., Scranton 2, Pa.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, 2-3-4. ADV. PG. 399-402.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 111. 2-3.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, 1-2-4.
 Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill. 4.
 Dixon Corporation, Bristol, R. I. 1-2-4.
 EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia Pa. 3-4. ADV. PG. 465.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J. 1-2-3-4.
 EMELOID CO., INC., 1239 Central Ave., Hillside, N. J. 4. ADV. PG. 367.
 EMERSON & CUMING, INC., 869 Washington St., Boston, Mass. 2-3. ADV. PG. 191.
 Extruders, Inc., 3232 W. El Segundo Blvd., Hawthorne, Calif. 1.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. 4. ADV. PG. 187.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill. 2-4.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio. 2-3-4.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del. 2-3-4.
 GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
 Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y. 1-2-3-4.
 General Electric Co., Chemical Div., 1 Plastics Dept., Pittsfield, Mass. 3-4.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill. 1-2-3.
 General Tire & Rubber Co., Akron, Ohio. 1-3.
 Gits Molding Corp., 4600 W. Huron St., Chicago 111. 4.
 Glastic Corp., 1823 E. 40th St., Cleveland 3, Ohio.

Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif. 1.

Gries Reproductor Corp., 151 Beechwood St., New Rochelle, N. Y. 4.

Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill. 1-2-3-4.

Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass. 3-4.

INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. 4. ADV. PG. 667.

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 9, Ill. 2-3.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass. 1-2-3-4.

Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J. 1-2-3.

IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. 1. ADV. PG. 246.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. 4. ADV. PG. 666.

Jodee Plastics Co., 534 Glenmore Ave., Brooklyn 7, N. Y. 2-4.

Keller Products Co., 41 Union St., Manchester, N. H. 3-4.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. 2.

Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass. 2-3.

MARTEL & SONS, L. FRANK, School House Lane, Norristown, Pa. 1. ADV. PG. 553.

McMillan Industrial Corp., Brownville Avenue Plant, Ipswich, Mass. 2-3-4.

Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill. 2-3-4.

MANVOL CERAMICS, 140 Little St., Belleville, N. J. 4. ADV. PG. 427.

MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. 2-4. ADV. PG. 292.

Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J. 1-2-3-4.

Mica Insulator Co., Schenectady 1, N. Y. 2-3-4.

Miccraft Products Inc., 703 McCarter Highway, Newark 5, N. J.

Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill. 2-3.

Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill. 4.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 4.

Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y. 1-2-3-4.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa. 2-3-4.

Molding Corp. of America, 40 Church St., Pawtucket, R. I. 4.

Moore Co., Howard J., 266 William St., New York 38, N. Y. 1-2-3-4.

Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y. 3-4.

MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. 2-4. ADV. PG. 136, 137.

Mykroy, Inc., Wheeling, Ill. 1-2-3-4.

NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. 4. ADV. PG. 585.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. 2-3. ADV. PG. 312.

NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. 3. ADV. PG. 193.

NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. 1. ADV. PG. 564.

PANELYTE DIV., ST. REGIS PAPER CO., 230 Park Ave., New York 17, N. Y. 2-3-4. ADV. PG. 261.

PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. 2-3. ADV. PG. 590.

Peerless Products Industries, 812 N. Pulaski St., Chicago 51, Ill. 2.

Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa. 2-3.

Plasticraft Products Co., One Station Plaza, West Nyack, N. Y. 2-3.

POLYMER CORP., THE, Reading, Pa. 1-2. ADV. PG. 412.

PRINTLOID, INC., 93 Mercer St., New York 1, N. Y. 1-2-3. ADV. PG. 198.

Quality Components, Inc., St. Marys, Pa. 4.

Reid Enterprises, 3715 Santa Fe Ave., Los Angeles 58, Calif. 2.

Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. 4.

RESIN INDUSTRIES INC, Santa Barbara, Calif. 1. ADV. PG. 154.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. 1-2-4. ADV. PG. 518.

REX CORP., THE, Hayward Rd., West Acton, Mass. 1. ADV. PG. 404.

RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. 2-3-4. ADV. PG. 546.

ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. 4. ADV. PG. 260.

ROMAR PLASTICS, INC., 1309 E. Main St., St. Charles, Ill. 4. ADV. PG. 615.

SEAELECTRO CORP., 186 Union Ave., New Rochelle, N. Y. 1. ADV. PG. 611.

Sillocks-Miller Co., 10 Parker Ave. W., So. Orange, N. J. 2.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y. 3.

Steel Products Co., 1420 W. Galer St., Seattle 99, Wash. 2.

Stevens Products Inc., 86-88 Main St., East Orange, N. J. 3-4.

Synthane Corp., Oaks, Pa. 2-3-4.

TAYLOR FIBRE CO., Norristown, Pa. 2-3. ADV. PG. 207.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S. E. 10, England. 1-2-3-4.

Thompson Fiberglass Co., H. I., 1733 Cordova St., Los Angeles 7, Calif. 3.

Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif. 2-3.

TRI-POINT MFG. & DEVELOPING CO., 401 Grand St., Brooklyn 11, N. Y. 1-2-3-4. ADV. PG. 577.

U. S. GASKET CO., P. O. Box 93, Camden, N. J. 1-2-3-4. ADV. PG. 604, 605.

U. S. Stoneware Co., The, P. O. Box 350, Akron 9, OHIO. 1-4.

U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. 1-4. ADV. PG. 577.

Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y. 3.

VARFLEX CORP., 308 N. Jay St., Rome, N. Y. 1. ADV. PG. 237.

Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J. 1-4.

Warren Plastics Corp., Warren, Pa. 4.

Weckesser Co., 5261 Avondale Ave., Chicago 30, Ill. 1.

Western Felt Works, 4029 Ogden Ave., Chicago, Ill.

Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del. 2-3.

RODS

American Mica Insulation Co., Manasquan, N. J.

Anchor Plastics Co., Inc., 36-36 36th St., Long Island City 6, N. Y.

Auburn Button Works, Inc., Auburn, N. Y.

CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.

Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.

Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.

Dixon Corporation, Bristol, R. I.

Du-Co Ceramics Co., Box 587, Butler 8, Pa.

Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.

ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. ADV. PG. 560.

Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.

Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.

Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

Glasic Corp., 1823 E. 40th St., Cleveland 3, Ohio.

Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.

Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.

Insulating Fabricators of New England Inc., 69 Grove St., Watertown 72, Mass.

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 9, Ill.

Johns-Manville, 22 E. 40th St., New York 16, N. Y.

Keller Products Co., 41 Union St., Manchester, N. H.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.

Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.

Mica Insulator Co., Schenectady 1, N. Y.

Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

Moore Co., Howard J., 266 William St., New York 38, N. Y.

Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y. MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.

Mykroy, Inc., Wheeling, Ill.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.

NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.

PANELYTE DIV., ST. REGIS PAPER CO., 230 Park Ave., New York 17, N. Y. ADV. PG. 261.

PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.

POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.

Reid Enterprises, 3715 Santa Fe Ave., Los Angeles 58, Calif.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 518.

REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.

RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.

POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.

Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.

Reid Enterprises, 3715 Santa Fe Ave., Los Angeles 58, Calif.

RESIN INDUSTRIES, INC., Santa Barbara, Calif. ADV. PG. 154.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 518.

REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.

RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.

Saxonburg Ceramics, Saxonburg, Pa.

Spaulding Fibre Co. Inc., 310 Wheeler St., Tonawanda, N. Y.

Synthane Corp., Oaks, Pa.

TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S. E. 10, England.

TRI-POINT MFG. & DEVELOPING CO., 401 Grand St., Brooklyn 11, N. Y. ADV. PG. 577.

U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

SHEETS

American Mica Insulation Co., Manasquan, N. J.

American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.

Auburn Button Works, Inc., Auburn, N. Y.

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.

Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.

Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.

Dixon Corporation, Bristol, R. I.

Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.

ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. ADV. PG. 560.

Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.

Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.

Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

Glasic Corp., 1823 E. 40th St., Cleveland 3, Ohio.

Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.

Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 9, Ill.

Johns-Manville, 22 E. 40th St., New York 16, N. Y.

Keller Products Co., 41 Union St., Manchester, N. H.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.

Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.

Mica Insulator Co., Schenectady 1, N. Y.

Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

Moore Co., Howard J., 266 William St., New York 38, N. Y.

Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y. MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.

Mykroy, Inc., Wheeling, Ill.

National Electric Coil Co., Columbus 16, Ohio.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.

NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.

PANELYTE DIV., ST. REGIS PAPER CO., 230 Park Ave., New York 17, N. Y. ADV. PG. 261.

PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.

POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.

Reid Enterprises, 3715 Santa Fe Ave., Los Angeles 58, Calif.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 518.

REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.

RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.

Rogers Corporation, Goodyear, Conn.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Synthane Corp., Oaks, Pa.

TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S. E. 10, England.

TRI-POINT MFG. & DEVELOPING CO., 401 Grand St., Brooklyn 11, N. Y. ADV. PG. 577.

U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Stampings & Punching—Ceramic

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.

ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 561.

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.

California Bent Glass Corp., Torrance, Calif.

CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.

Du-Co Ceramics Co., Box 587, Butler 8, Pa.

EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.

Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.

Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.

Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
FRENCHTOWN PORCELAIN CO., Trenton 9, N. J. ADV. PG. 559.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 I. E. Manufacturing, 321 N. Hoyme Ave., Chicago 12, Ill.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Isolantite Manufacturing Corp., Stirling, N. J.
KIRCHBERGER & CO., INC., M., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
 Louthan Mfg. Co., East Liverpool, Ohio.
MANSOL CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.
 Mica Fabricating Co., 53 Central Ave., New Rochelle Park, N. J.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Saxonburg Ceramics, Saxonburg, Pa.
 Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
 Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Stamping & Punchings—Paper—Mica

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Mica Insulation Co., Manasquan, N. J.
 Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 Ford Radio & Mica Corp., 436 63rd St., Brooklyn, N. Y.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 I. E. Manufacturing, 321 N. Hoyme Ave., Chicago 12, Ill.
 Industrial Mica Corp., 223 S. Van Brunt St., Englewood, N. J.
 Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
 Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
 Jodee Plastics Co., 534 Glenmore Ave., Brooklyn 7, N. Y.
 Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micacraft Products, Inc., 703 McCarter Highway, Newark 5, N. J.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
RELANCE MICA CO., INC., 341 39th St., Brooklyn 32, N. Y. ADV. PG. 460.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
 Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

Stampings & Punchings—Plastics or Laminates

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
 Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615

American Mica Insulation Co., Manasquan, N. J.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Anchor Plastics Co., Inc., 36-36 36th St., Long Island City 6, N. Y.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Bennett Co., Inc., R. P., Frederick, Md.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Burken Lamination Corp., 811 Whittier St., Bronx 59, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
COLLECTRON CORP., 216 E. 45th St., New York 17, N. Y. ADV. PG. 599.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 I. E. Manufacturing, 321 N. Hoyme Ave., Chicago 12, Ill.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 457.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
 Jodee Plastics Co., 534 Glenmore Ave., Brooklyn 7, N. Y.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
 Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micacraft Products, Inc., 703 McCarter Highway, Newark 5, N. J.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
PANELYTE DIV., ST. REGIS PAPER CO., 230 Park Ave., New York 17, N. Y. ADV. PG. 261.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Peerless Products Industries, 812 N. Pulaski St., Chicago 51, Ill.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
PRINTLOID, INC., 93 Mercer St., New York 1, N. Y. ADV. PG. 198.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 518.
RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
 Rogers Corporation, Goodyear, Conn.
 Sinclair Mfg. Co., Chartley, Mass.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Steel Products Co., 1420 W. Galer St., Seattle 99, Wash.
 Stevens Products, Inc., 86-88 Main St., East Orange, N. J.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Synthane Corp., Oaks, Pa.
TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.
 Telegraph Construction & Maintenance Co., Ltd., Telegraph Works, Greenwich, London S.E. 10, England.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

U. S. GASKET CO., P. O. Box 93, Camden, ADV. PG. 604, 605.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 Wade Electric Products Co., 400 Jacob St., St. Mich.
 Weckesser Co., 6251 Avondale Ave., Chicago 30, Ill.
 Wilmington Fibre Specialty Co., P. O. Drawer Wilmington 99, Del.

INSULATORS—Antenna Insulators & Sp Assemblies

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 574, 607, 659.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 I. E. Manufacturing, 321 N. Hoyme Ave., Chicago 12, Ill.
 Isolantite Manufacturing Corp., Stirling, N. J.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn 7, N. Y. ADV. PG. 666.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
JOHNSTON CO., E. F., Waseca, Minn. ADV. PG. 595.
LAPP INSULATOR CO., INC., Radio Specialties Div., Gilbert St., LeRoy, N. Y. ADV. PG. 414, 415.
 Millen Mfg. Co., James, 150 Exchange St., Melrose, Mass.
MUELLER ELECTRIC CO., 1583 E. 31st St., Cleveland 14, Ohio. ADV. PG. 551.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 National Electronic Mfg. Corp., 186 Granite St., Norchester, N. H.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
 Porcelain Products, Inc., Findlay, Ohio.
 Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls 2, N. Y.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 518.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
SYNROC PRODUCTS CO., Malden, Mass. ADV. PG. 595.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomington 1, N. J. ADV. PG. 424.

INSULATORS—Can Liner

American Mica Insulation Co., Manasquan, N. J.
AMERICAN MOLDED PRODUCTS CO., 1644 N. Hollywood St., Chicago 22, Ill. ADV. PG. 638.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 574, 607, 659.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
MARKEL & SONS, L. FRANK, School House Lane, Norristown, Pa. ADV. PG. 553.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
PRECISION PAPER TUBE CO., 2033 W. Charleston Chicago 47, Ill. ADV. PG. 503.
 Rogers Corporation, Goodyear, Conn.

INSULATORS—Ceramic

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 574, 607, 659.
 Colonial Insulator Co., 907 Grant St., Akron 11, Ohio.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Park St., East Palestine, Ohio.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
FRENCHTOWN PORCELAIN CO., Trenton 9, N. J. ADV. PG. 559.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
 Illinois Electric Porcelain Co., Macomb, Ill.
 Isolantite Manufacturing Co., Stirling, N. J.
JOHNSTON CO., E. F., Waseca, Minn. ADV. PG. 595.
KIRCHBERGER & CO., INC., M., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
LAPP INSULATOR CO., INC., Radio Specialties Div., Gilbert St., LeRoy, N. Y. ADV. PG. 414, 415.
 Locke Dept. of General Electric Co., P. O. Box 5 Baltimore 3, Md.

Louthan Mfg. Co., East Liverpool, Ohio.
MANSOL CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.
 Maryland Lava Co., Bel Air, Md.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
 Norton Co., 1 New Bond St., Worcester 6, Mass.
 Porcelain Products, Inc., Findlay, Ohio.
 Saxtonburg Ceramics, Saxtonburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
 Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

INSULATORS—Feeder Spreader

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Isolantite Manufacturing Corp., Stirling, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
LAPP INSULATOR CO., INC., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y. ADV. PG. 414, 415.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
 Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

INSULATORS—Fused Quartz

AMERICAN FUSED QUARTZ CO., INC., 18-20 Salem St., Dover, N. J.
 Andersen Laboratories, Inc., 39 Talcott Rd., West Hartford 10, Conn.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Gemlite Laboratories, 1819 W. Grand Ave., Chicago 22, Ill.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
SYNROC PRODUCTS CO., Malden, Mass. ADV. PG. 467.
 Thermal Syndicate, Ltd., 14 Bixley Heath, Lynbrook, N. Y.

INSULATORS—High Dielectric Paper

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Mica Insulation Co., Manasquan, N. J.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 East Optics Corp., 1 Post Rd., Riverside, Conn.
LEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 249.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Mykroy, Inc., Wheeling, Ill.
 Stevens Paper Mills, Inc., Windsor, Conn.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.

INSULATORS—Strain

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
 I. E. Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
 Illinois Electric Porcelain Co., Macomb, Ill.
 Insulation Manufacturing Co., 11 New York Ave., Brooklyn, N. Y.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
LAPP INSULATOR CO., INC., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y. ADV. PG. 414, 415.
 Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.
 Mica Insulator Co., Schenectady 1, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 Porcelain Products, Inc., Findlay, Ohio.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
 Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.

INSULATORS—Test Clip

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Radio Hardware Co., Inc., 152 S. MacQuisten Pkwy., Mt. Vernon, N. Y.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. ADV. PG. 667.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
MUELLER ELECTRIC CO., 1583 E. 31st St., Cleveland 14, Ohio. ADV. PG. 551.
SEALCTRO CORP., 186 Union Ave., New Rochelle, N. Y. ADV. PG. 611.

INSULATORS—Thermocouple

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
 Isolantite Manufacturing Corp., Stirling, N. J.
KIRCHBERGER & CO., INC., M., 82-92 W. Forest Ave., Englewood, N. J. ADV. PG. 497.
 Lacomia Corp., 37 S. 6th St., Newark 7, N. J.
 Richards Co., Inc., Arklay S., 38 Winchester St., Newton Highlands 61, Mass.
 Saxtonburg Ceramics, Saxtonburg, Pa.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
 Steward Mfg. Co., D. M., 3600 Jerrome Ave., Chattanooga 1, Tenn.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
 Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.

INSULATORS—Tower

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
LAPP INSULATOR CO., INC., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y. ADV. PG. 414, 415.
 Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
 Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.

INSULATORS—Transmitting Antenna

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.

GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
 Isolantite Manufacturing Corp., Stirling, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
LAPP INSULATOR CO., INC., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y. ADV. PG. 414, 415.
 Locke Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.
 Mica Insulator Co., Schenectady 1, N. Y.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Mykroy, Inc., Wheeling, Ill.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Star Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

INTEGRATORS—Electronic

Allegany Instrument Co., Inc., Cumberland, Md.
 Arma Corp., Old Country Rd., Garden City, N. Y.
AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. J. ADV. PG. 490.
 Bailey Meter Co., 1050 Vanhooe Rd., Cleveland 10, Ohio.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
COMPUTER CO. OF AMERICA, DIV. OF BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Digital Products, Inc., 7643 Fay Ave., LaJolla, Calif.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif.
 Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio.
 Instron Engineering Corp., 2 Hancock St., Quincy 71, Mass.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
MID-CENTURY INSTRUMENTAL CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
 Phebo, Inc., 3640 Woodland St., Baltimore 15, Md.
 Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
 Scott, Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Unitronics, Inc., 472 Paul Ave., Ferguson Station, St. Louis 21, Mo.
 Warren Electronics, Inc., Bound Brook, N. J.

INTERCOMMUNICATION SYSTEMS

Adler Communications Laboratories, 1 Le Fevre Lane, New Rochelle, N. Y.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Bliss Electronic Corp., Box 123, Sussex, N. J.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Bristol Motor Division, Vocaline Company of America, Inc., Old Saybrook, Conn.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Cooper Electronic Products Co., 4500 Melrose St., Philadelphia 24, Pa.
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 Executone Inc., 415 Lexington Ave., New York 17, N. Y.
 Farmers Engineering & Mfg. Co., Irwin, Pa.
FEDERAL TELEPHONE & RADIO CO., A DIV OF I T & T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Gates Radio Co., Quincy, Ill.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 645.
 Godfrey Mfg. Co., 2642 S. Madison Ave., Chicago, Ill.
 Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
 Jowill Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
 Lake Mfg. Co., 2323 Chestnut St., Oakland 7, Calif.

Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 National Inter-Communication Systems, Inc., 1130 N. Milwaukee Ave., Chicago 22, Ill.
 Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.
RADIO CORP. OF AMERICA, ENGINEERING PRODUCTS DIV., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Talk-A-Phone Mfg. Co., 1512 S. Pulaski Rd., Chicago 23, Ill.
TELETRON INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
 Telephonics Corp., Park Ave., Huntington, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 663.
 U. S. Instrument Corp., 409 Broad St., Summit, N. J.
 Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Vocatron Mfg. Div. of Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Wilcox-Gay Corp., Charlotte, Mich.
 Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.
WORNER ELECTRONIC DEVICES, Rankin, Ill. ADV. PG. 522.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

INTERCOMMUNICATION SYSTEMS—Sound Powered

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Talk-A-Phone Co., 1512 S. Pulaski Rd., Chicago 23, Ill.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 U. S. Instrument Corp., 409 Broad St., Summit, N. J.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138.

INVENTORYING SYSTEMS

BURROUGHS CORP., ELECTRONIC INSTRUMENTS DIV., 1209 Vine St., Philadelphia 23, Pa. ADV. PG. 495.
 Engineering Research Associates Div. of Remington-Rand Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 International Business Machines, 590 Madison Ave., New York 22, N. Y.
 International Register Co., 2620 Washington Blvd., Chicago 12, Ill.
 Logistics Research Inc., 141 S. Pacific Ave., Redondo Beach, Calif.
 Tally Register Co., 5300 14th N. W., Seattle, Wash.
 Tele-Register Corp., 157 Chambers St., New York, N. Y.
 Underwood Corp., 1 Park Ave., New York, N. Y.

INVERTERS

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. ADV. PG. 198.
BALLANTINE LABORATORIES, INC., Boonton, N. J. ADV. PG. 58.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 Bristol Co., The, Waterbury 20, Conn.
CARTER MOTOR CO., 2644 N. Maplewood Ave., Chicago 47, Ill. ADV. PG. 219.
CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. ADV. PG. 612.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
DOELCAM CORP., 56 Elmwood Ave., Newton 58, Mass. ADV. PG. 85.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. ADV. PG. 636.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.
 Jack & Heintz, Inc., Cleveland 1, Ohio.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Mission-Western Engineers, Inc., 132-134 W. Colorado Blvd., Pasadena 1, Calif.
 National Pneumatic Co., Inc., and Holtzer-Cabot Divisions, 125 Amory St., Boston 19, Mass.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Rangertone, Inc., 73 Winthrop St., Newark 4, N. J.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
 Redmond Co., Inc., 201 Monroe St., Owosso, Mich.

SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 50, 51.
TERADO CO., 1059 Raymond Ave., St. Paul 8, Minn. ADV. PG. 418.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
VIBRATION RESEARCH LABS., INC., 97 Lake Ave., Tuckaheo, N. Y. ADV. PG. 602.
WINCHARGER CORP., E. 7th & Division Sts., Sioux City, Iowa. ADV. PG. 257.

INTERVALOMETERS See TIMERS—Cycle

ION TRAPS

All Star Products, Inc., Defiance, Ohio.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
HEPPNER MFG. CO., P. O. Box 612, Round Lake, Ill. ADV. PG. 226.
 Indiana Steel Products Co., Valparaiso, Ind.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, Ill.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Quam-Nichols Co., Marquette Rd. & Prairie Ave., Chicago 37, Ill.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

IRONS—Soldering

Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
 American Electrical Heater Co., 6110 Cass Ave., Detroit 2, Mich.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Ill.
 Electric Soldering Iron Co., W. Elm St., Deep River, Conn.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hexacon Electric Company, 130 W. Clay Ave., Roselle Park, N. J.
 Ideal Industries, Inc., 5103 Park & Borden Aves., Sycamore, Ill.
 Kelnor Mfg. Co., 222 Kearny St., San Francisco 8, Calif.
 Kemode Mfg. Co., Inc., 161 W. 18th St., New York 11, N. Y.
 Kwikheat Mfg. Co., 3732 San Fernando Road, Glendale 4, Calif.
 Lenk Mfg. Co., 30 Cummington St., Boston 15, Mass.
 Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stanley Works, The, 195 Lake St., New Britain, Conn.
 Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.
TELEVISION ACCESSORIES CO., P. O. Box 6001, Arlington 6, Va. ADV. PG. 515.
 Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.
 Ungar Electric Tools, Inc., P. O. Box 312, Venice, Calif.
VULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass. ADV. PG. 479.
 Wall Mfg. Co., Grove City, Pa.
WASSCO ELECTRIC PRODUCTS CORP., 126 W. Cass St., Joliet, Ill. ADV. PG. 588.

JACK PANEL ASSEMBLIES

Adler Communications Laboratories, 1 Le Fevre Lane, New Rochelle, N. Y.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. ADV. PG. 510.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
 Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

Gates Radio Co., Quincy, Ill.
 Hall, Inc., F. Sumner, Amityville, N. Y.
HELDOR MFG. CORP., HELDOR BUSHING & MINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Cicero Ave., Chicago 3, Ill. ADV. PG.
 Keystone Electronics Corp., 423 Broome St., New York 13, N. Y.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckaheo, N. Y. ADV. PG. 199.
MENDELSONN SPEEDGUN CO., INC., Fourth & Haskell, N. J. ADV. PG. 292.
MODELECTRIC PRODUCTS CORP., 1500 Bangs Asbury Park, N. J. ADV. PG. 140.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Yonkers, N. Y. ADV. PG. 312.
PENNSYLVANIA TESTING LABORATORY, Doylest Pa. ADV. PG. 330.
 Pye Ltd., Cambridge, England.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Yonkers, N. Y.
 Stamford Metal Specialty Co., 429 W. Broadway, York 12, N. Y.
STANDARD ELECTRIC TIME CO., 89 Logan Springfield, Mass. ADV. PG. 154.
 Standard Electronics Corp., 287 Emmet St., New York 5, N. J.
TRIMM, INC., 400 W. Lake St., Libertyville, N. J. ADV. PG. 639.
U. S. COMPONENTS, INC., 454 E. 148th St., York 55, N. Y. ADV. PG. 339.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Waltham Horological Corp., 711 Broad St., Lynn, Mass.

JACKS

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AERON PRODUCTS CO., 112 N. Main St., Brockton, Mass. ADV. PG. 440.
AMERICAN PHENOLIC CORP., 1830 S. 54th Chicago 50, Ill. ADV. PG. 80.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
AUDIO DEVELOPMENT CO., 2833 13th Ave., Minneapolis 7, Minn. ADV. PG. 510.
 Automatic Electric Sales Corp., 1033 W. Van Buren Chicago 7, Ill.
BEAD CHAIN MFG. CO., 110 Mountain Grove Bridgeport 5, Conn. ADV. PG. 524.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
BRILHART PLASTICS CORP., Old Country Rd., Mineola, N. Y. ADV. PG. 653.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Cable Electric Products Inc., Providence, R. I.
 Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
DIAMOND MFG. CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 345.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
FEDERAL SCREW PRODUCTS, INC., 224 W. H St., Chicago 10, Ill. ADV. PG. 467.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT & T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., Taylor Ave., Rockford, Ill. ADV. PG. 380.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Hall, Inc., F. Sumner, Amityville, N. Y.
HARVEY HUBBELL, INC., State St. & Bostwick Ave., Bridgeport 2, Conn. ADV. PG. 515.
 Industrial Products Co., Div. of Danbury-Knudsen, Danbury, Conn.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
JONES DIV., HOWARD B., CINCH MFG. CORP., 1 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Cicero 3, Ill. ADV. PG. 497.
 Keystone Electronics Corp., 423 Broome St., New York 13, N. Y.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckaheo, N. Y. ADV. PG. 199.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury, Mass.
 Mallory & Co., Inc., P. R., 3029 E. Washington Indianapolis 6, Ind.
MENDELSONN SPEEDGUN CO., INC., Fourth & Haskell, N. J. ADV. PG. 292.
 Microdot Division, Felts Corp., 1826 Fremont A. South Pasadena, Calif.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Yonkers, N. Y. ADV. PG. 312.

North Electric Mfg. Co., 501 S. Market St., Gallon, Ohio.

HAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Embler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

ELECTRO CORP., 186 Union Ave., New Rochelle, N. Y. ADV. PG. 611.

Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.

STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 154.

Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.

Stromberg-Carlson Co., Rochester 3, N. Y.

SWITCHCRAFT, INC., 1320 N. Halsted St., Chicago 22, Ill. AV. PG. 491.

TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.

CINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.

S. COMPONENTS, INC., 454 E. 148th St., New York 55, N. Y. ADV. PG. 339.

S. Instrument Corp., 409 Broad St., Summit, N. J.

S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.

Waltham Horological Corp., 711 Broad St., Lynn, Mass.

WITSO, INC., 2037 Churchill St., Chicago 47, Ill. ADV. PG. 112.

WELLS—Glass

BEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.

RD CO., Richard H., 1 Spruce St., Waltham, Mass. ADV. PG. 302.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

WAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 111.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

HANSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.

WINDUPS—Rotary, Microwave

See **MICROWAVE ACCESSORIES**

WELDERS—Bonding

Weldcraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.

Weldco Corp., 3111 Winona Ave., Burbank, Calif.

WELKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.

WILSON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Womas & Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J.

Wotaker Cable Corp., Kansas City 16, Mo.

WINDUPS & COUPLERS

WALKER & WILLIAMSON, 235 Fairfield Ave., Upper Merion, Pa. ADV. PG. 174, 175.

Waltz Laboratories, 550 Fifth Ave., New York 19, N. Y.

Waco of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

WATSON ELECTRIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.

Radio Labs, Inc., E. Stewart Ave., Garden City, N. Y.

Watts Radio Co., Quincy, Ill.

WESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.

WELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 670.

Wentworth Electrical Material Corp., P. O. Box 142, Mamaroneck, N. Y.

Wentworth Engineering Labs., Inc., P. O. Box 8007, Albuquerque, N. M.

WIRE & CODING EQUIPMENT

Wentworth Inc., H. O., 915 Broadway, New York 10, N. Y.

Wentworth Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.

Waltz Laboratories, 550 Fifth Ave., New York 19, N. Y.

Waco of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Wentworth-Medical Lab., Inc., South Woodstock 8, Vt.

WENTWORTH TELEPHONE & RADIO CO., A DIV. OF IT&T, 1 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

Wentworth Corp. of America, 186 Granite St., Manchester, N. H.

WILSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.

WELCH CHROME, INC., 88 Merrick Rd., Amityville, Pa. ADV. PG. 303.

Wentworth Engineering Labs., Inc., P. O. Box 8007, Albuquerque, N. M.

Wentworth Complex Co., Inc., 833 Broadway, New York, N. Y.

Wentworth Co., Inc., 9 Liberty St., Newark 5, N. J.

WINDUPS & COUPLERS

WALSH ELECTRIC CORP., 333 E. 103rd St., New York 17, N. Y. ADV. PG. 225.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.

Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis 6, Ind.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. York 20, N. Y. ADV. PG. 450.

FERRANTI ELECTRIC INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.

Gyro Electronics Co., 325 Canal St., New York, N. Y.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.

INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. ADV. PG. 667.

KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.

MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.

Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.

PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Pye Ltd., Cambridge, England.

PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.

RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.

Triplet Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

KLYSTRONS See Tubes

KNOBES

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.

Ackerman Engravers, 458 Broadway, New York, N. Y.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 647.

Bolta Products Div. of The General Tire & Rubber Co., Lawrence, Mass.

BRILHART PLASTICS CORP., Old Country Rd., Mineola, N. Y. ADV. PG. 653.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 34, N. Y. ADV. PG. 201.

Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.

Cable Electric Products Inc., Providence, R. I.

Courter Electric Products, Inc., Boyne City, Mich.

Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.

Delco Radio Div., General Motors Corp., Kokomo, Ind.

Diamond Instrument Co., North Ave. at Broadway, Wakefield, Mass.

Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.

EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.

EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.

ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.

FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.

GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.

INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. ADV. PG. 667.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.

JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.

JOHNSON, CO., E. F., Waseca, Minn. ADV. PG. 594, 595.

Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1, Ohio.

Mica Insulator Co., Schenectady 1, N. Y.

Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

Muirhead & Co., Ltd., Beckenham, Kent, England.

NATIONAL CO, INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.

Pacific Transducer EBG Corp., 11921 S.W. Pico Blvd., Los Angeles 64, Calif.

PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

Precision Marking Co., 87 Dorsa Ave., Livingston, N. J.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., 26 Waltham 54, Mass. ADV. PG. 26.

RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.

ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 260.

Rohden Manufacturing Company, 4739 Montrose Ave., Chicago 41, Ill.

Sinclair Mfg. Co., Chartley, Mass.

TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.

Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.

Van Dyke Instruments, Inc., 1927 First Ave. S., P. O. Box 335, St. Petersburg 1, Fla.

WHITSO, INC., 2037 Churchill St., Chicago 47, Ill. ADV. PG. 112.

Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

LACQUER See INSULATING COMPOUNDS

LAMINATIONS—Transformer

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.

Alleghany Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.

Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind.

Burken Lamination Corp., 811 Whittier St., Bronx 59, N. Y.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argye Terrace, Irvington 11, N. J. ADV. PG. 246.

KOBY TOOL CO., 1535 N. Dayton Ave., Chicago 22, Ill. ADV. PG. 288.

Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.

Magnetic Powders, Inc., 1000 Fairview Ave., Johnsonburg, Pa.

Repach Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

TEMPEL MFG. CO., 1939 Bryn Mawr Ave., Chicago 26, Ill. ADV. PG. 568.

THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 162.

Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.

LAMP BULBS—Miniature See LIGHTS—Dial, Panel & Pilot

LEADS—Test

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.

American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.

ASSOCIATED ENGINEERING CORP., OF BOSTON, 65 Kent St., Brookline 46, Mass. ADV. PG. 591, 625.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

Booth Co., Arthur E., 265 S. Alexandria Ave., Los Angeles, Calif.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.

Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.

ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

HARVEY HUBBELL, INC., State St. & Bostwick Ave., Bridgeport 2, Conn. 515.

J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Pacific Electriccord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.

Reiner Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.

Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.

Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.

TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
Uni-Products Div. of Uni-Science, Inc., P. O. Box 64, Rockville, Md.
United Technical Laboratories, Box 425-V, Morristown, N. J.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

LEAK See DETECTORS

LEATHERETTE

APEX COATED FABRICS CO., 12 E. 22nd St., New York 10, N. Y. ADV. PG. 488.
General Tire & Rubber Co., The Akron, Ohio.
U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

LENSES—Optical

A'G'A' Div. of Elastic Stop Nut Corp. of America, 1029 Newark Ave., Elizabeth 3, N. J.
American Fused Quartz Co., Inc., 18-20 Salem St., Dover, N. J.
American Optical Co., Box A, Buffalo 15, N. Y.
Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., Bronx 70, N. Y. ADV. PG. 460.
Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, Ill.
Kollsman Instrument Corp., 80-08 45th Ave., Elmhurst, N. Y.
Lancaster Lens Co., Lancaster, Ohio.
Maurer, Inc., J. A. 37-01 31st St., Long Island City 1, N. Y.
Pacific Transducer EBG Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
Pacific Universal Products Corp., 168 Vista Ave., Pasadena 8, Calif.
Pailard Products Inc., 100 Sixth Ave., New York 13, N. Y.
Pennsylvania Optical Co., 234 S. 8th St., Reading 2, Pa.
Perkin-Elmer Corporation, The Main Ave., Norwalk, Conn.
SEDVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
SYNCOR PRODUCTS CO., Malden, Mass. ADV. PG. 467.
Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
Viewlex, Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.
Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.
Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

LENSES—Television

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
BURKE & JAMES, INC., 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 643.
California Bent Glass Corp., Torrance, Calif.
Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
Lancaster Lens Co., Lancaster, Ohio.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
Pennsylvania Optical Co., 234 S. 8th St., Reading 2, Pa.
Pye, Ltd., Cambridge, England.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Television Zoomar Corp., 500 Fifth Ave., Room 2223, New York, N. Y.
Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.
Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

LENSES—Television Magnifying

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
California Bent Glass Corp., Torrance, Calif.
Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.
Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

LENSES—Television Projection

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.
Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
California Bent Glass Corp., Torrance, Calif.
Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.
Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

LIE DETECTORS—Electronic

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.

LIGHTING EQUIPMENT—Television

Hy-Lite Antennae Inc., 242 E. 137th St., New York 51, N. Y.
Mole-Richardson Co., 937 N. Sycamore Ave., Hollywood 38, Calif.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.

LIGHTS—Dial, Panel and Pilot

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Cable Electric Products Inc., Providence, R. I.
Carling Electric, Inc., 499 Park Ave., West Hartford 10, Conn.
CHICAGO MINIATURE LAMP WORKS, 1500 N. Ogden Ave., Chicago 10, Ill. ADV. PG. 620.
DIALIGHT CORPORATION, 60 Stewart Ave., Brooklyn 37, N. Y. ADV. PG. 39.
DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 111.
ELDEMA CORP., 5827 E. Beverly Blvd., Los Angeles 22, Calif. ADV. PG. 539.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
Gables Engineering, Inc., P.O. Box 751, Coral Gables, Fla.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
General Electric Co., Lamp Div., Nela Park, Cleveland 12, Ohio.
General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.
Hetherington, Inc., Sharon Hill, Pa.
Hudson Lamp Co., 528 Elm St., Arlington, N. J.
INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. ADV. PG. 667.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
Kirkland Co., H. R., 8 King St., Morristown, N. J.
Marco Industries Co., 207 S. Helena St., Anaheim, Calif.

NATIONAL CARBON CO., DIV. OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 304.

OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 496.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

Schuco-Brite Div. of Schuler & Co., 75 Cliff St., New York 38, N. Y.

Signalite Inc., 37-41 Neptune Highway, Neptune, N. J.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 385.

UCINITE CO., DIV. OF UNITED CARR-FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.

WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

LIGHTS—Photoelectric Source

Airmec, Ltd., High Wycombe, Buckinghamshire, England.
AUTOTRON CO., P.O. Box 722-H, Danville, Ill., ADV. PG. 446.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
De-Tec-Tronic Corp., 2512 N. Halstead St., Chicago 14, Ill.
Electrical Service Co., 1271 Mission St., San Francisco, Calif.

Electronic Control Corp., 1573 E. Forest St., Mich.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.
Hudson Lamp Co., 528 Elm St., Arlington, N. J.
Photocon Research Products, 421 N. Foot Pasadena, Calif.
Photoswitch, Inc., 77 Broadway, Cambridge
RIPLEY CO., INC., Middletown, Conn. ADV. PG. 10, Ill.
WELCH SCIENTIFIC CO., W.M. 1515 Sedgwick St., Chicago 10, Ill.
WORNER ELECTRONIC DEVICES, Rankin, Ill. 522.

LIGHTS—Signal

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 10, Ill. ADV. PG. 467.
Anglo Corp., 2037 W. Division St., Chicago 10, Ill. ADV. PG. 383.
Cable Electric Products Inc., Providence, R. I.
DIALIGHT CORPORATION, 60 Stewart Ave., Brooklyn 37, N. Y. ADV. PG. 39.
DRAKE MFG. CORP., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 111.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF GENERAL ELECTRIC CO., 88 Kingsland Rd., Clifton, N. J. ADV. PG. 8.
Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.
Hudson Lamp Co., 528 Elm St., Arlington, N. J.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
Kirkland Co., H. R., 8 King St., Morristown, N. J.
Marco Industries Co., 207 S. Helena St., Anaheim, Calif.
North American Electric Lamp Co., 1014 Jefferson St., St. Louis 6, Mo.
Signalite Inc., 37-41 Neptune Highway, Neptune, N. J.
Wickes Engineering & Construction Co., P.O. Box 100, Camden 1, N. J.

LIGHTS—Stroboscopic Source

Aerolux Light Corp., 653 Eleventh Ave., New York 19, N. Y.
Anglo Corp., 2037 W. Division St., Chicago 10, Ill. ADV. PG. 383.
BERKSHIRE LABORATORIES, 580 Beaver Dam Rd., Lincoln, Mass. ADV. PG. 242.
Dormitzer Electric Co., Inc., 5 Hadley St., Malden, Mass.
Edgerton, Gernsmaen & Grier, Inc., 160 Cambridge Ave., Boston 15, Mass.
ELECTRONIC MEASUREMENTS CO., Lewis St., Eatontown, N. J. ADV. PG. 431.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Kemlite Laboratories, 1819 W. Grand Ave., Chicago 11, Ill.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

LINES—Slotted

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
BUDD-STANLEY CO., INC., 43-01 22nd St., City 1, N. J. ADV. PG. 151.
Diamond Instrument Co., 40 North Ave. at Wakefield, Mass.
F-R MACHINE WORKS, INC., 26-12 Boro Road, Woodside 77, N. Y. ADV. PG. 169-171.
Federal Telecommunication Labs., A Div. of General Electric Co., Washington Ave., Nutley 10, N. J.
Feller Engineering Co., 8026 Monticello Ave., Ferris Instrument Co., 110 Cornelia St., Boston 10, Mass. ADV. PG. 177-180.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Alto, Calif. ADV. PG. 29-36.
I-T-E Circuit Breaker Co., 19th & Hamilton St., Philadelphia 30, Pa.
KINGS ELECTRONICS CO., 40 Marbledale St., New York 17, N. Y. ADV. PG. 199.
Rollin Co., 2010 Lincoln Ave., Pasadena 3, Calif.
Selectar Industries, Inc., 3100 Ocean Parkway, Lyn 35, N. Y.
Sightmaster of California Co., Gillespie Airport, San Diego, Calif.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY GYROSCOPE CO., Great Neck, N. Y. ADV. PG. 331, 332.
TECHNICRAFT LABORATORIES, INC., Thomasbury Rd., Thomaston, Conn. ADV. PG. 46.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
UNIVERSAL MICROWAVE CORP., 380 Hillside, Hillsdale, N. J. ADV. PG. 553.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio

LINKS—Antenna

ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
BARKER & WILLIAMSON, 235 Fairfield Ave., Darby, Pa. ADV. PG. 174, 175.
I-T-E Circuit Breaker Co., 19th & Hamilton St., Philadelphia 30, Pa.
Janco Corp., 3111 Winona Ave., Burbank, Calif.
LaPointe Electronics Inc., Rockville, Conn.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave.,
Yonkers, N. Y. ADV. PG. 312.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave.,
Cleveland 3, Ohio.

LIQUID LEVEL See CONTROLS INDICATORS

LITHIUM COMPOUNDS See METALS

LOADS—Dummy See ANTENNAS—Dummy Load

LINKS—Television Microwave See MICROWAVE ACCESSORIES

LOCATORS—Cable & Line Fault

Automatic Electric Sales Corp., 1033 W. Van Buren
St., Chicago 7, Ill.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
Livingston, N. J. ADV. PG. 572.

Fisher Research Labs., Inc., 1961 University Ave., Palo
Alto, Calif.

Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chi-
cago 39, Ill.

MESCHEL ELECTRONICS, INC., 13 Garden St., New
Rochelle, N. Y. ADV. PG. 504.

Rubicon Co., Rfdg.-Ave. at 35th St., Philadelphia 29,
Pa.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale,
Pa. ADV. PG. 362.

TOBE DEUTSCHMANN CORP., 921 Providence Highway,
Norwood, Mass. ADV. PG. 513.

LOCATORS—Pipe & Cable

Cinema-Television, Ltd., Worsley Bridge Rd., London,
S.E. 26, England.

Nilsson Electrical Laboratory, Inc., 103 Lafayette St.,
New York 13, N. Y.

Nuclear Research Corp., 2563 Grays Ferry Ave., Phila-
delphia 46, Pa.

Fisher Research Labs., Inc., 1961 University Ave., Palo
Alto, Calif.

LOCKS—Dial

WIGAT BROS., INC., 33 Perry Ave., Attleboro, Mass.
ADV. PG. 298.

Rad Radio, Inc., 2119 E. 55th St., Cleveland 3, Ohio.

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,
Cambridge 38, Mass. ADV. PG. 240.

STATION PRODUCTS CO., 233 E. 146th St., New York
51, N. Y. ADV. PG. 616.

Hortone Electronics, Inc., 238 William St., New York
38, N. Y.

Oname, Inc., 2701 Ravenswood Ave., Chicago, Ill.

Raystone Electronics Corp., 423 Broome St., New York
12, N. Y.

Hen Mfg. Co., James, 150 Exchange St., Malden, Mass.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 395.

WYTHEON MFG. CO., EQUIPMENT SALES DIV., Wal-
tham 54, Mass. ADV. PG. 26.

S. Engineering Co., 521 Commercial St., Glendale 3,
Calif.

LOCKS—Shaft

American Radio Hardware Co., Inc., 152 S. MacQuesten
Pkwy., Mt. Vernon, N. Y.

CAMBRIDGE THERMIONIC CORP., 445 Concord Ave.,
Cambridge 38, Mass. ADV. PG. 240.

STATION PRODUCTS CO., 233 E. 146th St., New York
51, N. Y. ADV. PG. 616.

POLITO & CO., INC., JAMES, 401 Concord Ave.,
Bronx 54, N. Y. ADV. PG. 625.

N HARDWARE MFG. CO., INC., 75 N. 11th St.,
Brooklyn 11, N. Y. ADV. PG. 586.

Raystone Electronics Corp., 423 Broome St., New York
12, N. Y.

Hen Mfg. Co., James, 150 Exchange St., Malden, Mass.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass.
ADV. PG. 395.

WYTHEON MFG. CO., EQUIPMENT SALES DIV., Wal-
tham 54, Mass. ADV. PG. 26.

S. Engineering Co., 521 Commercial St., Glendale 3,
Calif.

TRAN SYSTEMS

Bludworth Marine Div., National Simplex-Bludworth,
Inc., 92 Gold St., New York 38, N. Y.

SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP.,
Great Neck, N. Y. ADV. PG. 331, 332.

TERMINALS

MACHINES—Bending

Allen Systems Co., 1 Alden Research Center, Westboro,
Mass.

W. Machine Co., 691 Antoinette St., Detroit 2, Mich.

O'Neil-Irwin Mfg. Co., 316 Eighth Ave., Lake City,
Minn.

Peck, Inc., W. Whitney, Old Saybrook, Conn.

MACHINES—Blueprint

American Photocopy Equipment Co., 1920 W. Peterson,
Chicago 26, Ill.

Lineal Electric Co., Geneva, Ill.

Edison-Revolute Corp., 71 S. Seventh Ave., Rochester
N. Y.

Pease Co., C. F., 2601 W. Irving Park Rd., Chicago,
Ill.

Peck & Harvey, 5650 N. Western Ave., Chicago 45, Ill.

MACHINES—Coil Winding

ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair
Lawn, N. J. ADV. PG. 426.

ASSOCIATED AMERICAN TRADING DIVISION, 8010
Empire State Bldg., New York 1, N. Y. ADV. PG.
669.

Boesch Mfg. Co., Danbury, Conn.

British Industries Corp., 164 Duane St., New York 13,
N. Y.

COIL WINDING EQUIPMENT CO., 109 Audrey Ave.,
Oyster Bay, N. Y. ADV. PG. 456.

Cosa Corp., 405 Lexington Ave., New York, 17, N. Y.

Eisler Engineering Co., Inc., 740 S. 13th St., Newark
3, N. J.

KAHLE ENGINEERING CO., 1307 Seventh St., North
Bergen, N. J. ADV. PG. 439.

MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge
38, Mass. ADV. PG. 367.

REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y.
ADV. PG. 650.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chi-
cago 39, Ill.

Stevens Mfg. Co., Inc., George, 6022 N. Rogers Ave.
Pulaski & Peterson, Chicago 30, Ill.

UNIVERSAL WINDING CO., P. O. Box 1605, Providence
1, R. I. ADV. PG. 194.

Weymouth Instrument Co., 1440 Commercial St., East
Weymouth 89, Mass.

MACHINES—Coil Winding, Toroidal

ASSOCIATED AMERICAN TRADING DIVISION, 8010
Empire State Bldg., New York 1, N. Y. ADV. PG.
669.

Boesch Mfg. Co., Danbury, Conn.

Cosa Corp., 405 Lexington Ave., New York 17, N. Y.

Dressen-Barnes Corp., 250 N. Vinado Ave., Pasadena 8,
Calif.

Eisler Engineering Co., Inc., 740 S. 13th St., Newark
3, N. J.

Harder Co., Donald C., 3338 India St., San Diego,
Calif.

Specialties, Inc., Skunks Misery Rd., Syosett, N. Y.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chi-
cago 39, Ill.

MACHINES—Counting (Photoelectric)

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave.,
Cambridge 39, Mass. ADV. PG. 481.

Cinema-Television Ltd., Worsley Bridge Rd., London,
S. E. 26, England.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
Livingston, N. J. ADV. PG. 572.

Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14,
Ill.

El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto,
Calif. ADV. PG. 29-36.

Pantek Co., Box 212, El Segundo, Calif.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill
Rd., Great Neck, N. Y. ADV. PG. 403.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.

MACHINES—Crystal Manufacturing & Finishing

Aeronautical Electronics, Inc., Raleigh-Durham Airport,
P. O. Box 6043, Raleigh, N. C.

Basset, Inc., Rex, 1314 N. E. 17th Court, P. O. Box
1759, Fort Lauderdale, Fla.

CLARK CRYSTAL CO., 2 Farm Rd., Marlboro, Mass.
ADV. PG. 581.

Consolidated Vacuum Corp., Rochester 3, N. Y.

CONSTANTIN & CO., L. L., Route 6 at Lodi Circle,
Lodi, N. J. ADV. PG. 167.

F & M Sales, Inc., 1054 Cahuenga Blvd., Hollywood 38,
Calif.

Norton Co., 1 New Bond St., Worcester 6, Mass.

**Specialty Engineering Div. of Specialty Assembling &
Packing Co.**, 79 Clifton Place, Brooklyn 38, N. Y.

STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa.
ADV. PG. 382.

MACHINES—Cutting

Alden Systems Co., 1 Alden Research Center, Westboro,
Mass.

Artos Engineering Co., 2737 S. 28th St., Milwaukee,
Wis.

Eisler Engineering Co., Inc., 740 S. 13th St., Newark
3, N. J.

Electro Wire Service, 5 Beekman St., New York 7,
N. Y.

O'Neil-Irwin Mfg. Co., 316 Eighth Ave., Lake City,
Minn.

Sheffield Corp., The, Dayton 1, Ohio.

WENCO MFG. CO., 1133 W. Hubbard St., Chicago 22,
ADV. PG. 480.

MACHINES—Disc Recording

Allied Recording Products Co., 32-32 Greenpoint Ave.,
Long Island City 1, N. Y.

Miles Reproducer Co., Inc., 812 Broadway, New York 3,
N. Y.

Scully Machine Co., 62 Walter St., Bridgeport, Conn.

Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long
Island City 3, N. Y.

Soundsciber Corp., 146 Munson St., New Haven 4,
Conn.

MACHINES—Electric Soldering

Ark-les Switch Corp., 51 Water St., Watertown 72,
Mass.

Cole Radio Works, 86 Westville Ave., Caldwell, N. J.

Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3,
N. J.

Electric Soldering Iron Co., W. Elm St., Deep River,
Conn.

Lepel High Frequency Labs., Inc., 55th St. & 37th Ave.,
Woodside 77, N. Y.

Sheffield Corp., The, Dayton 1, Ohio.

Sherman Industrial Electronics Co., Inc., 505 Washington
Ave., Belleville 9, N. J.

Standard Telephones & Cables Ltd., Connaught House,
Aldwych, London, W.C. 2, England.

Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2,
Minn.

MACHINES—Electronic Balancing

Annis Co., R. B., 1101 N. Delaware St., Indianapolis,
Ind.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave.,
Livingston, N. J. ADV. PG. 572.

Gisholt Machine Co., 1245 E. Washington Ave., Madison
3, Wis.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls,
N. J. ADV. PG. 372.

Micro Balancing, Inc., 191 Herricks Rd., Garden City
Park, N. Y.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868,
Pittsburgh 30, Pa. ADV. PG. 113-124.

MACHINES—Electronic Beverage Inspection

De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14,
Ill.

Nuclear Research Corp., 2563 Grays Ferry Ave., Phila-
delphia 46, Pa.

X-Ray Dept. of General Electric Co., 4855 Electric Ave.,
Milwaukee 1, Wis.

MACHINES—Electronic Computing

Arma Corp., Old Country Rd., Garden City, N. Y.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave.,
Cambridge 39, Mass. ADV. PG. 481.

Audio Instrument Co., Inc., 133 W. 14th St., New York
11, N. Y.

**AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR &
FOUNDRY CO.**, 295 State Highway No. 17, Paramar,
N. J. ADV. PG. 490.

Bendix Computer Division, Bendix Aviation Corp., 5630
Arbor Vitae St., Los Angeles 45, Calif.

BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC.,
2200 Wright Ave., Richmond, Calif. ADV. PG. 283.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th
St., New York 1, N. Y. ADV. PG. 201.

BURROUGHS CORP., ELECTRONIC INSTRUMENTS DIV.,
1209 Vine St., Philadelphia, Pa. ADV. PG. 495.

Codetypor Laboratories, 550 Fifth Ave., New York 19,
N. Y.

COMPUTER CO. OF AMERICA, Div. of Bruno-New York
Industries Corp., 460 W. 34th St., New York 1, N. Y.
ADV. PG. 201.

Computing Devices of Canada Ltd., P. O. Box 508,
Ottawa, Ontario.

Consolidated Engineering Corp., 300 N. Sierra Madre
Villa, Pasadena 15, Calif.

DAVIES LABORATORIES, INC., 4705 Queensbury Rd.,
Riverdale, Md. ADV. PG. 658.

Daystrom Instrument Co., Archbald, Pa.

Dictaphone Corp., 420 Lexington Ave., New York 17,
N. Y.

Digital Products, Inc., 7643 Faye Ave., LaJolla, Calif.

EPSCO, INCORPORATED, 126 Massachusetts Ave., Bos-
ton 15, Mass. ADV. PG. 583.

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New
York 20, N. Y. ADV. PG. 450.

Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15,
Ohio.

Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda,
Md.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls,
N. J. ADV. PG. 372.

Laboratory for Electronics, Inc., 75 Pitts St., Boston 14,
Mass.

LIBRASCOPE, INC., 1607 Flower St., Glendale, Calif.
ADV. PG. 531.

LINK AVIATION, INC., Binghamton, N. Y. ADV. PG. 507.

Logistics Research Inc., 141 S. Pacific Ave., Redondo
Beach, Calif.

MACDONALD CO., INC., W. S., 33 University Rd., Cam-
bridge 38, Mass. ADV. PG. 563.

MAGNAVOX CO., Component Sales Industrial & Defense
Products, Fort Wayne 4, Ind. ADV. PG. 181.

MID-CENTURY INSTRUMENTIC CORP., 611 Broadway,
New York 12, N. Y. ADV. PG. 217.

Philbrick Researches, Inc., George A., 230 Congress St.,
Boston 10, Mass.

POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd.,
Great Neck, N. Y. ADV. PG. 403.

Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

WANG LABORATORIES, 296 Columbus Ave., Boston 16,
Mass. ADV. PG. 633.

MACHINES—Electronic Dictating

Dictaphone Corp., 420 Lexington Ave., New York 17,
N. Y.

Edison, Inc., Thomas A., Ediphone Div., 51 Lakeside Ave.,
West Orange, N. J.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Peirce Wire Recorder Corp., 5900 Northwest Highway, Chicago 31, Ill.
 Soundscriber Corp., 146 Munson St., New Haven 4, Conn.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.

MACHINES—Electronic Transcribing

Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
MID-CENTURY INSTRUMENTAL CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Peirce Wire Recorder Corp., 5900 Northwest Highway, Chicago 31, Ill.
 Soundscriber Corp., 146 Munson St., New Haven 4, Conn.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.

MACHINES—Engraving and Profiling

Auto Engraver Co., Ridgefield, Conn.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
GREEN INSTRUMENT CO., 363A Putnam Ave., Cambridge, Mass. ADV. PG. 466.
MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 376.
NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 665.
 Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
 Preis Engraving Machine Co., H. P., 649 Highway 29, Hillside, N. J.
 Sheffield Corp., The, Dayton 1, Ohio.

MACHINES—Forming

Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.

MACHINES—Glass Blowing

Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington Pa.
PIONEER MACHINE WORKS, 6136 Adam St., West New York, N. J. ADV. PG. 656.

MACHINES—Glass Working

Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
 Forter-Teichmann Co., Clark Bldg., Pittsburgh, Pa.
 Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
INTERNATIONAL PUMP & MACHINE WORKS, 11-13 Governor St., Newark 2, N. J. ADV. PG. 154.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
PIONEER MACHINE WORKS, 6136 Adam St., West New York, N. J. ADV. PG. 656.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Sommer & Maca Glass Machine Co., 3600 S. Oakley Ave., Chicago 9, Ill.

MACHINES—Impregnating

Barrett Co., Leon J., P. O. Box 378, Worcester 1, Mass.
 Beach-Russ Co., 50 Church St., New York, 7, N. Y.
INTERNATIONAL PUMP & MACHINE WORKS, 11-13 Governor St., Newark 2, N. J. ADV. PG. 154.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.

MACHINES—Marking

Ackerman-Gould Co., 92 Bleecker St., New York, N. Y.
 Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
 Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind.
 Auto Engraver Co., Ridgefield, Conn.
 Coxhead Co., Ralph C., Newark, N. J.
 Entwistle Co., James L., 1475 Elmwood Ave., Providence 7, R. I.
 Ideal Industries, Inc., 5103 Park & Borden Aves., Sycamore, Ill.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
 Markem Machine Co., Keene, N. H.
MARKWIK MANUFACTURING CO., INC., 147-39 18th Ave., Whitestone, N. Y. ADV. PG. 621.
 Matthews Co., James H., 3942 Forbes St., Pittsburgh, Pa.

NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 665.
 Noble & Westbrook Mfg. Co., 27 Westbrook St., East Hartford 8, Conn.
 Numeral Stamp & Tool Co., Huguenot Park, Staten Island 12, N. Y.
POPPER & SONS, INC., 300 Fourth Ave., New York 10, N. Y. ADV. PG. 640.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
 Preis Engraving Machine Co., H. P., 649 Highway 29, Hillside, N. J.
 Rush Wire Stripper Div., Eraser Co., Inc., 1068 S. Clinton St., Syracuse 4, N. Y.
 Schmidt, Inc., Geo. T., 1804 Belle Plaine, Chicago 13, Ill.
 Tally & Cooper Co., 75 Front St., Brooklyn, N. Y.

MACHINES—Photocopy & Whiteprint

American Photocopy Equipment Co., 1920 W. Peterson, Chicago 26, Ill.
 Bruning & Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.
 Duplomat Co. of America, 2 Stone St., New York 4, N. Y.
 General Photo Products Co., Inc., General Photo Bldg., 15 Summit Ave., Chatham, N. J.
 Haloid Co., The, 6 Haloid St., Rochester 3, N. Y.
 Ozalid Div. of General Aniline & Film Corp., 770 Anasco Rd., Johnson City, N. Y.
 Paragon-Revolute Corp., 71 S. Seventh Ave., Rochester 4, N. Y.
 Peck & Harvey, 5650 N. Western Ave., Chicago 45, Ill.

MACHINES—Record Manufacturing

Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Poinsetta Co., Inc., 112 Cedar Ave., Pitman 6, N. J.

MACHINES—Shock Testing

AMERICAN RESEARCH CORP., 11 Brook St., Bristol, Conn. ADV. PG. 591.
BARRY CORP., 711 Pleasant St., Watertown 72, Mass. ADV. PG. 42.
 Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
 Genisco, Inc., 2233 Federal Ave., Los Angeles 64, Calif.
JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.
 International Radiant Corp., 40 Matinecock Ave., Port Washington, N. Y.
 L. A. B. Corporation, Skaneateles, N. Y.
 Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.
 Sorensen Industrial Electronics Co., 87 N. Day St., Orange, N. J.

MACHINES—Tube Manufacturing

Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
 Entwistle Co., James L., 1475 Elmwood Ave., Providence 7, R. I.
INTERNATIONAL PUMP & MACHINE WORKS, 11-13 Governor St., Newark 2, N. J. ADV. PG. 154.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
 Metro Engineering Associates, Easthampton, Mass.
PIONEER MACHINE WORKS, 6136 Adam St., West New York, N. J. ADV. PG. 656.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.
 Stewart-Speller Associates, Soquel, Calif.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway 19, N. Y. ADV. PG. 699-706.
 Unitek Corp., 275 N. Halstead Ave., Pasadena 8, Calif.

MACHINES—Vibration Fatigue Testing

All American Tool & Mfg. Co., 8027 Lawndale, Skokie, Ill.
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
CALIDYNE CO., P. O. Box 72, Winchester, Mass. ADV. PG. 509.
 Endevo Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 Gadgets, Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.
 Gates Radio Co., Quincy, Ill.
INTERNATIONAL PUMP & MACHINE WORKS, 11-13 Governor St., Newark 2, N. J. ADV. PG. 154.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 386.
 Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.
RADIO SONIC CORP., 111 Bleecker St., New York 12, N. Y. ADV. PG. 631.
 Sorensen Industrial Electronics Co., 87 N. Day St., Orange, N. J.

MACHINES—Wire Stripping

Arto Engineering Co., 2737 S. 28th St., Milwaukee, Wis.
 Electro Wire Service, 5 Beekman St., New York 7, N. Y.
 Entwistle Co., James L., 1475 Elmwood Ave., Providence 7, R. I.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 High Speed Hammer Co., Rochester, N. Y.
 Ideal Industries, Inc., Park & Borden Aves., Sycamore, Ill.

Rush Wire Stripper Div., Eraser Co., Inc., 1068 S. Clinton St., Syracuse 4, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Wire Stripper Co., 1730 Eastham Ave., Cleveland, Ohio.

MAGNETIC ANALYSIS EQUIPMENT

Authorized Manufacturers Service Co., Inc., 919 W. Ave., Brooklyn 27, N. Y.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Dice Co., J. W., Englewood, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 1-20.
 Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
 Magnetic Analysis Corp., 42-44 12th St., Long Island City 1, N. Y.
RAWSON ELECTRICAL INSTRUMENT CO., 111 F. St., Cambridge 42, Mass. ADV. PG. 436.

MAGNETIZERS AND DEMAGNETIZERS

AMPX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 98, 99.
 Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
 Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
CARBOLOY DEPT. OF GENERAL ELECTRIC CO., 1 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 1-20.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 ConRay Corp., 1225 Ray St., Dayton 4, Ohio.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 DoAll Co., 254 N. Laurel Ave., Des Plaines, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 1-20.
 Ideal Industries, Inc., Park & Borden Aves., Sycamore, Ill.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
 Klein-Electronics, Leo, 2404 S. La Brea Ave., Los Angeles 16, Calif.
 Luma Electric Equipment Co., P. O. Box 132, Toledo, Ohio.
MAGNETICS RESEARCH CO., 142 King St., New York 1, N. Y. ADV. PG. 651.
 Martindale Electric Co., Edgewater Branch, Box 10, Cleveland 7, Ohio.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway, N. Y.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul, Minn.
OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. ADV. PG. 341.
PERMAG CORP., 214 Taaffe Place, Brooklyn 5, N. Y. ADV. PG. 578.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 609.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 1, N. Y.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

**MAGNETOMETERS
See INSTRUMENTS—Electrical Measuring****MAGNETRONS
See TUBES****MAGNETS—Permanent**

Allegheny Ludlum Steel Corp., H. W. Orver, Pittsburgh 22, Pa.
ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 347.
CARBOLOY, DEPT. OF GENERAL ELECTRIC CO., 1 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 1-20.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Crowley & Co., Inc., Henry L., 1 Central Ave., Orange, N. J.
CRUCIBLE STEEL CO. OF AMERICA, Henry W. Bldg., P. O. Box 88, Pittsburgh 30, Pa. ADV. PG. 349.
 Ferroxcube Corp. of America, 125 E. Bridge St., Saugerties, N. Y.
 General Magnetic Corp., 10001 Erwin Ave., Detroit 1, Mich.
 Glaser-Steers Corp., 2 Main St., Belleville 9, Ill.
 Indiana Steel Products Co., Valparaiso, Indiana.
 Murex, Ltd., Rainham, Essex, England.
PERMAG CORP., 214 Taaffe Place, Brooklyn 5, N. Y. ADV. PG. 578.
THOMAS & SKINNER STEEL PRODUCTS CO., 11 E. 23rd St., Indianapolis, Ind. ADV. PG. 162.

**MARKERS—Frequency, Microwave
See MICROWAVE ACCESSORIES**

MARKERS—Wire

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y.
Brady Co., W. H., 727 W. Glendale Ave., Milwaukee 12, Wis.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
Duramark, Inc., 2 Secatog Ave., Port Washington, N. Y.
Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
MARKEL & SONS, L. FRANK, School House Lane, Norristown, Pa. ADV. PG. 553.
MARKWIK MANUFACTURING CO., INC., 147-39 18th Ave., Whitestone, N. Y. ADV. PG. 621.
Matthews & Co., James H., 3942 Forbes Ave., Pittsburgh, Pa.
MATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
NORTH SHORE NAMEPLATE CO., Bank of Manhattan Bldg., Bayside 61, N. Y. ADV. PG. 526.
Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
Topflight Tape Co., 160 E. 9th Ave., York, Pa.
Westline Products Div. of Western Lithograph Co., 600 E. Second St., Los Angeles 54, Calif.

MARKING STAMPSSee **STAMPS—Marking****MASKS—Television**

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
Hawley Products Co., St. Charles, Ill.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
Mica Insulator Co., Schenectady 1, N. Y.
Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
Rogers Corporation, Goodyear, Conn.
Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

MATCHING DEVICES—Automatic

Dunn Engineering Associates, Inc., 11 Windsor St., Cambridge 39, Mass.
LITTON INDUSTRIES, 336 N. Foothills Rd., Beverly Hills, Calif. ADV. PG. 327.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.

MECHANICAL TOOLSSee **TOOLS—Hand or Mechanical****MEGAPHONES—Electronic**

Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
Industrial Television, Inc., 369 Lexington Ave., Clifton, N. J.
Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey Parkway, Chicago 14, Ill.

MEGOhMMETERSSee **INSTRUMENTS—Electrical Measuring****MEGOhMMETERS—Vacuum Tube**

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Garnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
Feller Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 645.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.
Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
Reiner Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.
Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

MESH—Knitted WireSee **TUBING—Knitted Wire****METAL CONES—Television**See **CONES—Metal Television****METALLIC OXIDE**See **RECTIFIERS****METAL CLAD SHEETS—(for Etched Circuits)**

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
Mica Insulator Co., Schenectady 1, N. Y.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 193.
Plastilight, Inc., Box 214, Stamford, Conn.
Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
Synthane Corp., Oaks, Pa.

METAL PARTS—Bushings

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
Bennett Co., Inc., R. P., Frederick, Md.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
Delco Radio Div., General Motors Corp., Kokomo, Ind. Division Lead Co., 7742 W. 61st Place, Summit, Ill.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
H. & H. PRODUCTS CO., 766 Ramsey Ave., Hillside, N. J. ADV. PG. 668.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
I. E. Manufacturing, 321 N. Hoynes Ave., Chicago 12, Ill.
JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
LaPointe Electronics Inc., Rockville, Conn.
Northfield-Linden Corp., 4400 Austin Blvd., Island Park, N. Y.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
St. Marys Carbon Co., State Rd., St. Marys, Pa.
Sinclair Mfg. Co., Chertley, Mass.
Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.
Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
Waltham Screw Co., Waltham, Mass.
YALE & TOWNE MFG. CO., POWDERED METAL PRODUCTS DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

METAL PARTS—Castings

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Arwood Precision Casting Corp., 75 Washington St., Brooklyn, N. Y.
Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
Chicago Expansion Bolt Co., 1338 W. Concord Place, Chicago 22, Ill.
Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
Daystrom Instrument Co., Archbald, Pa.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Dollin Corp., 600 S. 21st St., Irvington 11, N. J.
E B Metal Products Co., Inc., 12-14 Bridge Plaza S., Long Island City 1, N. Y.
Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
Engineered Precision Casting Co., Box EL 68, Matawan, N. J.

Gries Reproducer Corp., 100 Willow Ave., 151 Beechwood St., New Rochelle, N. Y.
I. E. Manufacturing, 321 N. Hoynes Ave., Chicago 12, Ill.
International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
Investment Casting Co., 60 Brown Ave., Springfield, N. J.
Misco Precision Casting Co., Gibbs & Larsen Sts., Whitehall, Mich.
Precision Metalsmiths, Inc., 1087 E. 200 St., Cleveland 17, Ohio.
South River Metal Products Co., 377-379 Turnpike, South River, N. J.
Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 631.
Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

METAL PARTS—ContactsSee **CONTACTS—Electrical****METAL PARTS—Deep-Drawn**

AMERICAN ALUMINUM COMPANY, 374 Jelliff Ave., Newark, N. J. ADV. PG. 660.
American Brass Co., 414 Meadow St., Waterbury 20, Conn.
American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
ATLAS SCREW & SPECIALTY CO., 450 Broome St., New York 13, N. Y. ADV. PG. 312.
Baltic Metal Products Co., 120 Sutton St., Brooklyn 22, N. Y.
Bennett Mfg. Co., Alden, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
Cutler Metal Products Co., 1025 Line St., Camden, N. J.
Eastern Tool & Mfg. Co., 1 Montgomery St., Belleville 9, N. J.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
HUDSON TOOL & DIE CO., 118 S. 14th St., Newark, N. J. ADV. PG. 363.
Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 265.
Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
Metro, Inc., R. 1, 230 Toronto Ave., Providence, R. I.
MULTI-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
Northern Metal Products Co., 9597 W. Grand Ave., Franklin Park, Ill.
OLYMPIC METAL PRODUCTS CO., INC., Philipsburg, N. J. ADV. PG. 224.
Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.
Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
REF Mfg. Corp., Jericho Turnpike, Mineola, N. Y.
Repatch Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.
Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.
South River Metal Products Co., 377-379 Turnpike, South River, N. J.
Stanley Works, The, 195 Lake St., New Britain, Conn.
STAYER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 282.
Stolper Steel Products Corp., 308 Pilgrim Rd., Menomonee Falls, Wis.
Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 328.
Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.
Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester, Mass.
Worcester Pressed Steel Co., 101 Barber St., Worcester 6, Mass.

METAL PARTS—Laminated

ART-LLOYD METAL PRODUCTS CORP., 2973 Croysey Ave., Brooklyn 14, N. Y. ADV. PG. 561.

CHASSIS TRAK CORP., 6250 E. Iona Rd., Indianapolis, Ind. ADV. PG. 629.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 I. E. Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
INFRA ELECTRONIC CORP., Roseland, N. J. ADV. PG. 580.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 162.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

METAL PARTS—Lead

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Bennet Co., Inc., R. P., Frederick, Md.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 37, N. Y.
 I. E. Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
 National Lead Co., 111 Broadway, New York 6, N. Y.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 631.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.

METAL PARTS—Powdered

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Keystone Carbon Co., Inc., Saint Marys, Pa.
MANSOLD CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
PYROFERRIC CO., 621 E. 216th St., New York 67, N. Y. ADV. PG. 593.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Sorensen Industrial Electronics Co., 87 N. Day St., Orange, N. J.
 St. Marys Carbon Co., State Rd., St. Marys, Pa.
 Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.
 Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
 U. S. Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
YALE & TOWNE MFG. CO., POWDERED METAL PRODUCTS DIV., 9333 Belmont Ave., Franklin Park, Ill. ADV. PG. 630.

METAL PARTS—Screw Machine

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
 Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.
ANTON MACHINE WORKS, 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 620.
ATLAS SCREW & SPECIALTY CO., 450 Broome St., New York 13, N. Y. ADV. PG. 312.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsy Ave., Brooklyn 14, N. Y. ADV. PG. 561.
 Automatic Metal Products Corp., 315-323 Berry St., Brooklyn 11, N. Y.
 Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
 Bennett Co., Inc., R. P., Frederick, Md.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 Blake & Johnson Co., 1495 Thomaston Ave., Waterville 48, Conn.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
 Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Custom Gear Co., South Bend, Ind.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Eastern Specialty Co., Philadelphia 40, Pa.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
 Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Gombos Co., Inc., John, 103 Montgomery Ave., Irvington 11, N. J.
 Gorrell & Gorrell, Hayworth, N. J.
H. & H. PRODUCTS CO., 766 Ramsey Ave., Hillside, N. J. ADV. PG. 668.
 Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
 Hopkins Engineering Co., 2082 Lincoln Ave., Altadena, Calif.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 I. E. Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
INFRA ELECTRONIC CORP., Roseland, N. J. ADV. PG. 580.
 Instrument Parts Corp., P. O. Box 150, Ossining, N. Y.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Judd Co., J. L., 87 Chambers St., New York 7, N. Y.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
 LaPointe Electronics Inc., Rockville, Conn.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Northfield-Linden Corp., 4400 Austin Blvd., Island Park, N. Y.
 Peerless Products Industries, 812 N. Pulaski St., Chicago 51, Ill.
 Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
 Quaker City Gear Works, Red Lion & Philmont Rd., Bethayres, Pa.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Scovill Manufacturing Co., Waterbury 20, Conn.
 Sinclair Mfg. Co., Chartley, Mass.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
 Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Trans-American Precision Instrument Corp., 34-17 Lawrence St., Flushing 54, N. Y.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Vallorbs Jewel Co., Lancaster, Pa.
 Wall Mfg. Co., Grove City, Pa.
 Waltham Screw Co., Waltham, Mass.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

METAL PARTS—Small Metal Stampings

ABALON PRECISION MFG. CORP., 540 Casanova St., Bronx 59, N. Y. ADV. PG. 490.
 Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
 Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
 Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
Acme Tool & Specialties Co., 224 N. Loomis St., Chicago 7, Ill.
 Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
 Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
 All Metal Products Co., 206 McWhorter St., Newark 5, N. J.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 American Brass Co., 414 Meadow St., Waterbury 20, Conn.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
ANTON MACHINE WORKS, 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 620.
 Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind.
ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsy Ave., Brooklyn 14, N. Y. ADV. PG. 561.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
ATLAS E-E CORP., Bedford Airport, Bedford, Mass. ADV. PG. 674.
ATLAS SCREW & SPECIALTY CO., 450 Broome St., New York 13, N. Y. ADV. PG. 312.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
AUGAT BROS., INC., 33 Perry Ave., Attleboro, Mass. ADV. PG. 298.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Baltic Metal Products Co., 120 Sutton St., Brooklyn 22, N. Y.

BAYSHORE WOOD PRODUCTS CO., INC., 234 Cr. Keansburg, N. J. ADV. PG. 508.
 Bennett Co., Inc., R. P., Frederick, Md.
 Bennett Mfg. Co., Alden, N. Y.
 Braun Tool & Instrument Co., Inc., H., 140 Fifth Ave., Hawthorne, N. J.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
 Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
 Cass Machine Co., 691 Antoinette St., Detroit 20, Mich.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Chicago Expansion Bolt Co., 1338 W. Concorde Chicago 22, Ill.
CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 470.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 11, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Columbia Metal Box Co., 260 E. 143rd St., New York 14, N. Y.
 Connecticut Telephone & Electric Corp., 70 E. St., Meriden, Conn.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Donnelly Electric & Mfg. Co., 3050 Washington St., Boston, Mass.
 E B Metal Products Co., Inc., 12-14 Bridge Pl., Long Island City 1, N. Y.
 Eastern Specialty Co., Philadelphia 40, Pa.
 Eastern Tool & Mfg. Co., 1 Montgomery St., Belleville, N. J.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
 Elco Corp., 90 W. Glenwood Ave., Philadelphia 18, Pa.
 Electronic Mfg. Co., 20 Orange St., Newark, N. J.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 Eltrun Corp., St. Anne, Ill.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV. PG. 450.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Federal Tool & Mfg. Co., 3600 Alabama Ave., St. Paul, Minneapolis 16, Minn.
 Fryling Mfg. Co., 639 W. 12th St., Erie, Pa.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Forest Hills, N. Y.
 Garrett Co., Inc., George K., D and Tioga Sts., Philadelphia 34, Pa.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 General Metal Products Co., 1010-14 Centre St., Newark, N. J. ADV. PG. 363.
 Goat Co., Inc., Fred, 308 Dean St., Brooklyn 17, N. Y.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
 Harrison & Co., Philip H., Matawan, N. J.
 Hayden Mfg. Co., 173 N. Peoria, Chicago 7, Ill.
 Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
HEYMAN MFG. CO., Kenilworth 2, N. J. ADV. PG. 380.
 Hobson Bros., 4940 W. Lawrence Ave., Chicago 38, Ill.
HUDSON TOOL & DIE CO., INC., 118 S. 14th St., Newark, N. J. ADV. PG. 363.
 Hunter Spring Co., 21 Spring Ave., Lansdale, Pa.
 I. E. Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 11th St., New York, N. Y. ADV. PG. 457.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Javox, P. O. Box 646, Redlands, Calif.
 Johnson & Hoffman Mfg. Co., 31 E. Second St., Montreal, N. Y.
 Judd Co., J. L., 87 Chambers St., New York 7, N. Y.
KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 265.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 King Laboratories, Inc., 127 Solar St., Syracuse 13, N. Y.
 King Metal Spinning Co., 174 Centre St., Newark 5, N. J.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad, Newark 5, N. J.
 Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
 LaPointe Electronics Inc., Rockville, Conn.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, Ill. ADV. PG. 656.
 Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 11, Ill.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
 Metro, Inc., R. I., 230 Toronto Ave., Providence, R. I.

Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.

MULTI-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.

NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.

Northern Metal Products Co., 9597 W. Grand Ave., Franklin Park, Ill.

Patton-MacGuey Co., 17 Virginia Ave., Providence 5, R. I.

Paul & Beekman Inc., 1801 Cortland St., Philadelphia 40, Pa.

Peerless Products Industries, 812 N. Pulaski St., Chicago 51, Ill.

Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.

Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.

PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.

Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.

Rada Products Co., 2911 E. W. Carroll Ave., Chicago 12, Ill.

Reiner Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.

Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.

Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.

Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

Romac Products Co., 48-01 25th Ave., Long Island City 3, N. Y.

Sovill Manufacturing Co., Waterbury 20, Conn.

Shakeproof Div., Illinois Tool Works, 2501 N. Keeler Ave., Chicago 39, Ill.

Sinclair Mfg. Co., Chartley, Mass.

Smith, Inc., Hennan H., 2326 Nostrand Ave., Brooklyn 10, N. Y.

South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.

Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.

Stanley Works, The 195 Lake St., New Britain, Conn.

STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 631.

Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

STAYER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 282.

Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.

Steel Products Co., 1420 W. Galer St., Seattle 99, Wash.

Steinen Co., William, 43 Bruen St., Newark 5, N. J.

Stewart Stamping Co., 630 Central Park Ave., Yonkers 4, N. Y.

Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Inc.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Thomas & Sons, Inc., William, Slocum Ave., Ridgefield, N. J.

TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 82.

Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.

Trotone Electronics, Inc., 812-14 N. Highland Ave., Los Angeles 38, Calif.

U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.

UNICITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.

Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.

UNITED CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 328.

United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.

United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

VOLKERT METAL STAMPINGS INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

Wall Mfg. Co., Grove City, Pa.

Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.

WENCO MFG. CO., 1133 W. Hubbard St., Chicago 22, Ill. ADV. PG. 480.

Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.

Winzeler Mfg. & Tool Co., 1716 W. Arcade Place, Chicago 12, Ill.

Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester 3, Mass.

Wright-Happ Associates, Inc., 251 West St., South Hackensack, N. J.

Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio

METAL PARTS—Spinnings

All Metal Products, 206 McWhorter St., Newark 5, N. J.

Allied Products Div., Hamilton Watch Co., Lancaster, Pa.

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.

AMERICAN ALUMINUM COMPANY, 374 Jeliff Ave., Newark, N. J. ADV. PG. 660.

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.

Electronic Mfg. Co., 20 Orange St., Newark, N. J.

HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.

I. E. Manufacturing, 321 N. Hoyle Ave., Chicago 12, Ill.

KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 265.

Kling Metal Spinning Co., 174 Centre St., New York 13, N. Y.

Newark Spinning & Stamping Co., 472 Bloy St., Hillside, N. J.

Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.

Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

Teiner Co., Inc., Roland, 134 Tremont St., Everett 49, Mass.

U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.

METAL PARTS—Trimings

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.

Bennett Mfg. Co., Alden, N. Y.

Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.

I. E. Manufacturing, 321 N. Hoyle Ave., Chicago 12, Ill.

Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.

Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.

Sinclair Mfg. Co., Chartley, Mass.

Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.

U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.

METALLIC PAINTS See PAINTS

METALS

Alnico

ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 347.

Prom Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

CAROLY DEPT. OF GENERAL ELECTRIC CO., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 22.

Indiana Steel Products Co., Valparaiso, Ind.

THOMAS & SKINNER STEEL PRODUCTS CO., 1122 E. 23rd St., Indianapolis, Ind. ADV. PG. 162.

Aluminum

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Federated Metals Div. American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.

HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.

Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.

North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.

SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.

Antimony

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

National Lead Co., 111 Broadway, New York 6, N. Y.

Barium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

King Laboratories, Inc., 127 Solar St., Syracuse 4, N. Y.

Beryllium and Beryllium Alloys

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Beryllium Corp., The, Reading, Pa.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Brush Beryllium Co., The, 4301 Perkins Ave., Cleveland 3, Ohio.

DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.

INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. ADV. PG. 575.

METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.

Boron

Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Brass and Bronze

American Brass Co., 414 Meadow St., Waterbury 20, Conn.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.

Bristol Brass Co., 580 Broad St., Bristol, Conn.

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.

Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.

Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

Titan Metal Mfg. Co., Bellefonte, Pa.

Cadmium

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Division Lead Co., 7742 W. 61st Placa, Summit, Ill.

Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.

Cesium Compounds

(For Photo-Tubes)

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Dow Chemical Co., Midland, Mich.

Chromium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Cobalt

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Coefficient Metals

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.

Driver-Harris Co., 201 Middlesex St., Harrison, N. J.

Columbium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

Copper

American Brass Co., 414 Meadow St., Waterbury 20, Conn.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.

Bristol Brass Co., 580 Broad St., Bristol, Conn.

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.

Division Lead Co., 7742 W. 61st Place, Summit, Ill.

Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.

North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.

Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

Electric Sheets—See Steel, Electric

Foil-Aluminum, Tin & Lead

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.

Division Lead Co., 7742 W. 61st Place, Summit, Ill.

Johnston Foil Mfg. Co., 6100 S. Broadway, St. Louis 11, Mo.

Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.

National Lead Co., 111 Broadway, New York 6, N. Y.
REPUBLIC FOIL & METAL MILLS, INC., 55 Triangle St., Danbury, Conn. ADV. PG. 410.
 Soldering Specialties Co., 18 Chatham Rd., Summit, N. J.

Germanium

Soldering Specialties Co., 18 Chatham Rd., Summit, N. J.

Gold and Gold Alloys

American Silver Co., Inc., 36-07 Prince St., Flushing, 54, N. Y.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
HANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.

METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
METZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
SEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville 9, N. J. ADV. PG. 633.
 Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
TECHNIC, INC., P. O. Box 965, Providence 1, R. I. ADV. PG. 562.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

High Permeability Alloys

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
ARNOLD ENGINEERING CO., Marengo, Ill. ADV. PG. 347.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.
 Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

Laminated Metals

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Improved Seamless Wire Co., 775 Eddy St., Providence, R. I.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
 Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.

Lead

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Bow Solder Products Co., Inc., 251 Freeman St., Brooklyn 22, N. Y.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
 Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 37, N. Y.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 National Lead Co., 111 Broadway, New York 6, N. Y.
 Soldering Specialties Co., 18 Chatham Rd., Summit, N. J.

Lithium Compounds (for cathode tube screen setting)

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Baker Chemical Co., J. T., Phillipsburg, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Magnesium

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Dow Chemical Co., Midland, Mich.
 Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.

Magnetic Iron Oxide (for cores)

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Magnetic Powders, Inc., 1000 Fairview Ave., Johnsonburg, Pa.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
 Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.
WILLIAMS & CO., C. K., 640 N. 13th St., Easton, Pa. ADV. PG. 460.

Magnetic Powdered

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
ANTARA CHEMICAL DIV., GENERAL ANILINE & FILM CORP., 435 Hudson St., New York 14, N. Y. ADV. PG. 266.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Magnetic Powders, Inc., 1000 Fairview Ave., Johnsonburg, Pa.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
 Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.
WILLIAMS & CO., C. K., 640 N. 13th St., Easton, Pa. ADV. PG. 460.

Magnetostriction See Nickel & Nickel Alloys

Manganese

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Electro Metallurgical Co., A Div. of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.

Mercury

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Molybdenum

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
CROSS CO., H., 15 Beekman St., New York 38, N. Y. ADV. PG. 582.
 Electro Metallurgical Co., A Div. of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
 Murex, Ltd., Rainham, Essex, England.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y. ADV. PG. 300.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Nickel and Nickel Alloys

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
ALLOY METAL WIRE CO., DIV. OF H. K. PORTER CO., INC., Prospect Park, Pa. ADV. PG. 523.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.
 Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
 Haynes Stellite Co., A Div. of Union Carbide and Carbon Corp., 725 S. Lindsay St., Kokomo, Indiana.
 Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.
 International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
JELLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. ADV. PG. 196.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
 Phosphor Bronze Corp., 20 Franklin St., Seymour, Conn.
 Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

Nickel Ribbon

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.
 Driver-Harris Co., 201 Middlesex St., Harrison, N. J.

Palladium

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 663.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
METZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
SEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville 9, N. J. ADV. PG. 633.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

Phosphor Bronze

American Brass Co., 414 Meadow St., Waterbury 20, Conn.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Phosphor Bronze Corp., 20 Franklin St., Seymour, Conn.
 Plume & Atwood Mfg. Co., 220 Broadway, New York 5, N. Y.
 Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.

Platinum

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 663.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
HANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
METZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
TECHNIC, INC., P. O. Box 965, Providence 1, R. I. ADV. PG. 562.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

Polonium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
U. S. RADIUM CORP., 535 Pearl St., New York 11, N. Y. ADV. PG. 476.

Powdered

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
ANTARA CHEMICAL DIV., GENERAL ANILINE & FILM CORP., 435 Hudson St., New York 14, N. Y. ADV. PG. 266.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
 Magnetic Powders, Inc., 1000 Fairview Ave., Johnsonburg, Pa.
 Metal Hydrides, Inc., Beverly, Mass.
NATIONAL MOLDITE CO., 1410 Chestnut Ave., Hillside 5, N. J. ADV. PG. 204.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
 Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

Powders, Nonmagnetic—Iron Oxide

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
COLUMBIAN CARBON CO., MAPICO COLOR DIV., 601 Cass St., Trenton, N. J. ADV. PG. 628.

Radium

Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
 Southwest Products, Inc., Alamo Downs, Box 85-D, San Antonio, Rt. 4, Texas.
 U. S. **RADIUM CORP.**, 535 Pearl St., New York 7, N. Y. ADV. PG. 476.

Silicon

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Electro Metallurgical Co., A Div. of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Kentron Electron Products, Inc., 5 Prince Place, Newburyport, Mass.
 Plastic Metals Division, National Radiator Co., 169 Bridge St., Johnstown, Pa.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Silver

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.
AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 663.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
 Eastern Smelting & Refining Corp., 107-109 Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
HANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.

MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
NETZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.

North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

GEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville 9, N. J. ADV. PG. 633.

Standard Metals Corp., Broad & Whiting, North Attleboro, Mass.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Wilderberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

Silver Alloys and Compounds

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 663.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.

Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.

Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
HANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.

Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.

METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.

Metaplast Process, Inc., 34-51 56th St., Woodside, N. Y.
NETZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.

North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

GEL-REX PRECIOUS METALS, INC., 229 Main St., Belleville 9, N. J. ADV. PG. 633.

Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco 2, Calif.

Wilderberg Bros. Smelting & Refining Co., 742 Market St., San Francisco, Calif.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

Steel

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
 Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.

CRUCIBLE STEEL CO. OF AMERICA, Henry W. Oliver Bldg., P. O. Box 88, Pittsburgh 30, Pa. ADV. PG. 349.

Lukens Steel Co. and Divisions, By-Products Steel Co. & Lukensweld, 447 Lukens Bldg., Coatesville, Pa.
 Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.

Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 U. S. Steel Corp., 525 William Penn Place, Pittsburgh 30, Pa.

Steel, Electric
 Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
 Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.

DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.

Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
 U. S. Steel Corp., 525 William Penn Place, Pittsburgh 30, Pa.

Steel, Stainless
 Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.

ALLOY METAL WIRE CO., DIV. OF H. K. PORTER CO., INC., Prospect Park, Pa. ADV. PG. 523.

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Carpenter Steel Co., The, 142 W. Bern St., Reading, Pa.

CRUCIBLE STEEL CO. OF AMERICA, Henry W. Oliver Bldg., P. O. Box 88, Pittsburgh 30, Pa. ADV. PG. 349.

DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.

Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
 Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 U. S. Steel Corp., 525 William Penn Place, Pittsburgh 30, Pa.

Strontium
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 King Laboratories Inc., 127 Solar St., Syracuse 4, N. Y.

Tantalum
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
 Murex, Ltd., Rainham, Essex, England.

Thermostatic Bi-Metals
 See BI-METALS—Thermostatic

Tin
ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Baker Chemical Co., J. T., Phillipsburgh, N. J.

Bow Solder Products Co., Inc., 251 Freeman St., Brooklyn 22, N. Y.

Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 37, N. Y.

National Lead Co., 111 Broadway, New York 6, N. Y.
 Soldering Specialties Co., 18 Chatham Rd., Summit, N. J.

Titanium
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.

Foot Mineral Co., 18 W. Chelton Ave., Philadelphia 44, Pa.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Metal Hydrides, Inc., Beverly, Mass.
 Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.

Tungsten
 Associated Engineering & Mfg. Corp., Glen Ridge, N. J.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

Murex, Ltd., Rainham, Essex, England.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y. ADV. PG. 300.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

Tungsten Ribbon
 Associated Engineering & Mfg. Corp., Glen Ridge, N. J.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
CROSS CO., H., 15 Beekman St., New York 38, N. Y. ADV. PG. 582.

REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y. ADV. PG. 300.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Uranium
 Mallinckrodt Chemical Works, Second & Mallinckrodt Sts., St. Louis 7, Mo.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.

Zinc
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Baker Chemical Co., J. T., Phillipsburgh, N. J.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 37, N. Y.

Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.

New Jersey Zinc Co., 160 Front St., New York 7, N. Y.

Zirconium
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Foot Mineral Co., 18 W. Chelton Ave., Philadelphia 44, Pa.
 Murex, Ltd., Rainham, Essex, England.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

METEOROLOGICAL EQUIPMENT—Electronic
 Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.

CARDWELL ELECTRONICS PRODUCTION CORP., ALLEN D., 97 Whiting St., Plainville, Conn. ADV. PG. 394.

Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.

Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W.C. 2, England.

Northeastern Engineering, Inc., Manchester, N. H.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.

Wilcox-Gay Corp., Charlotte, Mich.

METERS—Acceleration
 See ACCELEROMETERS

METERS—Attenuation
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.

Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.

VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.

METERS—Cable Testing
 Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Entwistle Co., James L., 1475 Elmwood Ave., Providence 7, R. I.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 645.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge, Mass. ADV. PG. 177-180.

Hall, Inc., F. Sumner, Amityville, N. Y.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 481.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Conductance
BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 158.

METERS—Counting Rate
 Airtec Ltd., High Wycombe, Buckinghamshire, England.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Bristol Co., The, Waterbury 20, Conn.

Cinema-Television, Ltd., Worsley Bridge Rd., London SE 26, England.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Detlectron Corp., 5420 Vineland Ave., North Hollywood, Calif.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-20.
 Measurement Engineering, Ltd., Arrnprior, Ontario, Canada.
 Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
 Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
 Nuclear Research & Development Co., 6425 Etzel, St. Louis 14, Mo.
 NUCLEONIC COMPANY OF AMERICA, 196 DeGraw St., Brooklyn 31, N. Y. ADV. PG. 646.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 VICTOREAN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.
 WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.

METERS—d'Arsonval See Also Galvanometers

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Beede Electrical Instrument Co., Inc., Penacook, N. H.
 Bristol Co., The, Waterbury 20, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 DE JUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 Electric Design & Mfg. Corp., Burlington, Iowa.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 G-M LABORATORIES, INC., 4336 N. Knox Ave., Chicago, Ill. ADV. PG. 608.
 Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GREIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 HOYT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Supreme, Inc., Greenwood, Miss.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

METERS—Decibel

Adler Communications Laboratories, 1 Le Fevre Lane, New Rochelle, N. Y.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Clough Bregle Co., 6014 N. Broadway, Chicago, Ill.
 Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
 Electric Design & Mfg. Co., Burlington, Iowa.

ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Aves., Eatontown, N. J. ADV. PG. 431.
 Feller Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Trio Laboratories, P. O. Box 143, Wantagh, N. Y.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

METERS—Distortion and Noise

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 D & R, Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.
 DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 EMPIRE DEVICES PRODUCTS CORP., 38-25 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

METERS—Elapsed Time

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mount Vernon, N. Y. ADV. PG. 360.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Bristol Co., The, Waterbury 20, Conn.
 Bristol Motor Division, Vocaline Company of America, Inc., Old Saybrook, Conn.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PAGE 272.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 Detlectron Corp., 5420 Vineland Ave., North Hollywood, Calif.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Foxboro Co., The, Foxboro, Mass.
 GENERAL ELECTRIC CO., APPARATUS SALES DIV., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 HAYDON CO., A. W., 232 N. Elm St., Waterbury 20, Conn. ADV. PG. 477.
 HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Pantek Co., Box 212, El Segundo, Calif.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.
 Vocatron Mfg. Div. of Vocaline Co. of America, Inc., Old Saybrook, Conn.
 WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

METERS—Electronic Capacitance METERS—Field Strength

See INSTRUMENTS—Electrical Measuring

METERS—Flutter

See METERS—Wow and Flutter

METERS—F-M Deviation

See INSTRUMENTS—Electrical Measuring

METERS—Footcandle

GENERAL ELECTRIC CO., APPARATUS SALES DIV., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENT CORP., Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

METERS—Frequency

See INSTRUMENTS—Electrical Measuring

METERS—Frequency, Microwave See MICROWAVE ACCESSORIES

METERS—Grid Dip

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 BOONTON ELECTRONICS CORPORATION, Boonton, N. J. ADV. PG. 536.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Eldico of New York, Inc., 44-31 Douglaston Rd., Douglaston, N. Y.
 Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 76.
 Linear Equipment Labs., Brightwater Place, Mass. N. Y.
 MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 536.
 Millen Mfg. Co., James, 150 Exchange St., Boston, Mass.
 Summit Electronics, Inc., 7 Industrial Palace, Newark, N. J.

METERS—Impedance

See INSTRUMENTS—Electrical Measuring

METERS—Light

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 Federal Instrument Corp., 12-10 Broadway, Long Island City 6, N. Y.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 TELECHROME, INC., 88 Merrick Rd., Amityville, L.I.C. ADV. PG. 303.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 WESTON ELECTRICAL INSTRUMENT CORP., Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

METERS—Microwave

See MICROWAVE ACCESSORIES

METERS—Modulation

See INSTRUMENTS—Electrical Measuring

METERS—Moisture, Electronic

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Bristol Co., The, Waterbury 20, Conn.
 Delmhorst Instrument Co., 601 Cedar St., Boonton, N. J.
 FIELDS INSTRUMENT DIV. OF ROBERTSON INSTRUMENTS, INC., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 Friez Instrument Div., Bendix Aviation Corp., Broomfield, Colo. 4, Md.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Philadelphia, Pa.
 Photobell Co., 116 Nassau St., New York 38, N. Y.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

METERS—Null
METERS—Output
METERS—Panel
 See **INSTRUMENTS—Electrical Measuring**

METERS—pH Meters, Recorders & Comparators

Calistical Measurements, Inc., 585 Main St., Chatham, N. J.
 Wiley Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Hickman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Foxboro Co., The, Foxboro, Mass.
 Motte Chemical Products Co., Towson 4, Baltimore, Md.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Motovolt Corp., 95 Madison Ave., New York 16, N. Y.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
 The Ltd., Cambridge, England.
 S. Inc., 20 N. 15th St., East Orange, N. J.
 Wing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Precision Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

METERS—Phase Angle
 See **INSTRUMENTS—Electrical Measuring**

METERS—Photoelectric Reflection

AL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box 2-3, Solana Beach, Calif. ADV. PG. 159.
 Bristol Co., The, Waterbury 20, Conn.
 Central Service Co., 1271 Mission St., San Francisco, Calif.
GRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
 General Instrument Corp., 12-10 Broadway, Long Island City 6, N. Y.
LABORATORIES, INC., 4336 N. Knox Ave., Chicago 11, Ill. ADV. PG. 608.
 Instrument Development Labs., Inc., 163 Highland Ave., Needham Heights, Mass.
ORION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Motovolt Corp., 95 Madison Ave., New York 16, N. Y.
TECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Precision Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

METERS—Power Factor

METERS—Q

METERS—RF Power

See **INSTRUMENTS—Electrical Measuring**

METERS—Power Output

Dec Ltd., High Wycombe, Buckinghamshire, England.
AKER & WILLIAMSON, 235 Fairfield Ave., Upper Mersey, Pa. ADV. PG. 174, 175.
 Aire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.
 Bristol Co., The, Waterbury 20, Conn.
EN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Row Development Co., 235 Penn St., Burlington, N. J. Co. of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
CRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
KE MFG. CO., INC., JOHN, 1111 W. Nickerson St., Seattle 99, Wash. ADV. PG. 652.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
PHOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
TECHNIC RESEARCH & DEVELOPMENT CO., INC., 122 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
TON ELECTRICAL INSTRUMENT CORP., 614 Weltinghysen Ave., Newark 5, N. J. ADV. PG. 530.
 Terlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

METERS—Radar Speed

Klin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
ES ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Co., Inc., 3640 Woodland St., Baltimore 15, Md.

METERS—Sound Level

SH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

Burlington Instrument Co., Burlington, Iowa.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Summit Electronics Inc., 7 Industrial Place, Summit, N. J.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

METERS—Standing Wave Ratio
 See **INSTRUMENTS—Electrical Measuring**

METERS—Thermocouple

Assembly Products, Inc., Chagrin Falls 6, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Burlington Instrument Co., Burlington, Iowa.
DE JUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GREIBACH INSTRUMENTS CORP., Metuchen, N. J. ADV. PG. 641.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Minneapolis-Honeywell Regulator Co., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa.
 Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Simpson Electric Co. Div., American Gage & Machine Co., 5218 Kinzle St., Chicago 44, Ill.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.

METERS—Vibration

Advanced Electronics, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
CALIDYNE CO., THE, P. O. Box 72, Winchester, Mass. ADV. PG. 509.
 C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Endevo Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 386.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

METERS—Viscosity, Electronic

Foxboro Co., The, Foxboro, Mass.
 Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill.

METERS—Wave
 See **INSTRUMENTS—Electrical Measuring**

METERS—Wow and Flutter

Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.

D & R, Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Magnasyn Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.

METERS—X-Ray Intensity
 See **INSTRUMENTS—Electrical Measuring**

MICA
 See **INSULATION MATERIALS**

MICROFARAD METERS
 See **INSTRUMENTS—Electrical Measuring**

MICROMANOMETERS
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

MICROMETERS—Electronic
LISTON-BECKER INSTRUMENT CO., INC., 649 Hope St., Springfield, Stamford, Conn. ADV. PG. 674.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
 Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

MICRO-MICROAMMETERS
 See **INSTRUMENTS—Electrical Measuring**

MICRO-OHM METERS
 Dice Co., J. W., Englewood, N. J.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghysen Ave., Newark 5, N. J. ADV. PG. 530.

MICROPHONES—Aircraft Type
 American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Electro-Voice, Inc., Buchanan, Mich.
 Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, Ill.
 Lesa, Via Bergamo 21, Milan, Italy.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Roffan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
TURNER CO., THE, 909 17th St., N.E., Cedar Rapids, Iowa. ADV. PG. 430.
 Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

MICROPHONES—Carbon

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
 Astatic Corporation, The, Conneaut, Ohio.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Electro-Voice, Inc., Buchanan, Mich.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lesa, Via Bergamo 21, Milan, Italy.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Roffan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.

TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 430.
 Union Switch & Signal Div. of Westinghouse Air Brake Co., General Apparatus Sales, Pittsburgh 18, Pa.
 Universal Microphone Co., 424 Warren Lane, Inglewood Calif.

Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

MICROPHONES—Condenser

Altec Lansing Corp., 9356 Sana Monica Blvd., Beverly Hills, Calif.
 American Elite Inc., 1775 Broadway, New York 19, N. Y.
 Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
 CAPPS & CO., INC., FRANK L., 20 Addison Place, Valley Stream, N. Y. ADV. PG. 224.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

MICROPHONES—Contact

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
 AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 92.
 Electro-Voice, Inc., Buchanan, Mich.
 Lesa, Via Bergamo 21, Milan, Italy.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 430.

MICROPHONES—Crystal

American Microphone Co., 370 So. Fair Oaks Ave., Pasadena 1, Calif.
 Astatic Corporation, The, Conneaut, Ohio.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Duotone Co., Inc., Keyport, N. J.
 Electro, Inc., Delaware, Ohio.
 Electro-Voice, Inc., Buchanan, Mich.
 Lesa, Via Bergamo 21, Milan, Italy.
 Pentron Corp., The, 221 E. Cullerton St., Chicago 16, Ill.
 Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.
 Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
 Tibbetts Industries, Inc., Camden, Maine.
 TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 430.
 Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.
 Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago, 39, Ill.

MICROPHONES—Dynamic

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 American Microphone Co., 370 So. Fair Oaks Ave., Pasadena 1, Calif.
 AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 92.
 Astatic Corporation, The, Conneaut, Ohio.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Duotone Co., Inc., Keyport, N. J.
 Dyna Labs., Inc., 1075 Stewart Ave., Garden City, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.
 Lesa, Via Bergamo 21, Milan, Italy.
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
 Radionic Laboratory, 1111 State Rd., E., Anderson, Ind.
 ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Roßan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 TURNER CO., THE, 909 17th St., N. E. Cedar Rapids, Iowa. ADV. PG. 430.
 Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.

MICROPHONES—Magnetic

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Dyna Labs., Inc., 1075 Stewart Ave., Garden City, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.
 Goodmans Industries Ltd., Axiom Works, Wembley, Middlesex, England.
 Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, Ill.
 Lesa, Via Bergamo 21, Milan, Italy.
 Pentron Corp., The, 221 E. Cullerton St., Chicago 16, Ill.

Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.

Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.

Sears Co., M. J., Delaware County, Roxbury, N. Y.

Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.

Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.

Telephonics Corp., Park Ave., Huntington, N. Y.

MICROPHONES—Noise Cancelling

American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
 Electro-Voice, Inc., Buchanan, Mich.
 Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, Ill.
 ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 TURNER CO., THE, 909 17th St., N. E., Cedar Rapids, Iowa. ADV. PG. 430.

MICROPHONES—Velocity

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
 AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 92.
 Duotone Co., Inc., Keyport, N. J.
 Electro-Voice, Inc., Buchanan, Mich.
 Lesa, Via Bergamo 21, Milan, Italy.
 Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 TURNER CO., THE, 909 17th St., N. E. Cedar Rapids, Iowa. ADV. PG. 430.
 Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.

MICROSCOPES—Electron

FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 TELECHROME, INC., 88 Merrick Rd., Amityville, Pa. ADV. PG. 303.

MICROWAVE ACCESSORIES

**Amplifiers, Microwave to
Wavemeters inclusive**

AMPLIFIERS—Microwave

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 BRUNO NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Daystrom Instrument Co., Archbald, Pa.
 De Mornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory For Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 MAGNAVOX CO., COMPONENT SALES, INDUSTRIAL & DEFENSE PRODUCTS, Fort Wayne, Ind. ADV. PG. 181.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
 Radiation, Inc., Melbourne, Fla.
 RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 SPERRY GYROSCOPE CO. DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 VARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.

WHITE ELECTRON DEVICES, INC., ROGER, 12 Island Rd., Ramsey, N. J. ADV. PG. 646.

AMPLIFIERS—Microwave Radar

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 CLEGG LABORATORIES, INC., 142 S. Livingston St., Livingston, N. J. ADV. PG. 572.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Daystrom Instrument Co., Archbald, Pa.
 DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
 INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Otis Elevator Co., Electronics Div., 35 Ryerson Brooklyn, N. Y.
 Phecco, Inc., 3640 Woodland St., Baltimore 15, Md.
 RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 WHITE ELECTRON DEVICES, INC., ROGER, 12 Island Rd., Ramsey, N. J. ADV. PG. 646.

ANALYZERS—Microwave Radar

Century Metalcraft Corp., Electronic Div., 14806 Oxford St., Van Nuys, Calif.
 CLEGG LABORATORIES, INC., 142 S. Livingston St., Livingston, N. J. ADV. PG. 572.
 G & M Equipment Co., Inc., 7309-7327 Varna St., North Hollywood, Calif.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 PANORAMIC RADIO PRODUCTS, INC., 10 S. Seneca Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 245.
 Sightmaster of California Co., Gillespie Airport, San Diego, Calif.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.

ANTENNAS—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth St., Linden, N. J. ADV. PG. 428.
 Allied Research & Engineering Co., 1041 N. Las Palmas St., Hollywood, Calif.
 AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
 ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
 BART LABORATORIES CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 633.
 BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
 Bone Engineering Corp., 701 W. Broadway, Glendale, Calif.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Century Metalcraft Corp., Electronic Div., 14806 Oxford St., Van Nuys, Calif.
 Dalmo Instrument Co., 1414 El Camino Real, San Carlos, Calif.
 Daystrom Instrument Co., Archbald, Pa.
 De Mornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 Diamond Instrument Co., 40 North Ave. at Broad St., Wakefield, Mass.
 Dorne and Margolin Inc., 30 Sylvester St., Westfield, N. Y.
 DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
 Electro Precision Products, Inc., 139-30 34th Rd., Flushing 54, N. Y.
 Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.

Fretco Inc., 406 N Craig St., Pittsburgh 13, Pa.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO.,
 Endicott St., Norwood, Mass. ADV. PG. 57.
 General Precision Laboratories, Inc., 63 Bedford Rd.,
 Pleasantville, N. Y.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St.,
 Boston 15, Mass. ADV. PG. 410.
 Hycan Mfg. Co., 2961 E. Colorado St., Pasadena 8,
 Calif.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Phila-
 delphia 30, Pa.
 Insuline Corp. of America, 186 Granite St., Manchester,
 N. H.
 Kennedy & Co., D. S., Cohasset, Mass.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St.,
 New York 4, N. Y.
 Mark Products Co., 3547 W. Montrose Ave., Chicago 18,
 Ill.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Microwave Development Laboratories, Inc., 92 Broad St.,
 Wellesley, Mass.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES,
 INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New
 York 12, N. Y. ADV. PG. 528.
 Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
 Pye, Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div.,
 Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long
 Island City 1, N. Y.
 Resdel Engineering Corp., 2351 Riverside Drive, Los
 Angeles 39, Calif.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Tops-
 field, Mass.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG.
 622.
 Sightmaster of California Co., Gillespie Airport, Santee,
 Calif.
 Stainless, Inc., Third St., North Wales, Pa.
TORNGREN CO., INC., C. W., 236 Pearl St., Somerville
 45, Mass. ADV. PG. 672.
 M & F Manufacturing Corp., 10929 Vanover St.,
 North Hollywood, Calif.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave.,
 Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St.,
 Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.
 Weston Laboratories, Inc., Harvard, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

ATTENUATORS—Microwave, Adjustable & Calibrated
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave.,
 Linden, N. J. ADV. PG. 428.
MERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV.
 PG. 383.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y.
 ADV. PG. 569.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island
 City 1, N. Y. ADV. PG. 151.
CASCADE RESEARCH CORP., 53 Victory Lane, Los
 Gatos, Calif. ADV. PG. 506.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard
 St., Van Nuys, Calif.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 De Mornay-Bonardi, Inc., Archbald, Pa.
 Mornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasa-
 dena, Calif.
 Diamond Instrument Co., 40 North Ave. at Broadway,
 Wakefield, Mass.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield,
 Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave.,
 New Rochelle, N. Y. ADV. PG. 601.
ELECTRO IMPULSE LABS., 62 White St., Red Bank,
 N. J. ADV. PG. 408, 409.
 Electro Precision Products, Inc., 139-30 39th Rd., Flush-
 ing 54, N. Y.
 Electron-Radar Products, 1041 N. Pulaski Rd., Chicago
 51, Ill.
R MACHINE WORKS, INC., 26-12 Borough Place,
 Woodside 77, N. Y. ADV. PG. 169-171.
GENERAL COMMUNICATION CO., 681 Beacon St., Bos-
 ton 15, Mass. ADV. PG. 542.
GENERAL RADIO CO., 275 Massachusetts Ave., Cam-
 bridge 39, Mass. ADV. PG. 177-180.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich,
 Conn.
JUDELINE ASSOCIATES, 57 State St., Newark, N. J.
 ADV. PG. 505.
LEWETT-PACKARD CO., 395 Page Mill Rd., Palo Alto,
 Calif. ADV. PG. 29-36.
 Hycan Mfg. Co., 2961 E. Colorado St., Pasadena 8,
 Calif.
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y.
 ADV. PG. 663.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belle-
 ville, N. J. ADV. PG. 279.
ELGOG SWITCHBOARD & SUPPLY CO., 79 W. Mon-
 roe St., Chicago 3, Ill. ADV. PG. 497.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199.
 Via Bergamo 21, Milan, Italy.
ARCONI INSTRUMENTS, LTD., 23 Beaver St., New
 York 4, N. Y. ADV. PG. 150.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave.,
 Haskell, N. J. ADV. PG. 292.

MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV.
 PG. 670.
MICROWAVE ASSOCIATES, INC., 22 Cummington St.,
 Boston 15, Mass. ADV. PG. 613.
 Microwave Development Laboratories, Inc., 92 Broad St.,
 Wellesley, Mass.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES,
 INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Photocon Research Products, 421 N. Foothill Blvd., Pasa-
 dena, Calif.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave.,
 Brooklyn 11, N. Y. ADV. PG. 54-56.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244,
 245.
PREMIER INSTRUMENT CORP., 52 W. Houston St.,
 New York 12, N. Y. ADV. PG. 528.
 Radiation Inc., Melbourne, Fla.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG.
 622.
 Selectar Industries, Inc., 3100 Ocean Parkway, Brook-
 lyn 35, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee,
 Calif.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP.,
 Great Neck, N. Y. ADV. PG. 331, 332.
TECHNICRAFT LABORATORIES, INC., Thomaston-Water-
 bury Rd., Thomaston, Conn. ADV. PG. 461.
 Transitor, Inc., 154 Spring St., New York 12, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave.,
 Hillside, N. J. ADV. PG. 553.
VECTRON, INC., 404 Main St., Waltham 54, Mass.
 ADV. PG. 474, 475.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St.,
 Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

ATTENUATORS—Microwave Coaxial Fixed
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y.
 ADV. PG. 569.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th
 St., New York 1, N. Y. ADV. PG. 201.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island
 City 1, N. Y. ADV. PG. 151.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard
 St., Van Nuys, Calif.
COAXIAL CONNECTOR CO., 37 North 2nd Ave., Mt.
 Vernon, N. Y. ADV. PG. 617.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave.,
 New Rochelle, N. Y. ADV. PG. 601.
ELECTRO IMPULSE LABS., 62 White St., Red Bank,
 N. J. ADV. PG. 408, 409.
 Electro Precision Products, Inc., 139-30 34th Rd.,
 Flushing, N. Y.
 Electron-Radar Products, 1401 N. Pulaski Rd., Chicago
 51, Ill.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd.,
 Bayside, N. Y. ADV. PG. 277.
GENERAL COMMUNICATION CO., 681 Beacon St., Bos-
 ton 15, Mass. ADV. PG. 542.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St.,
 Boston 15, Mass. ADV. PG. 410.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belle-
 ville, N. J. ADV. PG. 279.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave.,
 Haskell, N. J. ADV. PG. 292.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV.
 PG. 670.
MICROWAVE ASSOCIATES, INC., 22 Cummington St.,
 Boston 15, Mass. ADV. PG. 613.
 Microwave Development Laboratories, Inc., 92 Broad
 St., Wellesley, Mass.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244,
 245.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New
 York 12, N. Y. ADV. PG. 528.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Tops-
 field, Mass.
 Schutter Co., Carl W., 80 E. Montauk Pkwy., Linden-
 hurst, N. Y.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
 Telewave Laboratories, Inc., 100 Metropolitan Ave.,
 Brooklyn 11, N. Y.
THOMPSON PRODUCTS, INC., ELECTRONICS DIV.,
 2196 Clarkwood Ave., Cleveland 3, Ohio. ADV. PG.
 60.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave.,
 Hillside, N. J. ADV. PG. 553.
VECTRON, INC., 404 Main St., Waltham 54, Mass.
 ADV. PG. 474, 475.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.
 Weinschel Engineering Co., Inc., 10503 Metropolitan
 Ave., Kensington, Md.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.

ATTENUATORS—Microwave Step
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV.
 PG. 383.

BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y.
 ADV. PG. 569.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island
 City 1, N. Y. ADV. PG. 151.
CASCADE RESEARCH CORP., 53 Victory Lane, Los
 Gatos, Calif. ADV. PG. 506.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard
 St., Van Nuys, Calif.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV.
 PG. 243.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave.,
 New Rochelle, N. Y. ADV. PG. 601.
 Electron Radar Products, 1041 N. Pulaski Rd., Chicago
 51, Ill.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd.,
 Bayside, N. Y. ADV. PG. 277.
GENERAL COMMUNICATION CO., 681 Beacon St., Bos-
 ton 15, Mass. ADV. PG. 542.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belle-
 ville, N. J. ADV. PG. 279.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Has-
 kell, N. J. ADV. PG. 292.
 Microwave Development Laboratories, Inc., 92 Broad St.,
 Wellesley, Mass.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES,
 INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Photocon Research Products, 421 N. Foothill Blvd.,
 Pasadena, Calif.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
PREMIER INSTRUMENT CORP., 52 W. Houston St.,
 New York 12, N. Y. ADV. PG. 528.
 Schutter Co., Carl W., 80 E. Montauk Pkwy., Linden-
 hurst, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee,
 Calif.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
VECTRON, INC., 404 Main St., Waltham 54, Mass.
 ADV. PG. 474, 475.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St.,
 Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.
 Weinschel Engineering Co., Inc., 10503 Metropolitan
 Ave., Kensington, Md.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

BENDS—Microwave
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave.,
 Linden, N. J. ADV. PG. 428.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass.
 ADV. PG. 383.
BART LABORATORIES CO., INC., 227 Main St., Belle-
 ville 9, N. J. ADV. PG. 633.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y.
 ADV. PG. 569.
 Bone Engineering Corp., 701 W. Broadway, Glendale
 4, Calif.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long
 Island City 1, N. Y. ADV. PG. 151.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 De Mornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasa-
 dena, Calif.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave.,
 New Rochelle, N. Y. ADV. PG. 601.
 General Precision Laboratories, Inc., 63 Bedford Rd.,
 Pleasantville, N. Y.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St.,
 Boston 15, Mass. ADV. PG. 410.
KENT CO., F. C., 64 Howard St., Irvington, N. J.
 ADV. PG. 578.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd.,
 Whittier, Calif.
 Microwave Development Laboratories, Inc., 92 Broad
 St., Wellesley, Mass.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia,
 Calif.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES,
 INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Photocon Research Products, 421 N. Foothill Blvd.,
 Pasadena, Calif.
PREMIER INSTRUMENT CORP., 52 W. Houston St.,
 New York 12, N. Y. ADV. PG. 528.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG.
 622.
 Selectar Industries, Inc., 3100 Ocean Parkway, Brook-
 lyn 35, N. Y.
SPECIALTY AUTOMATIC MACHINE CORP., 88 Gerrish
 Ave., Chelsea, Mass. ADV. PG. 578.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP.,
 Great Neck, N. Y. ADV. PG. 331, 332.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave.,
 Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St.,
 Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV.
 PG. 370.

CALORIMETERS—Microwave
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasa-
 dena, Calif.
 G. W. Associates, 108 Standard St., El Segundo, Calif.

Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
VARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.

CAVITIES—Microwave

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Allied Research & Engineering Co., 1041 N. Las Palmas Hollywood, Calif.
BART LABORATORIES CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 633.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 601.
 Electro Craft Industries Inc., 68 Jackson Ave., Stamford, Conn.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Frequency Standards, P. O. Box 504, Asbury Park, N. J. Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty-Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
 Microwave Development Laboratories, Inc., 92 Broad St., Wellesley, Mass.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Short Wave Plastic Forming Co., 2921 W. Alameda, Burbank, Calif.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 Tenstron, Inc., Harvard, Mass.
 Terpening Co., L. H., 16 W. 61st St., New York, N. Y.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
VECTRON, INC., 404 Main St., Waltham 53, Mass. ADV. PG. 474, 475.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.
 Woodwelding, Inc., 3000 W. Olive, Burbank, Calif.

COUPLERS—Directional
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
 Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Electro Precision Products, Inc., 139-30 34th Rd., Flushing 54, N. Y.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St., Boston 15, Mass. ADV. PG. 410.

GUIDELINE ASSOCIATES, 57 State St., Newark, N. J. ADV. PG. 505.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663.
JONES ELECTRONICS CO., INC., M. C., 185 N. Main St., Bristol, Conn. ADV. PG. 565.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Microwave Development Laboratories, Inc., 92 Broad St., Wellesley, Mass.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
N.R.K. MFG. & ENGINEERING CO., 4601 W. Addison St., Chicago 41, Ill. ADV. PG. 640.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Sierra Electronic Corp., San Carlos, Calif.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

CRYSTAL MOUNTS AND MIXERS

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.

COUPLINGS—Microwave
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
 Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
COAXIAL CONNECTOR CO., 37 North 2nd Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Communication Products Co., Inc., Marlboro, N. J.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
DIAMOND MFG. CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 601.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Electro Precision Products, Inc., 139-30 34th Rd., Flushing 54, N. Y.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St., Boston 15, Mass. ADV. PG. 410.
GUIDELINE ASSOCIATES, 57 State St., Newark, N. J. ADV. PG. 505.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Microwave Development Laboratories, Inc., 92 Broad St., Wellesley, Mass.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.

DUPLEXERS—Microwave
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL COMMUNICATION CO., 681 Beacon St., Boston 15, Mass. ADV. PG. 542.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
 Terpening Co., L. H., 16 W. 61st St., New York, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.

FILTERS—Microwave
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
 Basler Electric Co., 601 Fifth St., Highland, Ill.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567.
CENTRALLAB DIV. OF GLOBE-UNION, INC., 914Y Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 345, 574, 607, 659.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
 Federal Telecommunication Labs., A Div. of IT&T, 50 Washington Ave., Nutley 10, N. J.

Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
 Electro Precision Products, Inc., 139-30 34th Rd., Flushing 54, N. Y.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St., Boston 15, Mass. ADV. PG. 410.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenfield, Conn.
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663.
 Industrial Products Co., Div of Danbury-Knudsen, Danbury, Conn.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Javex, P. O. Box 646, Redlands, Calif.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Omega Laboratories, P. O. Box 33, Arlington 74, Mass.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 Warren Plastics Corp., Warren, Pa.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.

DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL COMMUNICATION CO., 681 Beacon St., Boston 15, Mass. ADV. PG. 542.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
 Terpening Co., L. H., 16 W. 61st St., New York, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.

FILTERS—Microwave
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
 Basler Electric Co., 601 Fifth St., Highland, Ill.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567.
CENTRALLAB DIV. OF GLOBE-UNION, INC., 914Y Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 345, 574, 607, 659.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
 Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
 Federal Telecommunication Labs., A Div. of IT&T, 50 Washington Ave., Nutley 10, N. J.

Frequency Standards, P. O. Box 504, Asbury Park, N. J.
 General Precision Laboratories, Inc., 63 Bedford Rd.,
 Pleasantville, N. Y.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St.,
 Boston 15, Mass. ADV. PG. 410.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto,
 Calif. ADV. PG. 29-36.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8,
 Calif.
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y.
 ADV. PG. 663.
 Jowill Electronics, Inc., 7945 Germantown Ave., Phila-
 delphia 18, Pa.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe,
 N. Y. ADV. PG. 199.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whit-
 tier, Calif.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV.
 PG. 670.
 Microwave Development Laboratories, Inc., 92 Broad St.,
 Wellesley, Mass.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES,
 INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
NORTHEAST SCIENTIFIC CO., 1 Gray St., Cambridge
 38, Mass. ADV. PG. 424.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244,
 245.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave.,
 Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St.,
 New York 12, N. Y. ADV. PG. 528.
 Radio Engineering Labs., Inc., 36-40 37th St., Long
 Island City 1, N. Y.
 Resdel Engineering Corp., 2351 Riverside Drive, Los
 Angeles 39, Calif.
 Selectar Industries, Inc., 3100 Ocean Parkway, Brook-
 lyn 35, N. Y.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP.,
 Great Neck, N. Y. ADV. PG. 331, 332.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago
 39, Ill.
 Standard Telephones & Cables Ltd., Connaught House,
 Aldwych, London, W. C. 2, England.
TECHNICRAFT LABORATORIES, INC., Thomaston-Water-
 bury Rd., Thomaston, Conn. ADV. PG. 461.
TOBE DEUTSCHMANN CORP., 921 Providence Highway,
 Norwood, Mass. ADV. PG. 513.
ELECTRON, INC., 404 Main St., Waltham 54, Mass.
 ADV. PG. 474, 475.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

LANGES—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Lin-
 den, N. J. ADV. PG. 428.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass.
 ADV. PG. 383.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y.
 ADV. PG. 569.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard
 St., Van Nuys, Calif.
 Communication Products Co., Inc., Marlboro, N. J.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasa-
 dena, Calif.
 Diamond Instrument Co., 40 North Ave. at Broadway,
 Wakefield, Mass.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave.,
 New Rochelle, N. Y. ADV. PG. 601.
F-R MACHINE WORKS, INC., 26-12 Borough Place,
 Woodside 77, N. Y. ADV. PG. 169-171.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St.,
 Boston 15, Mass. ADV. PG. 410.
 Industrial Products Co., Div. of Danbury-Knudsen, Inc.,
 Danbury, Conn.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199.
 Microwave Development Laboratories, Inc., 92 Broad St.,
 Wellesley, Mass.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
R.K. MFG. & ENGINEERING CO., 4601 W. Addison
 St., Chicago 41, Ill. ADV. PG. 640.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave.,
 Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St.,
 New York 12, N. Y. ADV. PG. 528.
 Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn
 35, N. Y.
TECHNICRAFT LABORATORIES, INC., Thomaston-Water-
 bury Rd., Thomaston, Conn. ADV. PG. 461.
 M & F Manufacturing Corp., 10929 Vanowen St.,
 North Hollywood, Calif.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave.,
 Hillside, N. J. ADV. PG. 553.
URIAN ASSOCIATES, 611 Hansen Way, Palo Alto,
 Calif. ADV. PG. 163.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St.,
 Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.

URNS—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave.,
 Linden, N. J. ADV. PG. 428.
 Allied Research & Engineering Co., 1041 N. Las
 Palmas, Hollywood, Calif.

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass.
 ADV. PG. 383.
BART LABORATORIES CO., INC., 227 Main St., Belle-
 ville 9, N. J. ADV. PG. 633.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y.
 ADV. PG. 569.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4,
 Calif.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island
 City 1, N. Y. ADV. PG. 151.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasa-
 dena, Calif.
 Diamond Instrument Co., 40 North Ave. at Broadway,
 Wakefield, Mass.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield,
 Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St.,
 New Rochelle, N. Y. ADV. PG. 601.
F-R MACHINE WORKS, INC., 26-12 Borough Place,
 Woodside 77, N. Y. ADV. PG. 169-171.
GENERAL COMMUNICATION CO., 681 Beacon St., Boston
 15, Mass. ADV. PG. 542.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto,
 Calif. ADV. PG. 29-36.
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y.
 ADV. PG. 663.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whit-
 tier, Calif.
MICROWAVE ASSOCIATES, INC., 22 Cummington St.,
 Boston 15, Mass. ADV. PG. 613.
 Microwave Development Laboratories, Inc., 92 Broad St.,
 Wellesley, Mass.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES,
 INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Photon Research Products, 421 N. Foothill Blvd., Pasa-
 dena, Calif.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244,
 245.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave.,
 Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St.,
 New York 12, N. Y. ADV. PG. 528.
 Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
 Radio Engineering Labs., Inc., 36-40 37th St., Long
 Island City 1, N. Y.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV.
 PG. 622.
 Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn
 35, N. Y.
SPECIALTY AUTOMATIC MACHINE CORP., 88 Gerrish
 Ave., Chelsea, Mass. ADV. PG. 578.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP.,
 Great Neck, N. Y. ADV. PG. 331, 332.
 Terpening Co., L. H., 16 W. 61st St., New York, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave.,
 Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St.,
 Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.

HYBRID JUNCTIONS—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave.,
 Linden, N. J. ADV. PG. 428.
 Allied Research & Engineering Co., 1041 N. Las
 Palmas, Hollywood, Calif.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass.
 ADV. PG. 383.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y.
 ADV. PG. 569.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4,
 Calif.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long
 Island City 1, N. Y. ADV. PG. 151.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard
 St., Van Nuys, Calif.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasa-
 dena, Calif.
DIAMOND MICROWAVE CORP., 7 North Ave., Wake-
 field, Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St.,
 New Rochelle, N. Y. ADV. PG. 601.
F-R MACHINE WORKS, INC., 26-12 Borough Place,
 Woodside 77, N. Y. ADV. PG. 169-171.
GUIDELINE ASSOCIATES, 57 State St., Newark, N. J.
 ADV. PG. 505.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo
 Alto, Calif. ADV. PG. 29-36.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8,
 Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 hoe, N. Y. ADV. PG. 199.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG.
 321.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whit-
 tier, Calif.
 Microwave Development Laboratories, Inc., 92 Broad
 St., Wellesley, Mass.
MICROWAVE ASSOCIATES INC., 22 Cummington St.,
 Boston 15, Mass. ADV. PG. 613.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES,
 INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244,
 245.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave.,
 Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St.,
 New York 12, N. Y. ADV. PG. 528.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV.
 PG. 622.
 Selectar Industries, Inc., 3100 Ocean Parkway, Brook-
 lyn 35, N. Y.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP.,
 Great Neck, N. Y. ADV. PG. 331, 332.
TECHNICRAFT LABORATORIES, INC., Thomaston-Water-
 bury Rd., Thomaston, Conn. ADV. PG. 461.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave.,
 Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St.,
 Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East
 Weymouth 89, Mass.

JOINTS—Rotary Microwave

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bay-
 onne, N. J. ADV. PG. 614.
AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave.,
 Linden, N. J. ADV. PG. 428.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass.
 ADV. PG. 383.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y.
 ADV. PG. 569.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4,
 Calif.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long
 Island City 1, N. Y. ADV. PG. 151.
 Dalmo Victor Co., 1414 El Camino Real, San Carlos,
 Calif.
 Diamond Instrument Co., North Ave. at Broadway,
 Wakefield, Mass.
F-R MACHINE WORKS, INC., 26-12 Borough Place,
 Woodside 77, N. Y. ADV. PG. 169-171.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO.,
 Endicott St., Norwood, Mass. ADV. PG. 57.
GRAPHITE METALLIZING CORP., 1041 Nepperhan
 Ave., Yonkers, N. Y. ADV. PG. 388, 389.
LITTON INDUSTRIES, 336 N. Foothill Rd., Beverly
 Hills, Calif. ADV. PG. 327.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whit-
 tier, Calif.
 Microwave Development Laboratories, Inc., 92 Broad St.,
 Wellesley, Mass.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia,
 Calif.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC.,
 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244,
 245.
PREMIER INSTRUMENT CORP., 52 W. Houston St.,
 New York 12, N. Y. ADV. PG. 528.
 Selectar Industries, Inc., 3100 Ocean Parkway, Brook-
 lyn 35, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave.,
 Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St.,
 Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.

LINKS—Television Microwave

Connecticut Telephone & Electric Corp., 70 Britannia St.,
 Meriden, Conn.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T,
 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver
 St., New York 4, N. Y.
 Philco Corp., Government & Industrial Div., 4700 Wis-
 sahnock Ave., Philadelphia 44, Pa.
 Pye Ltd., Cambridge, England.

MARKERS—Frequency, Microwave

Connecticut Telephone & Electric Corp., 70 Britannia St.,
 Meriden, Conn.
ELECTRO IMPULSE LABS., 62 White St., Red Bank,
 N. J. ADV. PG. 408, 409.
POLARAD ELECTRONICS CORP., 100 Metropolitan
 Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broad-
 way, New York 19, N. Y. ADV. PG. 699-706.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG.
 370.

METERS—Frequency, Microwave

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass.
 ADV. PG. 383.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y.
 ADV. PG. 569.
 Century Metalcraft Corp., Electronic Div., 14806
 Oxnard St., Van Nuys, Calif.
 Connecticut Telephone & Electric Corp., 70 Britannia
 St., Meriden, Conn.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasa-
 dena, Calif.
DIAMOND MICROWAVE CORP., 7 North Ave., Wake-
 field, Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St.,
 New Rochelle, N. Y. ADV. PG. 601.
ELECTRO IMPULSE LABS., 62 White St., Red Bank,
 N. J. ADV. PG. 408, 409.

F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. Frequency Standards, P. O. Box 504, Asbury Park, N. J.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 376.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
 Microwave Development Laboratories, Inc., 92 Broad St., Wellesley, Mass.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 Radiation, Inc., Melbourne, Fla.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

METERS—Microwave

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
 Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
F-R MACHINE WORKS INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
 Frequency Standards, P. O. Box 504, Asbury Park, N. J.
GERTSCH PRODUCTS, INC., 11846 Mississippi, Ave., P. O. Box 13856, Los Angeles 25, Calif. ADV. PG. 671.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

MICROWAVE TRANSMISSION LINES

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
ANDREW CORP., 363 E. 7th St., Chicago 19, Ill. ADV. PG. 584.
BOGART MFG. CO., 315 Seigel St., Brooklyn 6, N. Y. ADV. PG. 569.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
CASCADE RESEARCH CORP., 53 Victory Lane, Los Gatos, Calif. ADV. PG. 506.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
 Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Communication Products Co., Inc., Marlboro, N. J.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St., New Rochelle, N. Y. ADV. PG. 601.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St., Boston 15, Mass. ADV. PG. 410.
 Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Schutter Co., Carl W., 80 E. Montauk Pkwy, Lindenhurst, N. Y.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
 Terpening Co., L. H., 16 W. 61st St., New York 23, N. Y.
 Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.

MIXERS—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
 Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
BOGART MFG. CO., 315 Seigel St., Brooklyn 6, N. Y. ADV. PG. 569.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
 Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Kemtron Electron Products, Inc., 5 Prince Place, Newburyport, Mass.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
MENDELSONH SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
 Microwave Development Laboratories, Inc., 92 Broad St., Wellesley, Mass.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
 Terpening Co., L. H., 16 W. 61st St., New York, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.

OSCILLATORS—Microwave Power

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.

Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Decimeter, Inc., 1430 Market St., Denver 2, Colo.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St., New Rochelle, N. Y. ADV. PG. 601.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
MAXSON CORP., W. L., 460 W. 34th St., New York, N. Y. ADV. PG. 250.
MENDELSONH SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
VARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.
WHITE ELECTRON DEVICES, INC., ROGER, 12 W. Islip Rd., Ramsey, N. J. ADV. PG. 646.

PROBES—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
BOGART MFG. CO., 315 Seigel St., Brooklyn 6, N. Y. ADV. PG. 569.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St., New Rochelle, N. Y. ADV. PG. 601.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
GENERAL R-F FITTINGS CO., INC., 702 Beacon St., Boston 15, Mass. ADV. PG. 410.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
MENDELSONH SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
NATIONAL TEL-TRONICS CORP., 35 St. Casimir Ave., Yonkers, N. Y. ADV. PG. 312.
 Northfield-Linden Corp., 4400 Austin Blvd., Island Park, N. Y.
PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

RECEIVERS—Microwave

American Machine & Foundry Co., Electronics Division, 1085 Commonwealth Ave., Boston 15, Mass.
 Beam Instruments Corp., 350 Fifth Ave., New York, N. Y.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Daystrom Instrument Co., Archbald, Pa.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
 Engineering Associates, 434 Patterson Rd., Dayton, Ohio
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 23, N. Y.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.

Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
LAOVO LABORATORIES, Morganville, N. J. ADV. PG. 433.
MAGNAVOX CO., COMPONENT SALES, INDUSTRIAL & DEFENSE PRODUCTS, Fort Wayne 4, Ind. ADV. PG. 181.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
 Radiation, Inc., Melbourne, Fla.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

SHIFTERS—Phase, Microwave

AIRTRON, INC., Dept H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St., New Rochelle, N. Y. ADV. PG. 601.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Terpening Co., L. H., 16 W. 61st St., New York, N. Y.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
WHITE ELECTRON DEVICES, INC., ROGER, 12 W. Island Rd., Ramsey, N. J. ADV. PG. 646.

STANDARDS—Frequency, Microwave

Bassett, Inc., Rex, 1314 N. E. 17 Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
BERTSCH PRODUCTS, INC., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif. ADV. PG. 671.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 139.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

SWITCHES—Microwave

AIRTRON, INC., Dept H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
CASCADE RESEARCH CORP., 53 Victory Lane, Los Gatos, Calif. ADV. PG. 506.
 Dalmo Victor Co., 1414 El Camino Real, San Carlos, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.

GENERAL COMMUNICATION CO., 681 Beacon St., Boston 15, Mass. ADV. PG. 542.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
 Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Luhrs & Co., C. H., 297 Hudson St., Hackensack, N. J.
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
 Microwave Development Laboratories, Inc., 92 Broad St., Wellesley, Mass.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
SPECIALTY AUTOMATIC MACHINE CORP., 88 Gerrish Ave., Chelsea, Mass. ADV. PG. 578.
THOMPSON PRODUCTS, INC., ELECTRONICS DIV., 2196 Clarkwood Ave., Cleveland 3, Ohio ADV. PG. 60.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
WAVELINE, INC., Box 470 Caldwell, N. J. ADV. PG. 370.

TERMINATIONS—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
 Communication Products Co., Inc., Marlboro, N. J.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
F-R MACHINE WORKS INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
GUIDELINE ASSOCIATES, 57 State St., Newark, N. J. ADV. PG. 505.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Linear Equipment Labs., Brightwater Place, Massapequa, N. Y.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 McMillan Industrial Corp., Brownville Avenue Plant, Ipswich, Mass.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 Wavguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

TESTERS—Microwave Testing Equipment

AIRTRON, INC., DEPT. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CASCADE RESEARCH CORP., 53 Victory Lane, Los Gatos, Calif. ADV. PG. 506.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield Mass. ADV. PG. 344.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
GUIDELINE ASSOCIATES, 57 State St., Newark, N. J. ADV. PG. 505.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Jowill Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 Phebeco Inc., 3640 Woodland St., Baltimore 15, Md.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
 Sightmaster of California Co., Gillespie Airport, Santee, Calif.
 Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

TRANSFORMERS—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
 Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
 Atlas Coil, Inc., Cottage St., Derby, Conn. (h)
AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. ADV. PG. 510. (h)
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif. (h)
BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151. (h)
CENTRAL TRANSFORMER CO., 908 W. Jackson Ave., Chicago, Ill. ADV. PG. 567. (h)
 Cubic Corp., 2841 Canon St., San Diego 6, Calif. (h)
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif. (h)
DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344. (h)
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601. (h)
 Dunn Engineering Associates, Inc., 11 Windsor St., Cambridge 39, Mass. (h)
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 501. (h)
GUIDELINE ASSOCIATES, 57 State St., Newark, N. J. ADV. PG. 505. (h)
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif. (h)
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443. (h)
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199. (h)
 K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670. (h)
MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666. (h)
N.R.K. MFG. & ENGINEERING CO., 4601 W. Addison St., Chicago 41, Ill. ADV. PG. 640. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)

PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
 Thermador Electric Mfg. Co., 2000 S. Camfield Ave., Los Angeles 22, Calif. (h)
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

TRANSMITTERS—Microwave

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Daystrom Instrument Co., Archbald, Pa.
 Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.
 Pye Ltd., Cambridge, England.
 RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radto Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 VARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

TUBES—Microwave

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
 Central Sales & Mfg. Co., 2 Richwood Place, Denville, N. J.
 EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.
 ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 429.
 MICROWAVE ASSOCIATES, INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
 Pioneer Electronics Corp., Santa Monica, Calif.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
 RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.
 RED BANK DIV., BENDIX AVIATION CORP., Red Bank, N. J. ADV. PG. 110.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stewart-Speller Associates, Soquel, Calif.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 VARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.
 Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
 WHITE ELECTRON DEVICES, INC., ROGER, 12 W. Island Rd., Ramsey, N. J. ADV. PG. 646.

TUNERS—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.

BOGART MFG. CO., 315 Seigel St., Brooklyn 6, N. Y. ADV. PG. 569.
 BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 Diamond Instrument Co., North Ave. at Broadway, Wakefield, Mass.
 DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
 DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Dunn Engineering Associates, Inc., 11 Windsor St., Cambridge 39, Mass.
 F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
 FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, R. I.
 GUIDELINE ASSOCIATES, 57 State St., Newark, N. J. ADV. PG. 505.
 IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
 MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
 NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
 PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
 PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Ill.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
 UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

WAVEGUIDE TEST EQUIPMENT

BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 CASCADE RESEARCH CORP., 53 Victory Lane, Los Gatos, Calif. ADV. PG. 506.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.
 DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 ELECTRO IMPULSE LABS, 62 White St., Red Bank, N. J. ADV. PG. 408, 409.
 F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
 G. W. Associates, 108 Standard St., El Segundo, Calif.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, R. I.
 GUIDELINE ASSOCIATES, 57 State St., Newark, N. J. ADV. PG. 505.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
 NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
 PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
 Slightmaster of California Co., Gillespie Airport, Santee, Calif.
 SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.

Summit Electronics, Inc., 7 Industrial Place, Sudbury, N. J.
 TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
 UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., side, N. J. ADV. PG. 553.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 Weston Laboratories, Inc., Harvard, Mass.

WAVEGUIDES

C—Combination Rigid & Flexible Type

F—Flexible Type

R—Rigid Type

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Linden, N. J. ADV. PG. 428.
 Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
 ANDREW CORP., 363 E. 75th St., Chicago 19, ADV. PG. 584.
 BART LABORATORIES CO., INC., 227 Main St., Bellingham 9, N. J. ADV. PG. 633.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 BOGART MFG. CO., 315 Seigel St., Brooklyn 6, N. Y. ADV. PG. 569.
 BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
 COAXIAL CONNECTOR CO., 37 North 2nd Ave., Vernon, N. Y. ADV. PG. 617.
 Communication Products Co., Inc., Marlboro, N. J.
 Co-Operative Industries, Inc., 100 Oakdale Rd., Chatham, N. J.
 Dalmo Victor Co., 1414 El Camino Real, San Carlos, Calif.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
 DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
 Electro Precision Products, Inc., 139-30 34th St., Flushing 54, N. Y.
 F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
 GABRIEL ELECTRONICS DIV. OF THE GABRIEL ENDICOTT ST., NORWOOD, MASS. ADV. PG. 57.
 Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, R. I.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Industrial Products Co., Div. of Danbury-Knudsen, Danbury, Conn.
 KENT CO., F. C., 64 Howard St., Irvington, N. Y. ADV. PG. 578.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 321.
 MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
 MENDELSONN SPEEDGUN CO., INC., Fourth St., Haskell, N. J. ADV. PG. 292.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
 Model Engineering & Mfg. Inc., Huntington, Ind.
 Mueller Laboratory, 239 W. Maple Ave., Monaca, Calif.
 N.R.K. MFG. & ENGINEERING CO., 4601 W. Adams St., Chicago 41, Ill. ADV. PG. 640.
 NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.
 Photocon Research Products, 421 N. Foothill Blvd., Brea, Calif.
 PORTCHESTER INSTRUMENT CORP., 114 Wilkins Ave., Port Chester, N. Y. ADV. PG. 444.
 PREMIER INSTRUMENT CORP., 52 W. Houston St., New York 12, N. Y. ADV. PG. 528.
 Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Wakefield, Mass.
 SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Schutter Co., Carl W., 80 E. Montauk Pkwy., Linden, N. Y.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Slightmaster of California Co., Gillespie Airport, Santee, Calif.
 Standard Metals Corp., Broad & Whiting St., Attleboro, Mass.
 TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
 TELETRON INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
 Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.
 UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
 WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.

WAVEMETERS—Microwave

AIRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.

BOGART MFG. CO., 315 Seigel St., Brooklyn 6, N. Y. ADV. PG. 569.

BUDD-STANLEY CO., INC., 43-01 22nd St., Long Island City 1, N. Y. ADV. PG. 151.

Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.

Declmeter, Inc., 1430 Market St., Denver 2, Colo.

DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.

DIAMOND MICROWAVE CORP., 7 North Ave., Wakefield, Mass. ADV. PG. 344.

DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.

ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. ADV. PG. 408, 409.

F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

Hycron Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663.

KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.

LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.

MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 376.

MICROWAVE ASSOCIATES INC., 22 Cumington St., Boston 15, Mass. ADV. PG. 613.

Model Engineering & Mfg. Inc., Huntington, Ind.

NASSAU RESEARCH & DEVELOPMENT ASSOCIATES, INC., 66 Main St., Mineola, N. Y. ADV. PG. 666.

POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.

Radiation, Inc., Melbourne, Fla.

Sightmaster of California Co., Gillespie Airport, Santee, Calif.

SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.

UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.

VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.

WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.

Weston Laboratories, Inc., Harvard, Mass.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

MICROWAVE TRANSMISSION LINES

See MICROWAVE ACCESSORIES

MILLIAMMETERS

See INSTRUMENTS—Electrical Measuring

MILLOHMMETERS

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

Burlington Instrument Co., Burlington, Iowa.

Carnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.

Celler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Clear Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.

Slichter Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.

Velch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

MILLIVOLTMETERS

See INSTRUMENTS—Electrical Measuring

MIRRORS—Special Purpose

ART LABORATORIES CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 633.

Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.

Mathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Lancaster Lens Co., Lancaster, Ohio.

Pacific Universal Products Corp., 168 Vista Ave., Pasadena 8, Calif.

Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.

Southwest Products, Inc., Alamo Downs, Box 85-D, San Antonio, Rt. 4, Texas.

Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Tex.

Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

MIRRORS—Television

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.

Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.

Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.

FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.

GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.

Lancaster Lens Co., Lancaster, Ohio.

Pacific Universal Products Corp., 168 Vista Ave., Pasadena 8, Calif.

Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.

Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

MIXERS—Portable

See AMPLIFIERS—Audio Frequency

MIXERS—Microwave

See MICROWAVE ACCESSORIES

MODULATORS—Magnetic

Allied Mfg. Corp., 605-07 61st St., West New York, N. J.

C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.

Daystrom Instrument Co., Archbald, Pa.

GENERAL MAGNETICS, INC., 135 Bloomfield, N. J. ADV. PG. 146.

Phebc Co., 3640 Woodland St., Baltimore 15, Md.

Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.

MODULATORS—Phase

BRADLEY LABS., INC., 170 G Columbus Ave., New Haven 11, Conn. ADV. PG. 218.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.

Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.

MOISTURE

See INDICATORS

MONITORS—AM-FM Transmitter

BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.

Gates Radio Co., Quincy, Ill.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

MONITORS—Frequency

Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.

BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.

BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

Detectron Corp., 5420 Vineland Ave., North Hollywood, Calif.

Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.

Gates Radio Co., Quincy, Ill.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-20.

General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

LAMPKIN LABORATORIES, INC., Bradenton 1, Fla. ADV. PG. 665.

MANSON LABORATORIES, 207 Greenway Ave., Stamford, Conn. ADV. PG. 647.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

Motorola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.

PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.

West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

MONITORS—Modulation

BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.

Gates Radio Co., Quincy, Ill.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-20.

General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.

Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.

KNIGHTS CO., JAMES, 131 S. Wells St., Sandwich, Ill. ADV. PG. 634.

LAMPKIN LABORATORIES, INC., Bradenton 1, Fla. ADV. PG. 665.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

NEW LONDON INSTRUMENT CO., P. O. Box 189, New London, Conn. ADV. PG. 451.

PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

MONITORS—Television, Transmitter

Adler Communications Laboratories, 1 Le Fevre Lane, New Rochelle, N. Y.

Cinema-Television, Ltd., Worsley Bridge Rd., London SE 26, England.

Conrac, Inc., Glendora, Calif.

Dage Electronics Div. of Thompson Products, Inc., 69 N. Second St., Beech Grove, Ind.

DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.

Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.

GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-20.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

H-LAB., 53 Industrial Rd., Berkeley Heights, N. J. ADV. PG. 661.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

Industrial Television, Inc., 369 Lexington Ave., Clifton, N. J.

International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.

KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.

Pye Ltd., Cambridge, England.

Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

Television Utilities Corp., 1315 Jericho Turnpike, New Hyde Park, N. Y.

TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.

Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.

MOTOR CONTROLS

See CONTROLS

MOTORS

1. Fractional hp
2. Gear
3. Phonograph
4. Remote Control
5. Servo
6. Speed Regulation
7. Synchronous
8. Timing

Acro-Mu Switch Div., Acro Mfg. Co., Columbus, Ohio. 2.

AIR ASSOCIATES, INC., Teterboro, N. J. 1-4-5. ADV. PG. 83.

Airborne Accessories Corp., 1414 Chestnut Ave., Hillside, N. J. 1-2-4-5.

- AIR-MARINE MOTORS, INC., 369 Bay View Ave., Amityville, N. Y. 1-2-5-7. ADV. PG. 290.
- ALCAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. 1. ADV. PG. 426.
- Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio. 1-3-8.
- American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif. 1-7.
- Amgco Corp., 2037 W. Division St., Chicago 22, Ill. 2-8.
- Arma Corp., Old Country Rd., Garden City, N. Y. 1-4-5.
- ASSOCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. 5-6. ADV. PG. 669.
- Barber-Colman Co., Automatic Controls, Rockford, Ill. 1-2-7-8.
- Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif. 1-8.
- BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. 1-4-5. ADV. PG. 159.
- Birmingham Sound Reproducers, Ltd., Claremont Works, Old Hill Staffs, England. 3.
- Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, Ill. 1-7.
- BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. 1-4-5-6-7. ADV. PG. 323.
- BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. 1-5-7-8. ADV. PG. 251.
- Bristol Co., The, Waterbury 20, Conn. 8.
- Bristol Motor Division, Vocaline Company of America, Inc., Old Saybrook, Conn. 7-8.
- British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 1-3-5-7.
- Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif. 1-3.
- Carron Mfg. Co., 415 S. Aberdeen Ave., Chicago, Ill. 1-2-3.
- Century Electric Co., 1806 Pine St., St. Louis 3, Mo. 1-2-6-7.
- CLIFTON PRECISION PRODUCTS CO., INC., Broadway at Marple Ave., Clifton Heights, Pa. 1-5-7. ADV. PG. 394.
- Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. 1-5.
- CONTINENTAL ELECTRIC CO., INC., 334 Ferry St., Newark 5, N. J. 7. ADV. PG. 612.
- CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. 7-8. ADV. PG. 272.
- Diehl Mfg. Co., 1129 Finnerne Ave., Somerville, N. J. 1-5.
- DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. 5-7. ADV. PG. 85.
- Dumore Co., 1300 17th St., Racine, Wis. 1.
- EASTERN AIR DEVICES, INC., 15 Washington St., Dover, N. H. 1-2-3-5-7. ADV. PG. 315.
- Eastern Motor & Specialties, Inc., King & Hamsher Sts., Garrett, Ind. 1-7.
- ECLIPSE PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. 1-5. ADV. PG. 105-108.
- EIGOR, INC., 1501 W. Congress St., Chicago 7, Ill. 1. ADV. PG. 636.
- ELECTRIC INDICATOR CO., INC., Camp Avenue, Springdale, Conn. 1-3-4-5-6-7-8. ADV. PG. 346.
- Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn. 7.
- ELECTRIC SPECIALTY CO., 300 South St., Stamford, Conn. 1-2-7. ADV. PG. 649.
- ELECTRO ENGINEERING PRODUCTS CO., 609 W. Lake St., Chicago, Ill. 1-2-3-7. ADV. PG. 292.
- Electyeme Motor Products Corp., Genoa, Ill. 7.
- Emerson Electric Mfg. Co., The, 8100 Florissant Ave., St. Louis 21, Mo. 1.
- Fairchild Industries Division, Burlington, Vt. 1-7.
- Fasco Industries, Inc., Rochester 2, N. Y. 1.
- Foote Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill. 2.
- FORD INSTRUMENT CO. DIV. OF THE SPERRY CORP., 31-10 Thomson Ave., Long Island City 11, N. Y. 1-5-7. ADV. PG. 614.
- G-M LABORATORIES, INC., 4336 N. Knox Ave., Chicago, Ill. 5. ADV. PG. 608.
- Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y. 1-2-7-8.
- General Controls Co., Glendale 1, Calif. 1.
- GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-2-3-4-5-6-7. ADV. PG. 1-20.
- General Industries Co., Taylor & Olive Sts., Elyria, Ohio. 1-3-4.
- Giannini & Co., Inc., G.M. Pasadena 1, Calif. 5-7.
- Gleason-Avery Co., Auburn, N. Y. 1-2-3-7-8.
- Globe Industries, Inc., P. O. Box 101, North Dayton Station, Dayton 4, Ohio. 1-2-5-7.
- Gorrell & Gorrell, Haworth, N. J. 7.
- Hagen Mfg. Co., Inc., Baraboo, Wis. 7-8.
- Hansen Mfg. Co., Inc., Princeton, Ind. 7-8.
- HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. 7-8. ADV. PG. 477.
- HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. 7-8. ADV. PG. 310, 311.
- HEINZE ELECTRIC CORP., 685 Lawrence St., Lowell, Mass. 1. ADV. PG. 505.
- Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio. 1-2-5-6-7-8.
- HOWARD INDUSTRIES, INC., Divisions: Cyclohm Motor Corp.; Electric Motor Corp., Racine, Wis. 1-2-3-4-5-6-7-8. ADV. PG. 643.
- Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y. 1-2-4-5-7-8.
- INFRA ELECTRONIC CORP., Roseland, N. J. 1-5-7. ADV. PG. 580.
- Ingraham Co., E., Bristol, Conn. 7-8.
- INSTRUMENT MOTORS, Acosta St., Stamford, Conn. 1-4-5-6-7. ADV. PG. 536.
- Iron Fireman, Electronics Div., 2800 S.E. Ninth Ave., Portland 2, Ore. 1-5.
- Janette Electric Mfg. Co., Morton Grove, Ill. 2.
- KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. 1-2-4-5-7. ADV. PG. 372.
- KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. 5-7. ADV. PG. 253-256.
- Kinetix Instrument Div., Ketay Mfg. Corp., 902 Broadway, New York 12, N. Y. 5-7.
- Kollsman Instrument Corp., 80-08 45th Ave., Elmhurst, N. Y. 5-7.
- Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif. 1-5.
- Leland Electric Co., Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio. 1.
- Lesia, Via Bergamo 21, Milan, Italy. 1-2-3-6-7.
- Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y. 1-2-3.
- Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif. 5.
- Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif. 8.
- Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis. 1.
- Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla. 5.
- Mission-Western Engineers, Inc., 132-134 W. Colorado Blvd., Pasadena 1, Calif. 1-2-4-5-6-7-8.
- Motordyne, Inc., 2661 S. Myrtle Ave., Monrovia, Calif. 1-2-5.
- Motoresearch Co., 1600 Junction Ave., Racine, Wis. 1-2.
- National Pneumatic Co., Inc., and Holtzer-Cabot Divisions, 125 Amory St., Boston 19, Mass. 1-2-5-7-8.
- OSTER MFG. CO., JOHN, 1 N. Main St., Racine, Wis. 1-2-5. ADV. PG. 425.
- Pioneer Electric & Research Corp. 743 Circle Ave., Forest Park, Ill. 1.
- Piqua Machine & Mfg. Co., Young & College Sts., Piqua, Ohio. 1-2.
- Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill. 1.
- Rae Motor Corp., P. O. Box 291, Racine, Wis. 1-2-3.
- RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. 1-8. ADV. PG. 110.
- Redmond Co., Inc., 201 Monroe St., Owosso, Mich. 1.
- REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. 1. ADV. PG. 343.
- Reynolds Electric Co., 3000 River Rd., River Grove, Ill. 1-7.
- Robbins & Myers, Inc., 1345 Lagonda Ave., Springfield 99, Ohio. 1.
- ROTRON MFG. CO., INC., 7-9 Schoonmaker Lane, Woodstock, N. Y. 1-2. ADV. PG. 651.
- RUST INDUSTRIAL CO., 608 Willow St., Manchester, N. Y. 4. ADV. PG. 545.
- SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y. 7.
- Scovill Mfg. Co., Waterbury 20, Conn. 1.
- Servo-Tek Products Co., Inc., 1086 Goffie Rd., Hawthorne, N. J. 1-2-4-5-6.
- SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. 2-5-7. ADV. PG. 374.
- Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J. 4-6.
- Sessions Clock Co., Industrial Products Div., Forestville, Conn. 7-8.
- Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill. 1-2-5-7.
- Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill. 3.
- Specialty Battery Co., Madison 4, Wis. 1.
- Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill. 1.
- Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. 1-4-5-7-8.
- TELECHRON DEPT. OF GENERAL ELECTRIC CO., Ashland, Mass. 7-8. ADV. PG. 21.
- THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. 1. ADV. PG. 548.
- TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. 7. ADV. PG. 662.
- TRANSCOIL CORP., 107 Grand St., New York 13, N. Y. 5. ADV. PG. 37.
- United Pressed Products Co., 741 W. Harrison St., Chicago 7, Ill. 1-2-3.
- Universal Electric Co., 300 E. Main St., Owosso, Mich. 1.
- Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas. 6.
- Vocaline Co. of America, Inc., Old Saybrook, Conn. 7-8.
- Vocatron Mfg. Div. of Vocaline Co. of America, Inc., Old Saybrook, Conn. 1-7-8.
- Wagner Electric Corp., 6400 Plymouth Ave., St. Louis 14, Mo. 1.
- White-Rodgers Electric Co., Armament Dept., 1209 Cass Ave., St. Louis 6, Mo. 1-2-5.
- Cutler Metal Products Co., 1025 Line St., Cambridge, N. J.
- Fada Radio & Electric Co., Inc., 525 Main St., Belle Mead, N. J.
- Finn & Co., Inc., T. R., 200 Central Ave., Hawthorne, N. J.
- GENERAL CEMENT MFG. CO., ELECTRONIC DIV., Taylor Ave., Rockford, Ill. ADV. PG. 380.
- General Tire & Rubber Co., The, Akron, Ohio.
- Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio.
- J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
- KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
- LORD MFG. CO., 1635 W. 12th St., Erie, Pa. ADV. PG. 512.
- MARION ELECTRICAL INSTRUMENT CO., 402 St. Manchester, N. H. ADV. PG. 390.
- M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 386.
- Mercury Electronic Co., Box 450, Red Bank, N. J.
- METAL TEXTILE CORP., 647 E. First Ave., Rockford, N. J. ADV. PG. 653.
- Mica Insulator Co., Schenectady 1, N. Y.
- Minnesota Rubber & Gasket Co., 3630 Wooddale Minneapolis 16, Minn.
- Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
- Remler Co., Ltd., 2101 Bryant St., San Francisco, Calif.
- ROBINSON AVIATION INC., Teterboro Air Terminal, Teterboro, N. J. ADV. PG. 357.
- UCINITE CO., DIV. OF UNITED-CARR FASTENER CO., 459 Watertown St., Newtonville, Mass. ADV. PG. 359.
- United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
- Vulcanized Rubber Products Co., Morrisville, Pa.

MOUNTS—Antenna

- American Radio Hardware Co., Inc., 152 S. MacQuisten Pkwy., Mt. Vernon, N. Y.
- Baker Manufacturing Co., Evansville, Wis.
- Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
- BOGART MFG. CO., 315 Siegel St., Brooklyn 6, N. Y. ADV. PG. 569.
- CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 574, 607, 659.
- Clear Beam Antenna Corp., 100 Prospect Ave., bank, Calif.
- Cornell-Dubilier Electric Corp., South Plainfield, N. J.
- Daystrom Instrument Co., Archbald, Pa.
- Diamond Instrument Co., North Ave. at Broadway, Westfield, Mass.
- Dorne and Margolin, Inc., 30 Sylvester St., Westfield, N. Y.
- Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
- G & M Equipment Co., Inc., 7309-7327 Varna North Hollywood, Calif.
- GABRIEL ELECTRONICS DIV. OF THE GABRIEL ENDICOTT ST., NORWOOD, MASS. ADV. PG. 57.
- GENERAL CEMENT MFG. CO., ELECTRONIC DIV., Taylor Ave., Rockford, Ill. ADV. PG. 380.
- I. E. Manufacturing, 321 N. Hoynes Ave., Chicago 111.
- Insuline Corp. of America, 186 Granite St., Manchester, N. H.
- J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
- Kenworth Engineering Co., Inc., 265 Colfax Ave., Kenworth, N. J.
- KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
- Modern-Aire Mfg. Co., 4436 W. Roosevelt Rd., Chicago 24, Ill.
- National Electric Products Co., 140 Stanwix St., Pittsburgh 22, Pa.
- National Electronic Mfg. Corp., 186 Granite St., Chester, N. H.
- P.M. Industries, Inc., Stamford, Conn.
- Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.
- Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
- Premax Products Div., Chisholm-Ryder Co., Inc., 1000 Land & College Aves., Niagara Falls, N. Y.
- Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
- Radio Merchandise Sales, Inc., 2016 Bronxdale New York 62, N. Y.
- Rohn Mfg. Co., 116 Limestone, Bellevue, Peoria, Ill.
- SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
- Saxton Products, Inc., 2101 Grand Concourse, New York 53, N. Y.
- South River Metal Products Co., Inc., 377-379 Pike, South River, N. J.
- Tele-Ex-Pand Corp., Fourth Pine Sts., P. O. Box Berwick, Pa.
- U. S. GASKET CO., P.O. Box 93, Camden, N. J. ADV. PG. 604, 605.
- Walnut Machine Co., 1529 S. Walnut St., South Plainfield, N. J. 14, Ind.
- Wind Turbine Co., E. Market St. Penna. R.R., Chester, Pa.

MOUNTS—Thermistor

- F-R MACHINE WORKS INC., 26-12 Borough Park, Woodside 77, N. Y. ADV. PG. 169-171.
- HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
- PREMIER INSTRUMENT CORP., 52 W. Houston New York 12, N. Y. ADV. PG. 528.

MOUNTINGS

See also BASES

MOUNTINGS—Vibration and Shock

- AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
- American Radio Hardware Co., Inc., 152 S. MacQuisten Pkwy., Mt. Vernon, N. Y.
- BARRY CORP., THE, 711 Pleasant St., Watertown 72, Mass. ADV. PG. 42.
- Bennett Mfg. Co., Alden, N. Y.
- Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
- CENTRALAB DIV. OF GLOBE-UNION, INC., 914 Y. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
- Connecticut Hard Rubber Co., 413 East St., New Haven, Conn.

UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
Waveguide, Inc., P.O. Box 486, 14845 Oxnard St., Van Nuys, Calif.

MULTIPLIERS—Crystal

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.

MULTIPLIERS—Frequency

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St., New Rochelle, N. Y. ADV. PG. 601.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
PERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
ELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
ELECTRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
ARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.
West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

MULTIPLIERS—Magnetic

LOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.

MULTIPLIERS—Meter

Electrovox Corp., 740 Belleville Ave., New Bedford, Mass.
AVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 245.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
OKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
MAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Precision Resistor Co., 109 U. S. Highway No. 22, Hillside 5, N. J.
Aliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
INSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
ALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Insulo Co., Inc., 9 Liberty St., Newark 5, N. J.

MULTITESTERS

See **TESTERS—Multitesters**

MULTIVIBRATORS

See **VIBRATORS—Multivibrators**

WIRE SYSTEMS—Industrial and Commercial

McCans Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
Smutzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
Wes Radio Co., Quincy, Ill.
Wagna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Wintosh Laboratory, Inc., 320 Water St., Binghamton, N. Y.
W. J. Ltd., Cambridge, England.
Wolfeberg-Carlson Co., Rochester 3, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Western Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.

WIRE—Special

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.

Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.
Atlas Tack Corp., Pleasant St., Fairhaven, Mass.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
Hassall, Inc., John, P. O. Box 2242 Westbury, N. Y.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.
Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

NAME PLATES

See **PLATES, NAME—Metal or Plastic**

NEEDLES—Cutting

Audio Devices, Inc., 444 Madison Ave., New York 22, N. Y.
CAPPS & CO., INC., Frank L., 20 Addison Place, Valley Stream, N. Y. ADV. PG. 224.
Duotone Co., Inc., Keyport, N. J.
Electrovox Co., Inc., 60 Franklin St., East Orange, N. J.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
Jensen Industries, Inc., 329 S. Wood St., Chicago, Ill.
Miller Mfg. Co., M. A., 4th & Church Sts., Libertyville, Ill.
Permo, Inc., 6415 Ravenswood Ave., Chicago 26, Ill.
Recoton Corp., 147 W. 22nd St., New York 11, N. Y.
Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.
Sonic Recording Products, Inc., 58 Mill Rd., Freeport, N. Y.

NEEDLES—Playback

Audio Devices, Inc., 444 Madison Ave., New York 22, N. Y.
Duotone Co., Inc., Keyport, N. J.
Electrovox Co., Inc., 60 Franklin St., East Orange, N. J.
Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Jensen Industries, Inc., 329 S. Wood St., Chicago, Ill.
Miller Mfg. Co., M. A., 4th & Church Sts., Libertyville, Ill.
Pacific Transducer EBG Corp., 11921 S.W. Pico Blvd. Los Angeles 64, Calif.
Permo Inc., 6415 Ravenswood Ave., Chicago 26, Ill.
Franstiehl Chemical Co., 104 Lake View Ave., Waukegan, Ill.
Recoton Corp., 147 W. 22nd St., New York 11, N. Y.
Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.
Tetrad Co., Inc., 62 St. Mary St., Yonkers 2, N. Y.
Vallorbs Jewel Co., Lancaster, Pa.

NETWORKS—Directional Antenna Phasing

Adler Communications Laboratories, 1 Le Fevre Lane, New Rochelle, N. Y.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Gates Radio Co., Quincy, Ill.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
LaPointe Electronics Inc., Rockville, Conn.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

NETWORKS—Matching

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
American Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
ANDREW CORP., 363 E. 75th St., Chicago 19, Ill. ADV. PG. 584.
C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
Daystrom Instrument Co., Archbald, Pa.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.
Gates Radio Co., Quincy, Ill.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.

LaPointe Electronics Inc., Rockville, Conn.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

NETWORKS—Pulse Forming

ADVANCE ELECTRONICS CO., 451 Highland Ave., Pasadena, N. J. ADV. PG. 645.
Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg, Pa.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479.
Ajax Condenser Corp., 10905 Chandler Blvd., North Hollywood, Calif.
Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis., ADV. PG. 252, 342, 574, 607, 659.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144.
CONDENSER PRODUCTS CO., 140 Hamilton St., New Haven, Conn. ADV. PG. 623.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
CORSON ELECTRIC MFG. CORP., 540 39th St., Union City, N. J. ADV. PG. 662.
EMPIRE STATE LABORATORIES, 2608 Merrick Rd., Bellmore, N. Y. ADV. PG. 478.
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P.O. Box 327, Huntington, Ind. ADV. PG. 550.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. ADV. PG. 352.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
Ossian Mfg. Co., Box 151A, Ossian, Ind.
Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.
Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London W. 3, England.
Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Tex.
TOBE DEUTSCHMANN CORP., 921 Providence Highway, Norwood, Mass. ADV. PG. 513.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

NULL

See **DETECTORS**

NUTS

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALLMETAL SCREW PRODUCTS CO., INC., 821 Stewart Ave., E., Garden City, N. Y. ADV. PG. 457.
Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.
ATLAS E-E CORP., Bedford Airport, Bedford, Mass. ADV. PG. 674.
ATLAS SCREW & SPECIALTY CO., 450 Broome St., New York 13, N. Y. ADV. PG. 312.
Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
Continental Screw Co., New Bedford, Mass.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Gries Reproducer Corp., 151 Beechwood St., New Rochelle, N. Y.
Harper Co. H. M., 8200 Lehigh Ave., Morton Grove, Ill.
J F D MFG. CO., INC., 610-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
Jacobson Mfg. Co., Inc., Kenilworth 2, N. J.

KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.

Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.

NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.

National Screw & Mfg. Co., The, Cleveland 4, Ohio.

Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.

Pheoff Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.

Progressive Mfg. Co., 50 Norwood St., Torrington, Conn.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Standard Locknut & Lockwasher, Inc., 501 N. Capitol Ave., Indianapolis 4, Ind.

Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

TINNERMAN PRODUCTS, INC., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio. ADV. PG. 82.

TUBULAR RIVET & STUD CO., Linden St., Quincy, Mass. ADV. PG. 300.

United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.

Waltham Screw Co., Waltham, Mass.

Westfield Metal Products Co., Inc., Elm & Burton Sts., Westfield, Mass.

NUTS—Self-Locking

ALLMETAL SCREW PRODUCTS CO., INC., 821 Stewart Ave., E., Garden City, N. Y. ADV. PG. 457.

Banc-Lok Div. of Boots-Aircraft Nut Corp., Newton Ave., Norwalk, Conn.

Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.

Elastic Stop Nut Corp., 2330 Vauxhall Road, Union, N. J.

FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.

KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.

Klincher Locknut Corp., 2153 Hillside Ave., Indianapolis 18, Ind.

National Screw & Mfg. Co., Cleveland 4, Ohio.

Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Shakeproof, Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.

Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.

Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

Stronghold Screw Products, Inc., 1801 W. Winnemac St., Chicago 40, Ill.

THOMPSON-BREMER & CO., 1644 W. Hubbard St., Chicago 22, Ill. ADV. PG. 93.

UNITED-CARR FASTENER CORP., Cambridge 42, Mass. ADV. PG. 328.

NYLON

See INSULATING MATERIALS

OHMMETERS

See INSTRUMENTS—Electrical Measuring

OPTICAL EQUIPMENT AND SPECIALTIES

American Optical Co., Box 4, Buffalo 15, N. Y.

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.

Baird Associates, 33 University Rd., Cambridge 38, Mass.

Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.

BURKE & JAMES INC., 321 S. Wabash Ave., Chicago 4, Ill. ADV. PG. 643.

Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.

FARRAND OPTICAL CO., INC., Bronx Blvd., at 238th St., New York 70, N. Y. ADV. PG. 460.

Federal Instrument Corp., 1210 Broadway, Long Island City 6, N. Y.

Maurer, Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.

Milano Optica, S.P.A., Snow & Union Sts., Brighton 35, Mass.

Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.

Pancro Mirrors, Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.

Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.

PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.

Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.

Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

Viewloc, Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

OSCILLATORS—Audio Fork Controlled

Acme Electronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.

AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 36, N. Y. ADV. PG. 322.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.

DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 658.

Daystrom Instrument Co., Archbald, Pa.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Muirhead & Co., Ltd., Beckenham, Kent, England.

PHILAMON LABORATORIES, INC., 5717 Third Ave., Brooklyn 20, N. Y. ADV. PG. 514.

Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.

Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.

TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 662.

Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.

OSCILLATORS—Audio Frequency

Acme Electronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.

ALCO ELECTRONICS MFG. CO., 3 Wolcott Ave., Lawrence, Mass. ADV. PG. 367.

Bendix Aviation Corp., Pacific Division, 1160 Sherman Way, North Hollywood, Calif.

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.

BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.

Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.

Cinema-Television Ltd., Worsley Bridge Rd., London, S. E. 26, England.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Clough Bregle Co., 6014 N. Broadway, Chicago, Ill.

COILCRAFT, INC., Cary, Ill. ADV. PG. 534.

Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.

DAVEN CO., 191 Central Ave., Newark 4, N. J., ADV. PG. 243.

Donner Scientific Co., 2829 Seventh St., Berkeley 10, Calif.

DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.

ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.

El-Tronics, I. S., 5th & Noble Sts., Philadelphia 23, Pa.

Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.

Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.

HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.

INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.

INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.

International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.

Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.

LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.

LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.

Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.

Maryland Electronic Mfg. Corp., College Park, Md.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Mercury Electronic Co., Box 450, Red Bank, N. J.

Muirhead & Co., Inc., Beckenham, Kent, England.

Phebro, Inc., 3640 Woodland St., Baltimore 15, Md.

Precise Development Corp., 2 Neil Court, Oceanside, N. Y.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Pulse Techniques, Inc., 1411 Palisade Ave., West Essex, N. J.

Pye Ltd., Cambridge, England.

Radex Corp., 2076 N. Elston Ave., Chicago 14, Ill.

RADIO CORP. OF AMERICA, Engineering Products Camden, N. J. ADV. PG. Inside Back & Back Cover.

Radionic Laboratory, 1111 State Rd., E., Anderson, Resel Engineering Corp., 2351 Riverside Drive, Angeles 39, Calif.

Sightmaster of California Co., Gillespie Airport, San Diego, Calif.

Southwest Engineering & Mfg. Co., P. O. Box 3325, Diego 3, Calif.

Southwestern Industrial Electronics Co., 2831 Post Rd., P. O. Box 13058, Houston 19, Texas.

Specialty Engineering Div. of Specialty Assembling Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

TELETRONICS LABORATORY, INC., Kinkel St., Woburn, N. Y. ADV. PG. 447.

Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.

U. S. ELECTRONICS CORP., 276 Warren St., Larchmont, N. J. ADV. PG. 493.

WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.

WAVEFORMS, INC., 333 Sixth Ave., New York 1, N. Y. ADV. PG. 560.

Weinschel Engineering Co., Inc., 10503 Metropolitan Ave., Kensington, Md.

Wickes Engineering & Construction Co., P. O. Box Camden 1, N. J.

Wilcox Electric Co., 1400 Chestnut St., Kansas Mo.

OSCILLATORS—Cavity

AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. ADV. PG. 383.

AUDIO PRODUCTS CORP., 2265 Westwood Blvd., Angeles 64, Calif. ADV. PG. 653.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.

Decimeter, Inc., 1430 Market St., Denver 2, Colo.

DIAMOND MICROWAVE CORP., 7 North Ave., Woburn, Mass. ADV. PG. 344.

DOUGLAS MICROWAVE CO., INC., 11 Beechwood Road, New Rochelle, N. Y. ADV. PG. 601.

F-R MACHINE WORKS, INC., 26-12 Borough Park Woodside 77, N. Y. ADV. PG. 169-171.

Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Alto, Calif. ADV. PG. 29-36.

LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.

MENDELSON SPEEDGUN CO., INC., Fourth Haskell, N. J. ADV. PG. 292.

POLARAD ELECTRONICS CORP., 100 Metropolitan Brooklyn 11, N. Y. ADV. PG. 54-56.

Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Transitron, Inc., 154 Spring St., New York 12, N. Y.

OSCILLATORS—Crystal

ADVANCE ELECTRONICS CO., 451 Highland Ave., Salem, N. J. ADV. PG. 645.

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 639.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.

Bassett Inc., Rex., 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.

BLILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 375.

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.

CLARK CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.

Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.

Colortone Electronics, Inc., 238 William St., New York 38, N. Y.

Eldico of New York, Inc., 44-31 Douglaston Parkway, Douglaston, N. Y.

Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

Gates Radio Co., Quincy, Ill.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

INTERNATIONAL CRYSTAL MFG. CO., 18 N. Lee Oklahoma City, Okla. ADV. PG. 147.

Jersey City Technical Laboratory, 880 Bergen Jersey City 6, N. J.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.

Measurement Engineering, Ltd., Arnprior, Ontario, Canada.

Nebel Lab., R. E., 1104 Lincoln Place, Brooklyn 1, N. Y.

Norman Laboratories, Ernst, Williams Bay, Wis.

arsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 hebeco, Inc., 3640 Woodland St., Baltimore 15, Md.
 izeo Products Co., Whitney St., Frammingham, Mass.
 remier Research Laboratories, Inc., 79-89 Seventh Ave., New York 11, N. Y.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
EEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 343.
 tandard Crystal Co., 1714 Locust St., Kansas City, Mo.
TANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.
ELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
ELECTRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
EL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
ELONIC INDUSTRIES, 414 S. Rural St., Indianapolis 1, Ind. ADV. PG. 568.
ALPEY CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

OSCILLATORS, GRID DIP—High Frequency & vhf
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 assett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759 Fort Lauderdale, Fla.
COILCRAFT, INC., Cary, Ill. ADV. PG. 534.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Franco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.
EATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 owill Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 ular Equipment Labs., Brightwater Place, Massapequa, N. Y.
MEASUREMENTS CORP., Boonton, N. J. ADV. PG. 319.
 nion Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.

OSCILLATORS—Microwave Power
 See **MICROWAVE ACCESSORIES**

OSCILLATORS—Oven Crystal Control

eronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 assett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759 Fort Lauderdale, Fla.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
CLARK CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
INTERNATIONAL CRYSTAL MFG. CO., 18 N. Lee St., Oklahoma City Okla. ADV. PG. 147.
EE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.
ONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
ORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 324-326.
OLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
RESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
EEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 343.
 Scientific Radio Products, Inc., 215 South 11th, Omaha, Neb.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
 tandard Crystal Co., 1714 Locust St., Kansas City, Mo.
TANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.
 tandard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
ELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
ELECTRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
ALPEY CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.
ELECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Bright Electronic Development Co., 1519 McGee St., Kansas City 8, Mo.

OSCILLATORS—Radio Frequency

IR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 rborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
VION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. J. ADV. PG. 490.

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
 Cinema-Television, Ltd., Worsley Bridge Rd., London SE 26, England.
COILCRAFT, INC., Cary, Ill. ADV. PG. 534.
 Clough Brengle Co., 6014 N. Broadway, Chicago, Ill.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Donner Scientific Co., 2829 Seventh St., Berkeley 10, Calif.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
ELDEMA CORP., 5827 E. Beverly Blvd., Los Angeles 22, Calif. ADV. PG. 539.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
 Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Gates Radio Co., Quincy, Ill.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jowil Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.
 Melissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
 New Rochelle Tool Corp., 320 Main St., New Rochelle, N. Y.
NORTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 324-326.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 Peheco Inc., 3640 Woodland St., Baltimore 15, Md.
 Precision Development Corp., 2 Neil Court, Oceanside, N. Y.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Rollin Co., 2010 Lincoln Ave., Pasadena 3, Calif.
 Scientific Radio Products, Inc., 215 S. 11th, Omaha, Neb.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Slightmaster of California Co., Gillespie Airport, Santee, Calif.
STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Supreme, Inc., Greenwood, Miss.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
TELONIC INDUSTRIES, 444 S. Rural St., Indianapolis 1, Ind. ADV. PG. 568.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.

Weston Laboratories, Inc., Harvard, Mass.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

OSCILLATORS—Ultra-Low Frequency

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

OSCILLATORS—Ultrasonic

ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 571.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BIRTCHEER CORP., 4371 Valley Blvd., Los Angeles 32, Calif. ADV. PG. 545.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio ADV. PG. 406, 407.
CLARK CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.
 Donner Scientific Co., 2829 Seventh St., Berkeley 10, Calif.
 Fischer & Co., R. A., 517 Commercial St., Glendale 3, Calif.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 40, 41.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
 Mullard Overseas Ltd., Equipment Div., Century House Shaftesbury Ave., London, W. C. 2, England.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 Piezo Products Co., Whitney St., Frammingham, Mass.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill.
VRIBO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.

OSCILLOGRAPHS

See **OSCILLOSCOPES**

OSCILLOGRAPHS—Cathode Ray Camera

Allegany Instrument Co., Inc., Cumberland, Md.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Du Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.

LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

OSCILLOGRAPHS—Cathode Ray Recording, Multichannel

Allegheny Instrument Co., Inc., Cumberland, Md.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Central Research Laboratories, Inc., Red Wing, Minn.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Twentieth Century Electronics Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.

OSCILLOGRAPHS—Direct Writing

BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio.
 Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.
 Offner Electronics, Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
 Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
 Precise Development Corp., 2 Neil Court, Oceanside, N. Y.
 Radiation, Inc., Melbourne, Fla.
 SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Twentieth Century Electronics Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.

OSCILLOGRAPHS—Multi-Element

Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa 3, Okla.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Heiland Research Corp., 130 E. Fifth Ave., Denver 9, Colo.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Miller Instruments, Inc., William 325 N. Halstead Ave., Pasadena 8, Calif.
 Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
 SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

OSCILLOGRAPHS—Recording

Allegheny Instrument Co., Inc., Cumberland, Md.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa 3, Okla.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 95.
 Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
 MID-CENTURY INSTRUMATIC CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
 Twentieth Century Electronics Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.

OSCILLOGRAPHS—Transient Study
 See OSCILLOSCOPES—Cathode Ray

OSCILLOSCOPES
 See OSCILLOGRAPHS ACCESSORIES
 See TRACERS—Manual, for Oscilloscopes

OSCILLOSCOPES—Cathode Ray

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Allegheny Instrument Co., Inc., Cumberland, Md.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Crosby Labs., Inc., Box 233, Robbins Lane, Hicksville, N. Y.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Du Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
 Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
 ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-20.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
 HEATH CO., Benton Harbor, Mich., ADV. PG. 73-76.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Industrial Television, Inc., 369 Lexington Ave., Clifton, N. J.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston, 14, Mass.
 LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 Linear Equipment Labs., Brightwater Place, Massapequa, N. Y.
 Maico Co., Inc., 21 N. 3rd St., Minneapolis, Minn.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W.C. 2, England.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Precise Development Corp., 2 Neil Court, Oceanside, N. Y.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
 Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Simpson Electric Co. Div., American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.

Supreme, Inc., Greenwood, Miss.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Tektronix, Inc., P. O. Box 831, Portland 7, Ore.
 Teletronic Laboratories, Inc., 1835 W. Rosecrans Av., Gardena, Calif.
 TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 663.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 Twentieth Century Electronics Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.
 VOLKERS & SCHAFFER MFG. CORP., P. O. Box 99, Schenectady, N. Y. ADV. PG. 484.
 WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 90, 91.

OSCILLOSCOPES, Cathode Ray—Multiple Channel

Allegheny Instrument Co., Inc., Cumberland, Md.
 American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Cinema-Television Ltd., Worsley Bridge Rd., London, S.E. 26, England.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Du Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
 Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Twentieth Century Electronics Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.
 WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 90, 91.

OSCILLOSCOPES—Portable

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Du Mont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Feiler Engineering Co., 8026 N. Monticello Ave., Skokie, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston, 14, Mass.
 LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
 Precise Development Corp., 2 Neil Court, Oceanside, N. Y.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
 RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Cover.
 Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.
 Supreme, Inc., Greenwood, Miss.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
 TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 663.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.
 VOLKERS & SCHAFFER MFG. CORP., P. O. Box 99, Schenectady, N. Y. ADV. PG. 484.
 WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 90, 91.

OSCILLOSCOPES—Portable Projection

BETA ELECTRIC CORP., 333 E. 103rd St., New York 29, N. Y. ADV. PG. 225.

essor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S. Canada.
 ilder Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 ELECTRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.

VENTS—Crystal

asset, Inc., Rex, 1314 N.E. 17th Court, P.O. Box 1759, Fort Lauderdale, Fla.
 ILEY ELECTRIC CO., Union Station Bldg., Erie, Pa. ADV. PG. 375.
 ARK CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.
 X & COMPANY, INC., 115 E. 23rd St., New York 10, N. Y. ADV. PG. 539.
 igned Precision Casting Co., Box EL 68, Matawan, N. J.
 ve-Hendry Co., 1815 W. Lake St., Chicago 12, Ill.
 rison & Co., Philip H., Matawan, N. J.
 INT CORP., 453 Lincoln St., Carlisle, Pa. ADV. PG. 533.
 plantite Manufacturing Corp., Stirling, N. J.
 & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 VOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 WIS CO., E. B., 11 Bragg St., East Hartford 8, Conn. ADV. PG. 590.
 COY ELECTRONICS CO., Mount Holly Springs, Pa. ADV. PG. 525.
 ilder Labs., August E., 9226 Hudson Blvd., North Bergen, N. J.
 nitor Products Co., 815 Fremont Ave., South Pasadena, Calif.
 el Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
 recision Crystal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.
 erner Research Laboratories, Inc., 79-89 Seventh Ave., New York 11, N. Y.
 e Ltd., Cambridge, England.
 icientific Radio Products, Inc., 215 S. 11th, Omaha, Neb.
 andard Crystal Co., 1714 Locust St., Kansas City 1, Kans.
 ANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.
 ELECTRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
 -Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
 LPEY CRYSTAL CORP., 1244 Highland St., Holliston, Mass. ADV. PG. 483.
 st Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 ight Electronic Development Co., 1519 McGee St., Kansas City 8, Mo.

ENTS—Electric

ne Electric Heating Co., 1217 Washington St., Boston, Mass.
 ican Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
 ural Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 patch Oven Co., Minneapolis, Minn.
 nder Engineering Co., Inc., 740 S. 13th St., Newark, N. J.
 ERAL ELECTRIC CO., Apparatus Sales Div., 1 River St., Schenectady 5, N. Y. ADV. PG. 1-20.
 ve-Hendry Co., 1815 W. Lake St., Chicago 12, Ill.
 ert Co., K. H., 6830 Cottage Grove Ave., Chicago 77, Ill.
 HLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
 & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 nder Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 ella-Infra-Red Co., E. 73rd Grand Ave., Cleveland 4, Ohio.
 YSICS RESEARCH LABS., INC., 507 Hempstead Turnpike, West Hempstead, N. Y. ADV. PG. 607.
 erner Research Laboratories, Inc., 79-89 Seventh Ave., New York 11, N. Y.
 ision Scientific Co., 3737 W. Cortland St., Chicago 7, Ill.
 -Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
 age Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.
 st Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 and Co., Edwin L., 7606 Thomas Blvd., Pittsburgh, Pa.
 ng Brothers Co., 1829 Columbus Rd., Cleveland, Ohio.

ENTS—Infra-Red Drying

atch Oven Co., Minneapolis, Minn.
 oria Pressed Steel Corp., Fostoria, Ohio.
 ve-Hendry Co., 1815 W. Lake St., Chicago 12, Ill.
 ella-Infra-Red Co., The, E. 73rd & Grand Ave., Cleveland 4, Ohio.
 NER-IVES CO., Springfield Rd., Union, N. J. ADV. PG. 405.
 -Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
 and Co., Edwin L., 7606 Thomas Blvd., Pittsburgh, Pa.

IDES—Ferric

LIAMS & CO., C. K., 640 N. 13th St., Easton, Pa. ADV. PG. 460.

PACKAGING—Electronic Equipment

Cargo Packers, Inc., 73 Rutledge St., Brooklyn 11, N. Y.
 Corrugated Paper Products, Inc., 2233 Utica Ave., Brooklyn 34, N. Y.
 International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
 KOCH FIBERGLAS, Corte Madera, Calif. ADV. PG. 537.
 PETER PARTITION CORP., 19-21 Heyward St., Brooklyn 21, N. Y. ADV. PG. 667.
 Product Engineering Laboratories Co., Inc., 314 Adams St., Newark 5, N. J.
 PROTECTIVE COATINGS CORP., 596 River Rd., Clifton, N. J. ADV. PG. 456.
 Sherman Paper Products Corp., Newton Upper Falls 64, Mass.
 Specialty Engineering Div. of Specialty Assembling Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
 Webhart Corp., 33 W. Union St., Pasadena 1, Calif.

PACKAGING MATERIALS

A.C.F. Electronics, Inc., Alexandria, Va.
 Cargo Packers, Inc., 73 Rutledge St., Brooklyn, N. Y.
 Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.
 Corrugated Paper Products, Inc., 2233 Utica Ave., Brooklyn 34, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Forest Wadding Co., Inc., 3190 Washington St., Boston 30, Mass.
 Gair Co., Inc., Robert, 155 E. 44th St., New York, N. Y.
 Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio.
 Greenwood Packaging Supply Co., 859 Summer Ave., Newark, N. J.
 Hinde & Dauch, Sandusky, Ohio.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Plax Corporation, 672 Farmington Ave., West Hartford, Conn.
 PROTECTIVE COATINGS CORP., 596 River Rd., Clifton, N. J. ADV. PG. 456.
 Product Engineering Laboratories Co., Inc., 314 Adams St., Newark 5, N. J.
 Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.
 Sherman Paper Products Corp., Newton Upper Falls 64, Mass.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.

PAINTS—Conductive (for Printed Circuits)

California Bent Glass Corp., Torrance, Calif.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 HANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.
 Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.
 INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Javex, P. O. Box 646, Redlands, Calif.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.

PAINTS—Resistive (for Printed Circuits)

California Bent Glass Corp., Torrance, Calif.
 Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Javex, P. O. Box 646, Redlands, Calif.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.

PANEL LIGHTS

See LIGHTS—Dial, Panel and Pilot

PANELS—Instrument

ABALON PRECISION MFG. CORP., 540 Cassanova St., Bronx 59, N. Y. ADV. PG. 490.
 Ackerman Engravers, 458 Broadway, New York, N. Y.
 Acme Tool & Specialties Co., 224 N. Loomis St., Chicago 7, Ill.
 Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Anderson & Sons, Inc., Westfield, Mass.
 ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 561.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 Bingham Mfg. Co., J. F., 69 Bay State Rd., Lawrence, Mass.
 BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 647.

Bristol Co., The, Waterbury 20, Conn.
 California Bent Glass Corp., Torrance, Calif.
 Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 E B Metal Products Co., Inc., 12-14 Bridge Plaza, S., Long Island City 1, N. Y.
 Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif.
 EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Filmwood Corp., 33 N. 23rd St., Camden 5, N. J.
 Fischer & Porter Co., 476 Warminster Rd., Hatboro, Pa.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 General Metal Products Co., 1010-14 Centre St., Easton, Pa.
 Glass & Bro., Harry, 10 Van Cortlandt Ave., E., Bronx 68, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
 INDUSTRIAL ENGRAVERS, INC., 4103 Tenth Ave., Brooklyn 19, N. Y. ADV. PG. 635.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
 KARP METAL PRODUCTS CO., Div. of H & B Machine Co., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
 Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 Master Etching Corp., 50 Honeck St., Englewood, N. J.
 Metalcraft Inc., 8608 130th St., Richmond Hill 18, N. Y.
 MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.
 MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
 NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 665.
 Pfeiffer Products, 3901 W. 54th St., Los Angeles, Calif.
 PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
 Precision Marking Co., 87 Dorsa Ave., Livingston, N. J.
 Premier Metal Etching Co., 21-03 Fourth Ave., Long Island City, N. Y.
 PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 242.
 Quality Name Plate Inc., Fisher Hill Rd., East Glastonbury, Conn.
 RICHARDSON CO., 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
 Richardson Scale Co., Clifton, N. J.
 Seaboard Electric Co., 417 Canal St., New York 13, N. Y.
 Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 154.
 Syracuse Ornamental Co., Inc., 581 S. Clinton St., Syracuse, N. Y.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 476.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
 Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.
 Wright-Hepp Associates, Inc., 251 West St., South Hackensack, N. J.

PANELS—Jack

Adler Communications Laboratories, 1 Le Fevre Lane, New Rochelle, N. Y.
 AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.

CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 E B Metal Products Co., Inc., 12-14 Bridge Plaza, S., Long Island City 1, N. Y.
 EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Gates Radio Co., Quincy, Ill.
 Hall, Inc., F. Sumner, Amityville, N. Y.
 HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
 KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 MULTI-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.
 NATIONAL TEL-TRONICS CORP., 35 St. Caspms Ave., Yonkers, N. Y. ADV. PG. 312.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Pfefer Products, 3901 W. 54th St., Los Angeles, Calif.
 Selector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 154.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

PANELS—Receiver & Transmitter

Ackerman Engravers, 458 Broadway, New York, N. Y.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 561.
 Bristol Co., The, Waterbury 20, Conn.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 California Bent Glass Corp., Torrance, Calif.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 E B Metal Products Co., Inc., 12-14 Bridge Plaza South, Long Island City 1, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Gates Radio Co., Quincy, Ill.
 General Metal Products Co., 1010-14 Centre St., Easton, Pa.
 HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
 KARP METAL PRODUCTS CO., DIV. OF H & B MACHINE CO., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
 Metalcraft Inc., 86-08 130th St., Richmond Hill 18, N. Y.
 MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.
 New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
 Pfefer Products, 3901 W. 54th St., Los Angeles, Calif.
 PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
 PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 242.
 Quality Name Plate Inc., Fisher Hill Rd., East Glastonbury, Conn.
 Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
 Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.

PANELS—Relay Rack

Ackerman Engravers, 458 Broadway, New York, N. Y.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 ART-LLOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 561.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 470.
 Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.
 Cutler Metal Products Co., 1025 Line St., Camden, N. J.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 E B Metal Products Co., Inc., 12-14 Bridge Plaza South, Long Island City 1, N. Y.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Gates Radio Co., Quincy, Ill.
 HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
 KARP METAL PRODUCTS CO., DIV. OF H & B MACHINE CO., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
 Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.
 Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Metalcraft Inc., 86-08 130th St., Richmond Hill 18, N. Y.
 MULTI METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 230.
 Pfefer Products, 3901 W. 54th St., Los Angeles, Calif.
 PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
 PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 242.
 Radioactive Products, Inc., 443 W. Congress St., Detroit 26, Mich.
 Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.
 Tally & Cooper Co., 75 Front St., Brooklyn, N. Y.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.

PAPER

See INSULATION MATERIALS

PAPER—Facsimile Recording

ALFAX PAPER & ENGINEERING CO., Washington St., P. O. Box 125, Westboro, Mass. ADV. PG. 441.
 Bruning Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.
 Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 662.
 Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.

PAPER—Recording

ALFAX PAPER & ENGINEERING CO., Washington St., P. O. Box 125, Westboro, Mass. ADV. PG. 441.
 Bristol Co., The, Waterbury 20, Conn.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Schweitzer, Inc., Peter J., 405 Lexington Ave., New York 17, N. Y.
 TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 662.
 Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.

PERMEAMETERS—High H

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
PERMEAMETERS—R-F
 National Electronics Laboratories, Inc., 1713 Kalorama Rd., N.W., Washington 9, D. C.

pH

See INDICATORS

**PHENOLIC MOLDING COMPOUNDS
See INSULATING COMPOUNDS**

**PHONOGRAPHS—Electric Phonographs
& Record Players**

Admiral Corp., 3800 Cortland St., Chicago 47, Ill.
 Ansley Mfg. Co., Arthur, Doylestown, Pa.

Audio Industries Inc., Michigan City, Ind.
 Audio-Master Corp., 17 E. 45th St., New York 17, N. Y.
 Autocrat Electronics Co., 5024 Elm St., Skokie 8, Ill.
 Avco Mfg. Corp., 1329 Arlington St., Cincinnati 2, Ohio.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Birmingham Sound Reproducers, Ltd., Claremont West Old Hill, Staffs, England.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 1, N. Y.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Island City 1, N. Y.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 11th St., New York 1, N. Y. ADV. PG. 201.
 Califone Corp., 1041 N. Sycamore Ave., Hollywood 28, Calif.
 Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.
 Duotone Co., Inc., Keyport, N. J.
 Electro Engineering & Mfg. Co., 627 W. Alexander Ave., Detroit 1, Mich.
 Electron Enterprises, 6917-19-21 Stanley Ave., Berkeley 3, Calif.
 Elex Co., 150-50 Melbourne Ave., Flushing 67, N. Y.
 Esquire Radio Corp., 26 Court St., Brooklyn 2, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Fidelity Amplifier Co., 703 Willow St., Chicago 14, Ill.
 Garrard Sales Corp., 164 Duane St., New York 13, N. Y.
 General Industries Co., Taylor & Olive Sts., Elyria, Ohio.
 Gotham Television Corp., 123 W. 64th St., New York 23, N. Y.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 73-74.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Lesa, Via Bergamo 21, Milan, Italy.
 MP Engineering Co., Fairfield 3, Conn.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Midwest Radio & Television Corp., 909 Broadway, Cincinnati 2, Ohio.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Paillard Products Inc., 100 Sixth Ave., New York 1, N. Y.
 Pilot Radio Corp., 37-06 36th St., Long Island City 3, N. Y.
 Pye Ltd., Cambridge, England.
 Radio Corp. of America, Home Instrument Div., Camden, N. J.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Rek-O-Kut Co., 3801 Queens Blvd., Long Island City 1, N. Y.
 Speak-O-Phone Recording & Equip. Co., 23 W. 11th St., New York, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River, Yonkers, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 United Pressed Products Co., 741 W. Harrison Chicago 7, Ill.
 V-M Corp., Benton Harbor, Mich.
 Waters Conley Co., 501 First St. N. W., Rochester, Minn.
 Weathers Industries, Inc., 66 E. Gloucester Pl., Barrington, N. J.
 Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.
 Weingarten Electronics Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.
 Western Sound & Electric Labs., Inc., 805 S. Fifth Milwaukee 4, Wis.

PHOTO ETCHED COMPONENTS

LACEY BROTHERS ETCHED CIRCUITS, 117 S. Lomb Oak Park, Ill. ADV. PG. 591.

**PHOTOELECTRIC
See CONTROLS**

PHOTOFLASH EQUIPMENT—Electronic

Aerolux Light Corp., 653 Eleventh Ave., New York 1, N. Y.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 American Speedlight Corp., 480 Lexington Ave., New York 17, N. Y.
 Amglo Corp., 2037 West Division St., Chicago 22, Ill.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles 4, Calif.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
 Cormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
 Edgerton, Germeshausen & Grier, Inc., 160 Brook Ave., Boston 15, Mass.
 Hauman Instrument Co., 70 Coolidge Hill Rd., Watertown 72, Mass.
 HELAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 95.
 Kemlite Labs., 1819 W. Grand Ave., Chicago 22, Ill.
 MENDELSONN SPEEDGUN CO., INC., Fourth Ave. Haskell, N. J. ADV. PG. 292.
 MODELECTRIC PRODUCTS CORP., 1500 Banks Ave., Asbury Park, N. J. ADV. PG. 140.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y.

**PHOTOGRAPHIC MATERIALS—Films and Papers
For Recording Instruments**

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
Eastman Kodak Co., 343 State St., Rochester 4, N. Y.
Haloid Co., The, 6 Haloid St., Rochester 3, N. Y.
OS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.

**PHOTOGRAPHIC MATERIALS—Spectrographic
Instruments**

Haird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
Eastman Kodak Co., 343 State St., Rochester 4, N. Y.
Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.
ARRAND OPTICAL CO., INC., 460 Bronx Bldg. at 238th St., New York 70, N. Y. ADV. PG. 460.
Velch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

PHOTOGRAPHIC MATERIALS—X-Ray Films

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
Eastman Kodak Co., 343 State St., Rochester 4, N. Y.
North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

PHOTOMETERS

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
Haird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
ARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
Gardner Labs., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.
Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
ELECTROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill.
Varren Electronics, Inc., Bound Brook, N. J.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.
Velch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

**PHOTOMETERS, RECORDERS AND COMPARATORS
See METERS****PHOTOCOPIERS
See MACHINES****PHOTOTUBES AND PHOTOCELLS
See TUBES****PICKUP UNITS—Mobile Television**

Age Electronics Div. of Thompson Products, Inc., 69 N. Second St., Beech Grove, Ind.
General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Raye Ltd., Cambridge, England.
Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.

**PICKUPS—Crystal
See CRYSTAL CARTRIDGES****PICKUPS—Industrial**

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Control Components Co., 46 Walnut St., Brookline 47, Mass.
Indevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
Milmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.

PICKUPS—Magnetic

A. P. W. Co., 72 W. Main St., Rockaway, N. J.
Kodak Co., 500 Fifth Ave., New York, N. Y.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
Control Components Co., 46 Walnut St., Brookline 47, Mass.
Raystrom Instrument Co., Archbald, Pa.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 554.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

General Devices, Inc., P.O. Box 253, Princeton, N. J.
General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
Les, Via Bergamo 21, Milan, Italy.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 386.
Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
Pacific Transducer EBG Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 278.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Recoton Corp., 147 W. 22nd St., New York 11, N. Y.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.
Southwestern Industrial Electronics Co., 2831 Post Oak R., P. O. Box 13058, Houston 19, Texas.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
Valco Mfg. Co., 4700 W. Walton St., Chicago 51, Ill.

PICKUPS—Photoelectric

AUTOTRON CO., P.O. Box 722-H, Danville, Ill. ADV. PG. 446.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
Photobell Company, 116 Nassau St., New York 38, N. Y.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

PICKUPS—Quartz Crystal

ARENBERG ULTRASONIC LABORATORY, 94 Green St., Jamaica Plain 30, Mass. ADV. PG. 571.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.
Les, Via Bergamo 21, Milan, Italy.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Sperry Products, Inc., Danbury, Conn.

PICKUPS—Transcription and Phonograph

Astatic Corporation, The, Conneaut, Ohio.
Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
Duton Co., Inc., Keyport, N. J.
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
Electro-Voice, Inc., Buchanan, Mich.
Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
GRAY RESEARCH & DEVELOPMENT CO., INC., 685 Hilliard St., Manchester, Conn. ADV. PG. 126.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
Les, Via Bergamo 21, Milan, Italy.
MAGNAVOX CO., Component Sales Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
Pacific Transducer EBG Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
Pfanstiehl Chemical Co., 104 Lake View Ave., Waukegan, Ill.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 278.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Recoton Corp., 147 W. 22nd St., New York 11, N. Y.
Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.
Sonotone Corp., P. O. Box 200 Saw Mill River Rd., Elmsford, N. Y.
Tetrad Co., Inc., 62 St. Mary St., Yonkers 2, N. Y.
Weathers Industries, 66 E. Gloucester Pike, Burlington, N. J.

PILOT LIGHTS

See LIGHTS—Dial, Panel and Pilot

PILOT LIGHT ASSEMBLIES

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
American Radio Hardware Co., Inc., 152 S. MacQuisten Pkwy., Mt. Vernon, N. Y.

Bardwell & McAlister, Inc., 2950 Ontario, Burbank, Calif.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Cable Electric Products Inc., Providence, R. I.
DIALIGHT CORPORATION, 60 Stewart Ave., Brooklyn 37, N. Y. ADV. PG. 39.
DRAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. ADV. PG. 111.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
General Controls Co., Glendale 1, Calif.
General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. ADV. PG. 667.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
Kirkland Co., H. R., 8 King St., Morristown, N. J.
Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
T.L.G. Electric Corp., 31 W. 27th St., New York 1, N. Y.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
White-Rodgers Electric Co., Armament Dept., 1209 Cass Ave., St. Louis 6, Mo.

PILOTS—Automotive

DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
ECLIPSE-PIONEER DIV., BENDIX AVIATION CORP., Teterboro, N. J. ADV. PG. 105-108.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

PINS—Tubular

American Brass Co., 414 Meadow St., Waterbury 20, Conn.
American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524.
Elastic Stop Nut Corp., 2330 Vauxhall Rd., Union, N. J.
Javex, P. O. Box 646, Redlands, Calif.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
Sinclair Mfg. Co., Chartley, Mass.
Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.
Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

PITCH

See INSULATING COMPOUNDS

PLASTIC INSULATION PARTS

See INSULATION PARTS—Plastic Insulation Parts

PLASTIC MATERIALS**Allyls**

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
American Monomer Corp., 511 Lancaster St., Leominster, Mass.
Cast Optics Corp., 1 Post Rd., Riverside, Conn.

Cellulose Acetate

Ace Plastic Co., 91-54 Van Wyck Expressway, Jamaica 35, N. Y.
American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
Atlantic Research Corp., 901 N. Columbus, Alexandria, Va.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
Eastman Kodak Co., 343 State St., Rochester 4, N. Y.
EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
Gemold Corp., 78-01 Queens Blvd., Elmhurst, N. Y.
Gering Products, Inc., N. Seventh St., at Monroe Ave., Kenilworth, N. J.
Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.
Monsanto Chemical Co., Plastics Div., Springfield, Mass.
Moore Co., Howard J., 266 William St., New York 38, N. Y.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.

Cellulose Acetate Butyrate

Ace Plastic Co., 91-54 Van Wyck Expressway, Jamaica 35, N. Y.

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Eastman Kodak Co., 343 State St., Rochester 4, N. Y.
 EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
 Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.
 Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.

Cellulose Nitrate

American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Delaware.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.

Epoxy Resins

Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Javex, P. O. Box 646, Redlands, Calif.
 Plastilight, Inc., Box 214, Stamford, Conn.
 Shell Chemical Corp., 380 Madison Ave., New York 17, N. Y.

Ethyl Cellulose

Ace Plastic Co., 9154 Van Wyck Expressway, Jamaica 35, N. Y.
 American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
 American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
 Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Dow Chemical Co., Midland, Mich.
 Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.
 Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
 Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.

Melamine Formaldehyde

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
 BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 BARRETT DIVISION, ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y. ADV. PG. 188, 189.
 Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Synthane Corp., Oaks, Pa.
 TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

Methyl Methacrylate

Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.

Nylon

See INSULATING MATERIALS

Phenol Formaldehyde—(Phenolics)

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Durez Plastics & Chemicals, Inc., 1921 Walck Rd., N. Tonawanda, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Marlette Corp., 37-21 30th St., Long Island City, N. Y.

Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N. Y.
 Rogers Corp., Goodyear, Conn.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Synthane Corp., Oaks, Pa.
 TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.

Polyethylene

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
 Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.
 Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 New Jersey Wood Finishing Co., Amboy Ave., Woodbridge, N. J.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 Trimount Plastic Co., 71 Dudley St., Arlington, Mass.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

Polystyrene

American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
 AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Cast Optics Corp., 1 Post Rd., Riverside, Conn.
 Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Dow Chemical Co., Midland, Mich.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
 Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.
 Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
 Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

Polytetrafluoroethylene (Teflon)

Rods—Sheets—Tubing

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Dilectrix Co., 60 Ocean Ave., Lynbrook, N. Y.
 Dixon Corporation, Bristol, R. I.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
 ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. ADV. PG. 560.
 Flexrock Co., 3608 Filbert St., Philadelphia 8, Pa.
 Garlock Packing Co., Palmyra, N. Y.
 Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.
 Howes Engineering Co., Inc., 1594 Hyde Park Ave., Hyde Park, Mass.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minor Rubber Co., 49 Ackerman St., Bloomfield, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 193.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
 RESISTOFLEX CORP., 39 Plansoen St., Belleville 11, N. J. ADV. PG. 518.
 Synthane Corp., Oaks, Pa.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

Polytrifluorochlorethylene

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
 Garlock Packing Co., Palmyra, N. Y.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 KELLOGG CO., M. W., P. O. Box 469, Jersey City 11, N. J. ADV. PG. 273-276.
 Minor Rubber Co., 49 Ackerman St., Bloomfield, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 RESISTOFLEX CORP., 39 Plansoen St., Belleville 11, N. J. ADV. PG. 518.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

Resins

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 BARRETT DIVISION, ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y. ADV. PG. 188, 189.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
 Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 Forman Co., B. G., 238 William St., New York 38, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 MANSOL CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.
 Marbon Corp., Gary, Ind.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Plastronics, P. O. Box 96, Winter Hill 45, Mass.
 Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N. Y.
 Schenectady Varnish Co., Inc., Schenectady, N. Y.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

Urea Formaldehyde

American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
 BARRETT DIVISION, ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y. ADV. PG. 188, 189.
 Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N. Y.

Vinyl Compounds

American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
 American Monomer Corp., 511 Lancaster St., Leominster, Mass.
 ANTARA CHEMICAL DIV., GENERAL ANILINE & FILM CORP., 435 Hudson St., New York 14, N. Y. ADV. PG. 266.
 Auburn Button Works, Inc., Auburn, N. Y.
 Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.
 Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Dow Chemical Co., Midland, Mich.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
 General Tire & Rubber Co., The, Akron, Ohio.
 Gering Products, Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.
 Goodrich Chemical Co., B. F., 2060 E. Ninth St., Ross Bldg., Cleveland 15, Ohio.
 Goodyear Tire & Rubber Co., Chemical Div., 1144 E. Market St., Akron 16, Ohio.
 Houghton Laboratories Inc., 322 Bush St., Olean, N. Y.
 Marbon Corp., Gary, Ind.

Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Parhar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Plastronics, P. O. Box 96, Winter Hill 45, Mass.
 Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N. Y.
 Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.
 Trumount Plastic Co., 71 Dudley St., Arlington, Mass.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

PLATES—Instruction

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
 Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y.
 Anderson & Sons, Inc., Westfield, Mass.
 Bolta Products Div. of The General Tire & Rubber Co., Lawrence, Mass.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Coral Designs Div., Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Croname Inc., 3701 Ravenswood Ave., Chicago, Ill.
 Diamond Union Stamp Works, 81 Washington St., Boston, Mass.
 Duramark, Inc., 2 Secatoag Ave., Port Washington, N. Y.
EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Glass & Bro., Harry, 10 Van Cortlandt Ave., E., Bronx 68, N. Y.
 Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
INDUSTRIAL ENGRAVERS, INC., 4103 Tenth Ave., Brooklyn 19, N. Y. ADV. PG. 635.
 Insulating Fabricators Inc., 150 Union Ave., East Rutherford, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
LACEY BROTHERS ETCHED CIRCUITS, 117 S. Lombard, Oak Park, Ill. ADV. PG. 591.
 Master Etching Corp., 50 Honeck St., Englewood, N. J.
 Matthews & Co., James H., 3942 Forbes St., Pittsburgh, Pa.
 Mica Insulator Co., Schenectady 1, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Pfeeger Products, 3901 W. 54th St., Los Angeles, Calif.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
 Technicraft Products Co., One Station Plaza, West Nyack, N. Y.
 Premier Metal Etching Co., 21-03 Fourth Ave., Long Island City, N. Y.
S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 476.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
 Willson Camera Co., Inc., 1395 Lawrence Road, Haver- town, Pa.

PLATES—Metal-Plastic

Actioncraft Products, 8 Sagamore Hill Drive, Port Wash- ington, N. Y.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
 Anderson & Sons, Inc., Westfield, Mass.
 Bolta Products Div. of The General Tire & Rubber Co., Lawrence, Mass.
 Coral Designs Div., Henry G., Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
 Diamond Union Stamp Works, 81 Washington St., Boston, Mass.
 Duramark, Inc., 2 Secatoag Ave., Port Washington, N. Y.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.
 Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
 Glass & Bro., Harry, 10 Van Cortlandt Ave., E., Bronx 68, N. Y.
 Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
INDUSTRIAL ENGRAVERS, INC., 4103 Tenth Ave., Brooklyn 19, N. Y. ADV. PG. 635.
LACEY BROTHERS ETCHED CIRCUITS, 117 S. Lombard, Oak Park, Ill. ADV. PG. 591.
 Master Etching Corp., 50 Honeck St., Englewood, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 665.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Pfeeger Products, 3901 W. 54th St., Los Angeles, Calif.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
 Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 2, Calif.
 Premier Metal Etching Co., 21-03 Fourth Ave., Long Island City, N. Y.
PRINTLOID, INC., 93 Mercer St., New York 1, N. Y. ADV. PG. 198.
 Quality Name Plate Inc., Fisher Hill Rd., East Glaston- bury, Conn.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tona- wanda, N. Y.
 Tally & Cooper Co., 75 Front St., Brooklyn, N. Y.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 476.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
 Willson Camera Co., Inc., 1395 Lawrence Rd., Haver- town, Pa.

PRINTLOID, INC., 93 Mercer St., New York 1, N. Y. ADV. PG. 198.
 Trumount Plastic Co., 71 Dudley St., Arlington, Mass.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
 Willson Camera Co., Inc., 1395 Lawrence Rd., Haver- town, Pa.

PLATES—NAME—Metal or Plastic

Ackerman Engravers, 458 Broadway, New York, N. Y.
 Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y.
 Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
 American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y.
 Anderson & Sons, Inc., Westfield, Mass.
 Bolta Products Div. of The General Tire & Rubber Co., Lawrence, Mass.
 Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
 ConRay Corp., 1225 Ray St., Dayton 4, Ohio.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Coral Designs Div., Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.
 Decimeter, Inc., 1430 Market St., Denver 2, Colo.
 Diamond Union Stamp Works, 81 Washington St., Boston, Mass.
 Duramark, Inc., 2 Secatoag Ave., Port Washington, N. Y.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
 Gemliod Corp., 78-01 Queens Blvd. Elmhurst, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
 Glass & Bro., Harry, 10 Van Cortlandt Ave., E., Bronx 68, N. Y.
 Hermes Plastics, Inc., 13-19 University Place, New York 3, N. Y.
 Hopp Press, Inc., 460 W. 34th St., New York, N. Y.
INDUSTRIAL ENGRAVERS, INC., 4103 Tenth Ave., Brooklyn 19, N. Y. ADV. PG. 635.
 Insulating Fabricators, Inc., 150 Union Ave., East Ruther- ford, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Jodee Plastics Co., 534 Glenmore Ave., Brooklyn 7, N. Y.
LACEY BROTHERS ETCHED CIRCUITS, 117 S. Lombard, Oak Park, Ill. ADV. PG. 591.
 Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
 Master Etching Corp., 50 Honeck St., Englewood, N. J.
 Matthews & Co., James H., 3942 Forbes St., Pittsburgh, Pa.
 Mica Insulator Co., Schenectady 1, N. Y.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Nameplates, Inc., 425 E. 101st St., Brooklyn 12, N. Y.
 New England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
NEW HERMES, INC., 13-19 University Place, New York 3, N. Y. ADV. PG. 665.
NORTH SHORE NAMEPLATE CO., Bank of Manhattan Bldg., Bayside 61, N. Y. ADV. PG. 526.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chi- cago 9, Ill. ADV. PG. 590.
 Pfeeger Products, 3901 W. 54th St., Los Angeles, Calif.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
 Plasticraft Products Co., One Station Plaza, West Nyack, N. Y.
 Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 2, Calif.
 Premier Metal Etching Co., 21-03 Fourth Ave., Long Island City, N. Y.
PRINTLOID, INC., 93 Mercer St., New York 1, N. Y. ADV. PG. 198.
 Quality Name Plate Inc., Fisher Hill Rd., East Glaston- bury, Conn.
 Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tona- wanda, N. Y.
 Tally & Cooper Co., 75 Front St., Brooklyn, N. Y.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 476.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
 Willson Camera Co., Inc., 1395 Lawrence Rd., Haver- town, Pa.

PLATES—Plastic Lighting

BODNAR INDUSTRIES, INC., 19 Railroad Ave., New Rochelle, N. Y. ADV. PG. 647.

PLATING—Metal on Plastic

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
 Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
 Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.
 Cast Optics Corp., 1 Post Rd., Riverside, Conn.
COHAN-EPNER CO., INC., 142 W. 14th St., New York 11, N. Y. ADV. PG. 667.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Donham Craft, Inc., Thomaston, Conn.
ELECTRALAB, INC., 76 Atherton St., Boston 30, Mass. ADV. PG. 264.
 Electro-Coatings, Inc., 1662 W. Fullerton Ave., Chicago 14, Ill.
 Electrochemical Industries, Inc., Jacques St., Worcester, Mass.
GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y. ADV. PG. 168.
 Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
LACEY BROTHERS ETCHED CIRCUITS, 117 S. Lombard, Oak Park, Ill. ADV. PG. 591.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Metaplast Process, Inc., 3451 56th St., Woodside, N. Y.
METZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 P. M. Industries, Inc., Stamford, Conn.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chi- cago 9, Ill. ADV. PG. 590.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
 Poinsettia Co., Inc., 112 Cedar Ave., Pitman 6, N. J.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

PLATING—Precision Metal

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
 Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
 Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
BART LABORATORIES, CO., INC., 227 Main St., Belle- ville 9, N. J. ADV. PG. 633.
 Bennett Co., Inc., R. P., Frederick, Md.
 Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
COHAN-EPNER CO., INC., 142 W. 14th St., New York 11, N. Y. ADV. PG. 667.
 Donham Craft, Inc., Thomaston, Conn.
 Electrochemical Industries, Inc., Jacques St., Worcester, Mass.
 Electro-Coatings, Inc., 1662 W. Fullerton Ave., Chicago 14, Ill.
 Eveready Plating Co., 1790 First Ave., New York, N. Y.
GENERAL CHEMICAL DIV., ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York 6, N. Y. ADV. PG. 168.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belle- ville, N. J. ADV. PG. 279.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
 M-W Laboratories, 1824 N. Milwaukee Ave., Chicago 27, Ill.
MERIT PLATING CO., 216 E. 141st St., New York 51, N. Y. ADV. PG. 612.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Poinsettia Co., Inc., 112 Cedar Ave., Pitman 6, N. J.
 Scientific Radio Products, Inc., 215 S. 11th, Omaha, Neb.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
STEEL PROTECTION & CHEMICAL CO., INC., Moores- ville, Ind. ADV. PG. 566.

PLUGS

Accurate Electronics Corp., Courtland Bldg., 1312 Onta- rio St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chi- cago 50, Ill. ADV. PG. 80.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.

Automatic & Precision Mfg. Co., 252 Hawthorne Ave., Yonkers 5, N. Y.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
CANNON ELECTRIC CO., 3209 Humboldt St., Los Angeles 31, Calif. ADV. PG. 87.
 Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Hall, Inc., F. Sumner, Amityville, N. Y.
 Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
HARVEY HUBBELL, INC., State St. & Bostwick Ave., Bridgeport 2, Conn. ADV. PG. 515.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. ADV. PG. 667.
 Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Javex, P. O. Box 646, Redlands, Calif.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
JONES DIV., HOWARD B. CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NATIONAL TEL-TRONICS CORP., 35 St. Caspms Ave., Yonkers, N. Y. ADV. PG. 312.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw Station, Los Angeles 8, Calif.
 Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Shakeproof Div., Illinois Tool Works, 2501 N. Keeler Ave., Chicago 39, Ill.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
SWITCHCRAFT, INC., 1320 N. Halsted St., Chicago 22, Ill. ADV. PG. 491.
TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
 Waltham Horological Corp., 711 Broad St., Lynn, Mass.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

PLUGS—Telephone

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. ADV. PG. 440.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Cable Electric Products Inc., Providence, R. I.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Hall, Inc., F. Sumner, Amityville, N. Y.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NATIONAL TEL-TRONICS CORP., 35 St. Caspms Ave., Yonkers, N. Y. ADV. PG. 312.
 North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
 Stromberg-Carlson Co., Rochester 3, N. Y.
SWITCHCRAFT, INC., 1320 N. Halsted St., Chicago 22, Ill. ADV. PG. 491.
 Telephonics Corp., Park Ave., Huntington, N. Y.
TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.
 U. S. Instrument Corp., 409 Broad St., Summit, N. J.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 Waltham Horological Corp., 711 Broad St., Lynn, Mass.

PLUGS—Terminal

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
 American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Cable Electric Products Inc., Providence, R. I.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Gombos Co., Inc., John, 103 Montgomery Ave., Irvington 11, N. J.
HERMETIC SEAL PRODUCTS CO., 29-37 S. 6th St., Newark 7, N. J. ADV. PG. 223.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NATIONAL TEL-TRONICS CORP., 35 St. Caspms Ave., Yonkers, N. Y. ADV. PG. 312.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 18, Calif.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.
RUSSELL & STOLL CO., INC., 125-6 Barclay St., New York 7, N. Y. ADV. PG. 632.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 154.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
 Waltham Horological Corp., 711 Broad St., Lynn, Mass.

POINTERS—Dial

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
 Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.
EMELOID CO., INC., 1239 Central Ave., Hillside, N. J. ADV. PG. 367.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
ROGAN BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 260.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Tallier & Cooper Co., 75 Front St., Brooklyn, N. Y.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
 U. S. Engineering Co., 521 Commercial St., Glendale, Calif.
U. S. RADIUM CORP., 535 Pearl St., New York, N. Y. ADV. PG. 476.

POSITIONING

See CONTROLS—INDICATORS

POSTS—Binding

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 Eastern Specialty Co., Philadelphia 40, Pa.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
 Elco Corp., 190 W. Glenwood Ave., Philadelphia 40, Pa.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF ITT, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-183.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-74.
INDUSTRIAL DEVICES, INC., 22 State Rd., Edgewater, N. J. ADV. PG. 667.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Kurz-Kasch Inc., 1421 South Broadway, Dayton, Ohio.
MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, Ill. ADV. PG. 656.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
NATIONAL CO., INC., 61 Sherman St., Malden, Mass. ADV. PG. 395.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
 Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
SUPERIOR ELECTRIC CO., THE, 4000 Mae Ave., Bristol, Conn. ADV. PG. 336, 337.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
WHITSO, INC., 2037 Churchill St., Chicago 47, Ill. ADV. PG. 112.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

POTENTIOMETERS

ACE ELECTRONICS ASSOCIATES, 125-129 Rogers Ave., Somerville 44, Mass. ADV. PG. 583.
AEROHM CORP., 282 Moody St., Waltham 54, Mass. ADV. PG. 589.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Ahrendt Instrument Co., 4910 Calvert Rd., College Park, Md.
 Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee, Wis.
 Birkan Corp., 200 E. Third St., Mt. Vernon, N. Y.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
 Bristol Co., The, Waterbury 20, Conn.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 48, 49.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
 Colvin Laboratories, Inc., 364 Glenwood Ave., East Orange, N. J.
 Computer Instrument Co., 1964 Utica Ave., Brooklyn 34, N. Y.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Daystrom Instrument Co., Archbald, Pa.
DEJUR-AMSCO CORP., Northern Blvd., at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 Edcliff Instruments, 383 N. Foothill Blvd., Pasadena 8, Calif.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
 Electro-Measurements, Inc., 4312 S.E. Stark St., Portland 15, Ore.
ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City, N. Y. ADV. PG. 616.
 Elektro-Serv Co., 480 Johnson Ave., Brooklyn 37, N. Y. Foxboro Co., The Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Genisco, Inc., 2233 Federal Ave., Los Angeles 64, Calif.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
GYROMECHANISMS, INC., Halesite, N. Y. ADV. PG. 544.
HELIPOT CORP., 916 Meridian Ave., South Pasadena, Calif. ADV. PG. 335.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Lesa, Via Bergamo 21, Milan, Italy.
 Markite Corp., 155 Waverly Place, New York 14, N. Y.
MATAWAN ELECTRONICS CO., INC., 236 Creek Rd., Keansburg, N. J. ADV. PG. 649.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
WHITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.
 Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.
 Paul & Stein Bros., Inc., F. H., 100 Gold St., New York 38, N. Y.
 Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Rattray & Co., Inc., George, 116-08 Myrtle Ave., Richmond Hill, N. Y.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Trans-Sonics, Inc., 5 Forest Ave., Bedford, Mass.
RIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.
RU-OHM PRODUCTS DIV., MODEL ENGINEERING & MFG. INC., 2800 Milwaukee Ave., Chicago 18, Ill. ADV. PG. 247.
 M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Van Dyke Instruments, Inc., 1927 First Ave., S., P. O. Box 335, St. Petersburg 1, Fla.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
WATERS MFG., INC., 4 Gordon St., Waltham 54, Mass. ADV. PG. 589.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

POTENTIOMETERS—Induction
 Birklan Corp., 200 E. Third St., Mt. Vernon, N. Y.
 Dehl Mfg. Co., 1129 Finnerne Ave., Somerville, N. J.
K-F DEVELOPMENT CO., 2606 Spring St., Redwood City, Calif. ADV. PG. 600.
EARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 Muirhead & Co., Ltd., Beckenham, Kent, England.

POTENTIOMETERS—Linear & Non-Linear, Precision Carbon Film
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Birklan Corp., 200 E. Third St., Mt. Vernon, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Colvin Laboratories, Inc., 364 Glenwood Ave., East Orange, N. J.

Computer Instrument Co., 1964 Utica Ave., Brooklyn 34, N. Y.
 Daystrom Instrument Co., Archbald, Pa.
 Elektro-Serv Co., 480 Johnson Ave., Brooklyn 37, N. Y.
 Fortiphone Ltd., 247 Regent St., W1, London, England.
 Lesa, Via Bergamo 21, Milan, Italy.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.
 Paul & Stein Bros., Inc., F. H., 100 Gold St., New York 38, N. Y.
 Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

POTENTIOMETERS—Linear & Non-Linear Precision Wire Wound

ACE ELECTRONICS ASSOCIATES, 125-129 Rogers Ave., Somerville 44, Mass. ADV. PG. 583.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Birklan Corp., 200 E. Third St., Mt. Vernon, N. Y.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 251.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
 Bristol Co., The, Waterbury 20, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Daystrom Instrument Co., Archbald, Pa.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 Edcliff Instruments, 383 N. Foothill Blvd., Pasadena 8, Calif.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City, N. Y. ADV. PG. 616.
 Electromath Corp., 70 Westmoreland Ave., White Plains, N. Y.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. ADV. PG. 434, 435.
FAIRCHILD CAMERA & INSTRUMENT CORP., Potentiometer Div., 225 Park Ave., Hicksville, N. Y. ADV. PG. 102, 103.
 Ford Engineering Co., 129 East A St., Upland, Calif.
GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 458.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Genisco, Inc., 2233 Federal Ave., Los Angeles 64, Calif.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
GYROMECHANISMS, INC., Halesite, N. Y. ADV. PG. 544.
HELIPOT CORP., 916 Meriden Ave., South Pasadena, Calif. ADV. PG. 335.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Jet Electronics, Inc., 93 Mass Ave., Boston, Mass.
K-F DEVELOPMENT CO., 2606 Spring St., Redwood City, Calif. ADV. PG. 600.
 Lesa, Via Bergamo 21, Milan, Italy.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 Paul & Stein Bros., Inc., F. H., 100 Gold St., New York 38, N. Y.
 Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Rattray & Co., Inc., George, 116-08 Myrtle Ave., Richmond Hill, N. Y.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Samarius Electronic Corp., 122 Canal St., Shelton, Conn.
 Servotrol Co., 114 W. Illinois St., Chicago 10, Ill.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
 Trans-Sonics, Inc., 5 Forest Ave., Bedford, Mass.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Van Dyke Instruments, Inc., 1927 First Ave., S., P. O. Box 335, St. Petersburg 1, Fla.

POTENTIOMETERS—Portable Instrument
ACE ELECTRONICS ASSOCIATES, 125-129 Rogers Ave., Somerville 44, Mass. ADV. PG. 583.
 Birklan Corp., 200 E. Third St., Mt. Vernon, N. Y.
BOURNS LABORATORIES, 6136 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
CENTRALAB DIV. OF GLOBE UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.

COMPUTER CO. OF AMERICA, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Daystrom Instrument Co., Archbald, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Georator Corp., Box 463, Manassas, Va.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
HELIPOT CORP., 916 Meridian Ave., South Pasadena, Calif. ADV. PG. 335.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
 Pye Ltd., Cambridge, England.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Tiwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Trans-Sonics, Inc., 5 Forest Ave., Bedford, Mass.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

POTENTIOMETERS—Precision
ACE ELECTRONICS ASSOCIATES, 125-129 Rogers Ave., Somerville 44, Mass. ADV. PG. 583.
AEROHM CORP., 282 Moody St., Waltham 54, Mass. ADV. PG. 589.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Birklan Corp., 200 E. Third St., Mt. Vernon, N. Y.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 251.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
 Bristol Co., The, Waterbury 20, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
 Colvin Laboratories, Inc., 364 Glenwood Ave., East Orange, N. J.
 Computer Instrument Co., 1964 Utica Ave., Brooklyn 34, N. Y.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Daystrom Instrument Co., Archbald, Pa.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City, N. Y. ADV. PG. 616.
 Electromath Corp., 70 Westmoreland Ave., White Plains, N. Y.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. ADV. PG. 434, 435.
FAIRCHILD CAMERA & INSTRUMENT CORP., Potentiometer Div., 225 Park Ave., Hicksville, N. Y. ADV. PG. 102, 103.
 Ford Engineering Co., 129 East A St., Upland, Calif.
GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 458.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Genisco, Inc., 2233 Federal Ave., Los Angeles 64, Calif.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
GYROMECHANISMS, INC., Halesite, N. Y. ADV. PG. 544.
HELIPOT CORP., 916 Meriden Ave., South Pasadena, Calif. ADV. PG. 335.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Jet Electronics, Inc., 93 Mass Ave., Boston, Mass.
K-F DEVELOPMENT CO., 2606 Spring St., Redwood City, Calif. ADV. PG. 600.
 Lesa, Via Bergamo 21, Milan, Italy.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 Paul & Stein Bros., Inc., F. H., 100 Gold St., New York 38, N. Y.
 Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Rattray & Co., Inc., George, 116-08 Myrtle Ave., Richmond Hill, N. Y.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Samarius Electronic Corp., 122 Canal St., Shelton, Conn.
 Servotrol Co., 114 W. Illinois St., Chicago 10, Ill.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
 Trans-Sonics, Inc., 5 Forest Ave., Bedford, Mass.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Van Dyke Instruments, Inc., 1927 First Ave., S., P. O. Box 335, St. Petersburg 1, Fla.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

COMPUTER CO. OF AMERICA, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Daystrom Instrument Co., Archbald, Pa.
 Foxboro Co., The, Foxboro, Mass.
 Georator Corp., Box 463, Manassas, Va.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
HELIPOT CORP., 916 Meridian Ave., South Pasadena, Calif. ADV. PG. 335.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
 Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
 Pye Ltd., Cambridge, England.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Tiwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Trans-Sonics, Inc., 5 Forest Ave., Bedford, Mass.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

POTENTIOMETERS—Precision
ACE ELECTRONICS ASSOCIATES, 125-129 Rogers Ave., Somerville 44, Mass. ADV. PG. 583.
AEROHM CORP., 282 Moody St., Waltham 54, Mass. ADV. PG. 589.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Birklan Corp., 200 E. Third St., Mt. Vernon, N. Y.
BORG EQUIPMENT DIVISION, THE GEORGE W. BORG CORP., Janesville, Wis. ADV. PG. 251.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
 Bristol Co., The, Waterbury 20, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
 Colvin Laboratories, Inc., 364 Glenwood Ave., East Orange, N. J.
 Computer Instrument Co., 1964 Utica Ave., Brooklyn 34, N. Y.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Daystrom Instrument Co., Archbald, Pa.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City, N. Y. ADV. PG. 616.
 Electromath Corp., 70 Westmoreland Ave., White Plains, N. Y.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. ADV. PG. 434, 435.
FAIRCHILD CAMERA & INSTRUMENT CORP., Potentiometer Div., 225 Park Ave., Hicksville, N. Y. ADV. PG. 102, 103.
 Ford Engineering Co., 129 East A St., Upland, Calif.
GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 458.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Genisco, Inc., 2233 Federal Ave., Los Angeles 64, Calif.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
GYROMECHANISMS, INC., Halesite, N. Y. ADV. PG. 544.
HELIPOT CORP., 916 Meriden Ave., South Pasadena, Calif. ADV. PG. 335.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Jet Electronics, Inc., 93 Mass Ave., Boston, Mass.
K-F DEVELOPMENT CO., 2606 Spring St., Redwood City, Calif. ADV. PG. 600.
 Lesa, Via Bergamo 21, Milan, Italy.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 Paul & Stein Bros., Inc., F. H., 100 Gold St., New York 38, N. Y.
 Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Rattray & Co., Inc., George, 116-08 Myrtle Ave., Richmond Hill, N. Y.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
 Samarius Electronic Corp., 122 Canal St., Shelton, Conn.
 Servotrol Co., 114 W. Illinois St., Chicago 10, Ill.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
 Trans-Sonics, Inc., 5 Forest Ave., Bedford, Mass.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Van Dyke Instruments, Inc., 1927 First Ave., S., P. O. Box 335, St. Petersburg 1, Fla.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

POTENTIOMETERS—Rectilinear

Birklan Corp., 200 E. Third St., Mt. Vernon, N. Y.
 BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
 Bristol Co., The, Waterbury 20, Conn.
 CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
 Colvin Laboratories, Inc., 364 Glenwood Ave., East Orange, N. J.
 Computer Instrument Co., 1964 Utica Ave., Brooklyn 34, N. Y.
 Daystrom Instrument Co., Archbald, Pa.
 DE JUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 EdCliff Instruments, 383 N. Foothill Blvd., Pasadena 8, Calif.
 ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City, N. Y. ADV. PG. 616.
 GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 458.
 Genisco, Inc., 2233 Federal Ave., Los Angeles 64, Calif.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif.
 HELIPOP CORP., 916 Meridian Ave., South Pasadena, Calif. ADV. PG. 335.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Jet Electronics, Inc., 93 Mass Ave., Boston, Mass.
 Markite Corp., 155 Waverly Place, New York 14, N. Y.
 TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.

POTS—Soldering

Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
 Dee Electric Co., 1101 N. Paulina St., Chicago 22, Ill.
 Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Ill.
 Eislser Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
 Electric Soldering Iron Co., W. Elm St., Deep River, Conn.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
 Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Sta-Warm Electric Co., Ravenna, Ohio.
 Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.
 TELEURO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
 VULCAN ELECTRIC CO., 88 Holten St., Danvers, Mass. ADV. PG. 479.
 Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.

POTS AND TANKS—Heating

Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Lukens Steel Corp. and Divisions, By-Products Steel Co. & Lukenwald, 447 Lukens Bldg., Coatesville, Pa.
 Sta-Warm Electric Co., Ravenna, Ohio.
 Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.

POWER LEVEL
 See INDICATORS

POWER SUPPLIES

1. A-C
2. D-C
3. High Voltage
4. Klystron
5. Microwave
6. Regulated
7. Transistor
8. Variable

ACME ELECTRIC CORP., 21 Water St., Cuba, N. Y. 1-2-3-4-6-7-8. ADV. PG. 260.
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. 1-2-3-6.
 Acme Teletronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio. 1-2-7.
 Adler Communications Laboratories, 1 Le Fevre Lane, New Rochelle, N. Y. 6.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. 1-2-6-8.
 AIR ASSOCIATES, INC., Teterboro, N. J. 1-2-3-4-5-6-8. ADV. PG. 83.
 AIRCRAFT-MARINE PRODUCTS, INC., CHEMICALS & DIELECTRICS DIV., 155 Park Ave., Elizabethtown, Pa. 2-3. ADV. PG. 526.
 Airmec Ltd., High Wycombe, Buckinghamshire, England. 2-4-6.
 ALCO ELECTRONICS MFG. CO., 3 Wolcott Ave., Lawrence, Mass. 2-6-7-8. ADV. PG. 367.
 ALDEN ELECTRONIC & IMPULSE RECORDING EQUIPMENT CO., Box 125, Westboro, Mass. 2. ADV. PG. 441.
 Allied Eng. Div., Allied International Inc., South Norwalk, Conn. 2-6-8.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. 2-3-6.
 AMERAC, INC., 116 Topsfield Rd., Wenham, Mass. 4-5. ADV. PG. 383.

American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif. 1-6.
 American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa. 2-6-8.
 AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. 2. ADV. PG. 198.
 AMPLEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. 1. ADV. PG. 98, 99.
 Amplifier Corp. of America, 396 Broadway, New York 13, N. Y. 1-2.
 ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. 6. ADV. PG. 333.
 ASSOCIATED ENGINEERING CORP. OF BOSTON, 65 Kent St., Brookline 46, Mass. 2-3-6-8. ADV. PG. 591, 625.
 ASSOCIATED SPECIALTIES CO., 1751 Main St., Orfield, Pa. 6. ADV. PG. 545.
 Atlas Coil, Inc., Cottage St., Derby, Conn. 1-2.
 ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. 1-2-6-8. ADV. PG. 230.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. 2-3-6-8. ADV. PG. 481.
 AUDIO PRODUCTS CORP., 2265 Westwood Blvd., Los Angeles 64, Calif. 2. ADV. PG. 653.
 Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y. 2-6-8.
 AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. J. 1-2-6. ADV. PG. 490.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. D. Box 1759, Fort Lauderdale, Fla. 1-2-3.
 BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. 3. ADV. PG. 283.
 BETA ELECTRIC CORP., 33 E. 103rd St., New York 29, N. Y. 1-2-3-6-8. ADV. PG. 225.
 Beva Laboratory, P. O. Box 478, Trenton 9, N. J. 2-3-6.
 BLISS SCIENTIFIC INSTRUMENTS, 107 Elmwood Ave., Ithaca, N. Y. 1. ADV. PG. 671.
 BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. 1-2-3-5-6-8. ADV. PG. 323.
 Booth Co., Arthur E., 265 S. Alexandria Ave., Los Angeles, Calif. 1-2-3-6-8.
 BRACKE-SEIB X-RAY CO., INC., 293 Third Ave., New York 10, N. Y. 1-2-3-6-8. ADV. PG. 583.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y. 1-2-8.
 BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. 1-2-3-6-8. ADV. PG. 592.
 BROWNING LABORATORIES, INC., Main St., Winchester, Mass. 4-5-6. ADV. PG. 522.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. 1-2-6-8. ADV. PG. 201.
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J. 3-6.
 BURROUGHS CORP., ELECTRONIC INSTRUMENTS DIV., 1209 Vine St., Philadelphia, Pa. 2-6. ADV. PG. 495.
 Carol Electronics Corp., 141E. 25th St., New York 10, N. Y. 1-2-3-6-8.
 CASCADE RESEARCH CORP., 53 Victory Lane, Los Gatos, Calif. 4-5. ADV. PG. 506.
 CHATHAM ELECTRONICS CORP., Livingston, N. J. 1-2-3-4-6-8. ADV. PG. 132, 133.
 CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. 2. ADV. PG. 448.
 Cinema-Television Ltd., Worsley Bridge Rd., London S.E. 26, England. 2-3-8.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. 1-2-3-4-5-6-7-8. ADV. PG. 572.
 Communication Measurements Lab., Inc., 350 Leland Ave., Ave., Plainfield, N. J. 6.
 COMPUTER CO. OF AMERICA, DIV. OF BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. 2-6. ADV. PG. 201.
 CONDENSER PRODUCTS CO., 140 Hamilton St., New Haven, Conn. 3. ADV. PG. 623.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. 1-2.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif. 2-6.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas. 3.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J. 1-2-3-8.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif. 4-5-7.
 Daystrom Instrument Co., Archbald, Pa. 2-6.
 DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif. 4-5.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill. 2-3-6-8.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J. 1-2-3-6-8.
 Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo. 2-6-8.
 Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass. 3-6-8.
 Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif. 1-2-3-4-5-6-7-8.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. 1-2-3-6-7. ADV. PG. 536.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J. 3.
 Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y. 6.
 EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. 2. ADV. PG. 636.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y. 1-2-3-4-5-6-8.
 Electron Mfg. Co., 1901 N. Clybourn, Chicago, Ill. 2.
 Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif. 6.

ELECTRONIC MEASUREMENTS CO., Lewis St. & M Ave., Eatontown, N. J. 1-2-3-4-5-6-7-8. ADV. PG. 431.
 Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif. 1-2-3-4-5-6-8.
 Electronic Research Associates, Inc., 715 Main North Caldwell, N. J. 2-6-7.
 Electro Engineering Works, 6021 College Ave., Oak 18, Calif. 1-2-3-4-6-8.
 ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Chicago 40, Ill. 2. ADV. PG. 554.
 Electro-Science Industries, Box 10066 International port, Los Angeles 45, Calif. 3.
 Electro-Tech Equipment Co., 308 Canal St., New 13, N. Y. 1-2-8.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J. 1-2-3-6-7.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, 2-3-6-8.
 Embassy Engineering Corp., 6173 Elton Ave., New 51, N. Y. 3.
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn N. Y. 1-2-3. ADV. PG. 490.
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., Chicago, Ill. 2.
 FEDERAL MFG. & ENGINEERING CORP., 211 Ste St., Brooklyn 5, N. Y. 2-8. ADV. PG. 642.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT 88 Kingsland Rd., Clifton, N. J. 2-3-6. ADV. PG. 182-187.
 FLUKE MFG. CO., INC., JOHN, 111 W. Nickerson Seattle 99, Wash. 1-2-3-6-8. ADV. PG. 652.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa. 1-2-3-4-5-6-7-8.
 FREED TRANSFORMER CO., INC., 1736 Weirfield Brooklyn 27, N. Y. 1-2-6-8. ADV. PG. 227.
 FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. 2-3-4-5-6-8. ADV. PG. 670.
 G. W. Associates, 108 Standard St., El Segundo, Calif. G & M Equipment Co., Inc., 7309-7327 Varna North Hollywood, Calif. 1-2-6-8.
 Galbraith & Son Electric Corp., C. C., 450 Avenue of Americas, New York 11, N. Y. 1-2-6.
 Gates Electric Co., 65 W. Broadway, New York, N. Y.
 Gates Radio Co., Quincy, Ill. 1-2-3-6.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 R Rd., Schenectady 5, N. Y. 1-2-3-6-7-8. ADV. PG. 1-20.
 GENERAL ELECTRIC CO., Electronics Div., Electro Park, Syracuse, N. Y. 2-6-8. ADV. PG. 1-20.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y. 2-6-8.
 GENERAL MAGNETICS, INC., 135 Bloomfield, N. 1-2-4-6-8. ADV. PG. 146.
 GENERAL RADIO CO., 275 Massachusetts Ave. Cambridge 39, Mass. 1-2-6-8. ADV. PG. 177-180.
 Green Electric Co., W., 130 Cedar St., New York, N. 1-2-3-4-6-8.
 Gyro Electronics Co., 325 Canal St., New York, N. 2.
 Hall, Inc., F. Sumner, Amityville, N. Y. 2-6-8.
 Hanover Developments, 401 E. 74th St., New York N. Y. 1-2-6-8.
 Harvey-Wells Electronics, Inc., North St., Southbr Conn. 1-2.
 HEWLETT-PACKARD CO., 395 Page Mill Rd., Alto, Calif. 2-4-6-8. ADV. PG. 29-36.
 Hivolt Ltd., 34A Pottery Lane, London W, 11, Engl 3-6-8.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena Calif. 3-4-5-6.
 INDUSTRIAL RECTIFIER CO., 323 Canal St., New York N. Y. 2-8. ADV. PG. 661.
 INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Angeles 58, Calif. 1-2-6-7. ADV. PG. 628.
 Insuline Corp. of America, 186 Granite St., Manchester N. H. 1-2-3-5-6.
 International Research Associates, 2221 Warwick Santa Monica, Calif. 1-2-3-6-8.
 International Telemeter Corp., Ampli-Vision Div., 2 Stoner Ave., Los Angeles 25, Calif. 2.
 James Vibrapow Co., 4036 N. Rockwell St., Chicago Ill. 2.
 Jersey City Technical Laboratory, 880 Bergen Ave Jersey City 6, N. J. 2.
 Jobbins Electronic Enterprises, Menlo Park, Calif. 1-2-3-5-6-8.
 Jowill Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa. 1-6.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. Box 1320, Palo Alto, Calif. 1-2.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn. 2-8.
 Katolight Corp., 624 Front St., Mankato, Minn. 1-2.
 KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. 4. ADV. PG. 420, 421.
 KAY-LAB, INC., 1090 Morena Blvd., San Diego Calif. 2-3-4-5-6-7-8. ADV. PG. 231.
 KEITHLEY INSTRUMENTS, 3868 Carnegie Ave., Cleveland 15, Ohio. 2. ADV. PG. 533.
 KEPCO LABS., 131-38 Sanford Ave., Flushing 55, N. 1-2-3-4-5-6-7-8. ADV. PG. 23-25.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuohoe, N. Y. 5. ADV. PG. 199.
 KROHN-HITE INSTRUMENT CO., 580 Massachusetts Ave., Cambridge 39, Mass. 2-6-7-8. ADV. PG. 40.
 Kuljian Corp., Electronics Div., 1200 N. Broad Philadelphia 21, Pa. 3.
 Kybernetes Co., 1100 Raymond Blvd., Newark, N. J. 2-6.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. 1-2-4-5-6.

- ABDA ELECTRONICS CORP.**, 103-02 Northern Blvd., Corona, N. Y. 1-2-3-4-5-6-7-8. ADV. PG. 259.
- AGEVIN MANUFACTURING CORP.**, 37 W. 65th St., New York 23, N. Y. 1-2-3-6. ADV. PG. 152, 153.
- Am Electronics Co.**, E. Freehold Rd., Freehold, N. J. 1-2-3-6.
- Electric & Mfg. Co.**, 2806 Clearwater St., Los Angeles 39, Calif. 1-2-3-4-5-6-7-8.
- Electronic Labs., Inc.**, 233 Dudley St., Roxbury 19, Mass. 1-2.
- High Frequency Labs., Inc.**, 55th St., & 37th Ave., Woodside 77, N. Y. 2-7.
- K AVIATION, INC.**, Binghamton, N. Y. 2-3-6. ADV. PG. 507.
- Massync Manufacturing Co., Ltd.**, 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif. 6.
- MINTRAN, INC.**, 248 Schuyler Ave., Kearny, N. J. 1-3-4. ADV. PG. 668.
- GNAVOX CO., COMPONENT SALES INDUSTRIAL & DEFENSE PRODUCTS**, Fort Wayne 4, Ind. 1-2-6. DV. PG. 181.
- MAGNETIC AMPLIFIERS, INC.**, 632 Tinton Ave., New York 55, N. Y. 6. ADV. PG. 212.
- Magnetic Precision Controls, Inc.**, 119 W. 63rd St., New York 23, N. Y. 3-6.
- Magnetic Research Corp.**, 318 Kansas St., El Segundo, Calif. 2-6-7-8.
- MAGNETICS RESEARCH CO.**, 142 King St., Chappaqua, N. Y. 6. ADV. PG. 651.
- Mary & Co., Inc., P. R.**, 3029 E. Washington St., Indianapolis 6, Ind. 2.
- MASON LABORATORIES**, 207 Greenwich Ave., Stamford, Conn. 1-2-3-6-8. ADV. PG. 647.
- Mayer, Inc., J. A.**, 37-01 31st St., Long Island City 1, N. Y. 1-2.
- McAlpin-Christie Corp.**, 3410 W. 67th St., Los Angeles 43, Calif. 2-6-8.
- Measurement Engineering, Ltd.**, Arnprior, Ontario, Canada. 6-8.
- Mesner Mfg. Div., Maguire Industries, Inc.**, Mt. Carmel, Ind. 1-2-3.
- Murray Electronic Co.**, Box 450, Red Bank, N. J. 1-2-3-6-8.
- CENTURY INSTRUMENTAL CORP.**, 611 Broadway, New York 12, N. Y. 6-8. ADV. PG. 217.
- West Coil & Transformer Co.**, 1642 N. Halstead St., Chicago 14, Ill. 1-2.
- Nurn, Inc., Alexander**, 1241 Ridgely St., Baltimore 12, Md. 2-3-6.
- Orin Mfg. Co., James**, 150 Exchange St., Malden, Mass. 3-6.
- ORIVAC INSTRUMENT CORP.**, 444 Second St., Box 17, Schenectady, N. Y. 2-6. ADV. PG. 484.
- REL RECTIFIER CORP.**, 557 Rogers Ave., Brooklyn 1, N. Y. 2-6-8. ADV. PG. 424.
- ELECTRIC PRODUCTS CORP.**, 1500 Bangs Ave., Newbury Park, N. J. 3. ADV. PG. 140.
- Radio Specialties Co.**, 1007 W. Washington St., Bloomington, Ill. 2-3-6.
- Radio-Products Co.**, 559 E. Ten Mile Rd., Hazel Park, Mich. 1-2.
- Radiational Spectrographic Labs., Inc.**, 6300 Euclid Ave., Cleveland 3, Ohio. 1-2-3-6-8.
- RADIONIC ASSOCIATES**, 87-16 116th St., Richmond Hill, N. Y. 1-2-3-6-8. ADV. PG. 672.
- Radio American Philips Co., Inc.**, 750 S. Fulton Ave., Vernon, N. Y. 2-3.
- RADIEST SCIENTIFIC CO.**, 1 Gray St., Cambridge, Mass. 2-3-4-5-6-8. ADV. PG. 424.
- Radio Research Corp.**, 2563 Grays Ferry Ave., Philadelphia 46, Pa. 2-3-6-8.
- EDCON COMPANY OF AMERICA**, 196 DeGraw St., Brooklyn 31, N. Y. 3. ADV. PG. 646.
- RO-GREEN CO.**, 71-5 Warren St., New York 7, N. Y. 5-7-8. ADV. PG. 341.
- Radio Electronic Mfg. Co.**, 2232 E. Burnside St., Portland 15, Ore. 2-6-8.
- RO FILTER CORP.**, 198 Albion Ave., Paterson 2, N. J. 1-2-3-6-8. ADV. PG. 312.
- Radio Mercury Television Mfg. Corp.**, 5955 Van Nuys Blvd., Van Nuys, Calif. 2-6.
- Radio, Inc. M. V.**, 4002 Fruit Valley Rd., Vancouver, B. C., Canada.
- RADAPLEGICS MFG. CO., INC.**, 10068 Franklin Ave., Franklin Park, Ill. 2-6. ADV. PG. 472.
- Radio Products Co., Ralph M.**, 135 W. Dayton St., Pasadena 5, Calif. 1-2-3-6.
- Radio Electrical Products Div. of Altec Lansing Corp.**, 56 Santa Monica Blvd., Beverly Hills, Calif. 1-2.
- PENNSYLVANIA TESTING LABORATORY**, Doylestown, Pa. 1-2-3-6-8. ADV. PG. 330.
- PERKINS ENGINEERING CORP.**, 345 Kansas St., El Segundo, Calif. 2-3-6-8. ADV. PG. 561.
- PHIL ELECTRONICS, INC.**, 13 Garden St., New Rochelle, N. Y. 1-2-3-6-8. ADV. PG. 504.
- Phonograph Inc.**, 3640 Woodland St., Baltimore 15, Md. 1-2-3.
- Phonograph Researches, Inc., George A.**, 230 Congress St., Boston 10, Mass. 6.
- Phonograph X-Ray Corp.**, 25 S. Broadway, White Plains, N. Y. 3.
- Phonograph Capacitors, Inc.**, 2511 W. Moffat St., Chicago 11, Ill. 1-2-3-6.
- PHONOGRAPH ELECTRONICS CORP.**, 100 Metropolitan Ave., Brooklyn 11, N. Y. 2-4-5-6. ADV. PG. 54-56.
- PHONOGRAPH DESIGNS, INC.**, 119-22 Atlantic Ave., Richmond Hill 19, N. Y. 2-3-6-8. ADV. PG. 517.
- Phonograph Equipment Co.**, 5740 Nevada, East, Detroit 34, Mich. 2-6.
- Phonograph Transformer Co., Inc.**, 532 Mulberry St., Newark N. J. 1-2-3-6-8.
- PRECISE MEASUREMENTS CO.**, 942 Kings Highway, Brooklyn 23, N. Y. 2-3-6-8. ADV. PG. 650.
- PRESS WIRELESS LABORATORIES INC.**, 25 Prospect Place, West Newton 65, Mass. 2-3. ADV. PG. 92.
- Process & Instruments**, 15 Stone Ave., Brooklyn 33, N. Y. 6.
- PRODUCTION RESEARCH CORP.**, Thornwood, N. Y. 3-6. ADV. PG. 578.
- Pulse Techniques, Inc.**, 1411 Palisade Ave., West Englewood, N. J. 1-8.
- Pye Ltd.**, Cambridge, England. 6.
- Radiart Corp.**, The, 3455 Vega Ave., Cleveland 13, Ohio. 2.
- Radiation Instrument Development Labs.**, 2337 W. 67th St., Chicago 36, Ill. 3-7.
- RADIO SONIC CORP.**, 111 Bleeker St., New York 12, N. Y. 1-2-3-6-8. ADV. PG. 631.
- RAPID ELECTRIC CO.**, 2881 Middletown Rd., New York 61, N. Y. 2. ADV. PG. 641.
- RAYTHEON MFG. CO., EQUIPMENT SALES DIV.**, Waltham 54, Mass. 2-3-6. ADV. PG. 26.
- RED BANK DIVISION, BENDIX AVIATION CORP.**, Eatontown, N. J. 1-6. ADV. PG. 110.
- Resdel Engineering Corp.**, 2351 Riverside Drive, Los Angeles 39, Calif. 1-2-3-4-6-8.
- Research Electronics Laboratory, Roslyn**, Pa. 2-7-8.
- Richardson-Allen Corp.**, 39-15 Main St., Flushing, N. Y. 1-2-3-6-8.
- Rowe Industries**, 1702 Wayne St., Toledo 9, Ohio. 3.
- "S" Corrugated Quenched Gap Co., Scientific Electric Div.**, 105-119 Monroe St., Garfield, N. J. 3.
- SANFORD MILLER CO.**, 691 Bedford Ave., Brooklyn 6, N. Y. 2. ADV. PG. 162.
- Schauer Mfg. Corp.**, 4521 Alpine Ave., Cincinnati 36, Ohio. 2-6-8.
- SCIENTIFIC SPECIALTIES CORP.**, Snow & Union Sts., Brighton 35, Mass. 2-3-6-8. ADV. PG. 598.
- SERVO CORP. OF AMERICA**, 20-20 Jericho Turnpike, New Hyde Park, N. Y. 3. ADV. PG. 69-72.
- SERVOMECHANISMS, INC.**, 500 Franklin Ave., Garden City, N. Y. 1. ADV. PG. 374.
- Servospeed Div. of Electro Devices, Inc.**, 4 Godwin Ave., Paterson, N. J. 2-6-8.
- Servo-Tek Products Co., Inc.**, 1086 Goffe Rd., Hawthorne, N. J. 6.
- Shields Laboratories, Inc.**, 810 N. Lincoln Ave., Pittsburgh 12, Pa. 2.
- Sonar Radio Corp.**, 3050 W. 21st St., Brooklyn 24, N. Y. 1-2.
- SORENSEN & CO., INC.**, 375 Fairfield Ave., Stamford, Conn. 1-2-3-6-8. ADV. PG. 50, 51.
- Sorensen Industrial Electronics Co.**, 87 N. Day St., Orange, N. J. 3.
- SPELLMAN TELEVISION CO., INC.**, 3029 Webster Ave., New York 67, N. Y. 1-2-3-6-8. ADV. PG. 422, 423.
- SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP.**, Great Neck, N. Y. 4-5. ADV. PG. 331, 332.
- Square Root Mfg. Corp.**, 391 Saw Mill River Rd., Yonkers, N. Y. 1-2-3-6-8.
- Standard Electrical Products Co.**, 2239 E. Third St., Dayton, Ohio. 8.
- Standard Electronics Corp.**, 287 Emmet St., Newark 5, N. J. 6.
- Standard Telephones & Cables Ltd.**, Connaught House, Aldwych, London, W. C. 2, England. 3-6.
- Stephens Mfg. Corp.**, 8538 Warner Drive, Culver City, Calif. 2.
- Summit Electronics, Inc.**, 7 Industrial Place, Summit, N. J. 1-2-3-4-5-6-7-8.
- SUPERIOR ELECTRIC CO., THE**, 4000 Mae Ave., Bristol, Conn. 1-2. ADV. PG. 336, 337.
- Tech Laboratories, Inc.**, Bergen & Edsall Bldgs., Palisades Park, N. J. 2.
- Technical Apparatus Builders**, 109 Liberty St., New York 6, N. Y. 2-6-8.
- Technical Measurement Corp.**, P. O. Box 1947, New Haven, Conn. 2-3-6-8.
- Technical Operations, Inc.**, 6 Schouler Court, Arlington, Mass. 3-7.
- TELECHROME, INC.**, 88 Merrick Rd., Amityville, N. Y. 2-3-6-8. ADV. PG. 303.
- TELETRONICS LABORATORY, INC.**, Kinkel St., Westbury, N. Y. 1-2-6-7. ADV. PG. 447.
- TEL-INSTRUMENT CORP.**, 728 Garden St., Carlstadt, N. J. 2-6. ADV. PG. 540.
- THOMPSON PRODUCTS, INC., ELECTRONICS DIV.**, 2196 Clarkwood Ave., Cleveland 3, Ohio. 4. ADV. PG. 60.
- Thordarson-Meissner Mfg. Divs.**, Mt. Carmel, Ill. 1-2.
- TRAD TELEVISION CORP.**, 1001 First Ave., Asbury Park, N. J. 1-8. ADV. PG. 663.
- Transformer Engineers**, 161 E. California, Pasadena 1, Calif. 1-2-3-6.
- TRANSFORMER SPECIALTY CO., INC.**, Bala Cynwyd, Pa. 1-2-3. ADV. PG. 591.
- Transvision, Inc.**, 460 North Ave., New Rochelle, N. Y. 3.
- Trenton Transformer Corp.**, Box 568 B., Trenton, N. J. 1.
- U M & F Manufacturing Corp.**, 10929 Vanowen St., North Hollywood, Calif. 7.
- Union Electric & Mfg. Co.**, 1057 Summit Ave., Jersey City, N. J. 3.
- Universal Electronics Co.**, 2012 S. Sepulveda Blvd., Los Angeles 25, Calif. 2-6-8.
- Valley Engineering Co.**, P. O. Box 2, Los Alamos, N. M. 1.
- VARIAN ASSOCIATES**, 611 Hansen Way, Palo Alto, Calif. 4-6. ADV. PG. 163.
- Varo Mfg. Co., Inc.**, 1801 Walnut St., Garland, Texas. 1-2-3-6.
- VECTRON, INC.**, 404 Main St., Waltham 54, Mass. 1-2-3-4-5-6-7-8. ADV. PG. 474, 475.
- VIBRATION RESEARCH LABS., INC.**, 97 Lake Ave., Tuckahee, N. Y. 1-2-3-6. ADV. PG. 602.
- Videon Electronic Corp.**, 222 E. Ohio St., Indianapolis 4, Ind. 1-2-3.
- Vokar Corp.**, 7300 Huron River Drive, Dexter, Mich. 1-2-3-8.
- Voron & Co., George**, 835 N. 19th St., Philadelphia 30, Pa. 2.
- WAVELINE, INC.**, Box 470, Caldwell, N. J. 5. ADV. PG. 370.
- WESTINGHOUSE ELECTRIC CORP.**, P. O. Box 868, Pittsburgh 30, Pa. 2. ADV. PG. 113-124.
- Weston Laboratories, Inc.**, Harvard, Mass. 4-5.
- Weymouth Instrument Co.**, 1440 Commercial St., East Weymouth 89, Mass. 4-5.
- Wickes Engineering & Construction Co.**, P. O. Box 590, Camden 1, N. J. 6.
- Wunderlich Radio Co.**, 2 Fifth Ave., New York 11, N. Y. 1-2.
- Wurlitzer Co., Rudolph**, North Tonawanda, N. Y. 1-2.
- YARDNEY ELECTRIC CORP.**, Dept. EBG, 40 Leonard St., New York 13, N. Y. 2. ADV. PG. 381.
- Z & W Machine Products, Inc.**, 5100-16 St. Clair Ave., Cleveland 3, Ohio 3.

PRE-AMPLIFIERS for COMMUNICATION RECEIVERS

- Bassett, Inc., Rex**, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
- BRUNO-NEW YORK INDUSTRIES CORP.**, 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
- C.G.S. Laboratories, Inc.**, 391 Ludlow St., Stamford, Conn.
- CENTRALAB DIV. OF GLOBE-UNION, INC.**, 914 Y. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
- Communications Co., Inc.**, 300 Greco Ave., Coral Gables 34, Fla.
- DUBROW DEVELOPMENT CO.**, 235 Penn St., Burlington, N. J. ADV. PG. 536.
- Eldico of New York, Inc.**, 44 31 Douglaston Pkwy., Douglaston, N. Y.
- El-Tronics, Inc.**, 5th & Noble Sts., Philadelphia 23, Pa.
- Insuline Corp. of America**, 186 Granite St., Manchester N. H.
- Kaar Engineering Corp.**, 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
- Lesca, Via Bergamo 21**, Milan, Italy.
- Millen Mfg. Co., James**, 150 Exchange St., Malden, Mass.
- ORTHON CORP., THE**, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
- Radio Mfg. Engineers Inc.**, 300-302 First Ave., Peoria 6, Ill.
- Standard Coil Products Co.**, 2329 N. Pulaski Rd., Chicago 39, Ill.
- Thordarson-Meissner Mfg. Divs.**, Mt. Carmel, Ill.
- White Industries, Inc.**, 421 W. 54th St., New York 19, N. Y.
- Wurlitzer Co., Rudolph**, North Tonawanda, N. Y.

PRE-AMPLIFIERS for OSCILLOSCOPES

- Airmec Ltd.**, High Wycombe, Buckinghamshire, England.
- Audio Instrument Co., Inc.**, 133 W. 14th St., New York 11, N. Y.
- Commercial Research Labs., Inc.**, 20 Bartlett Ave., Detroit 3, Mich.
- Cossor (Canada) Ltd.**, 301-303 Windsor St., Halifax, N. S., Canada.
- DUBROW DEVELOPMENT CO.**, 235 Penn St., Burlington, N. J. ADV. PG. 536.
- Electro-Mechanical Research, Inc.**, Ridgefield, Conn.
- ELECTRONIC TUBE CORP.**, 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
- Ellis Associates**, Box 77, Pelham, N. Y.
- Feiler Engineering Co.**, 8026 Monticello Ave., Skokie, Ill.
- Franklin Electronics, Inc.**, 415 W. Pike St., Philadelphia 40, Pa.
- FURST ELECTRONICS**, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
- Gilmore Industries**, 5713 Euclid Ave., Cleveland 3, Ohio.
- Grass Instrument Co.**, 101 Old Colony Ave., Quincy, Mass.
- Hanover Developments**, 401 E. 74th St., New York 21, N. Y.
- Jowil Electronics, Inc.**, 7945 Germantown Ave., Philadelphia 18, Pa.
- KAY-LAB, INC.**, 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
- KEITHLEY INSTRUMENTS**, 3868 Carnegie Ave., Cleveland 15, Ohio. ADV. PG. 533.
- Linear Equipment Labs.**, Brightwater Place, Massachusetts, N. Y.
- Millen Mfg. Co., James**, 150 Exchange St., Malden, Mass.
- Miller Instruments Inc.**, William, 325 N. Halstead Ave., Pasadena 8, Calif.
- Process & Instruments**, 15 Stone Ave., Brooklyn 33, N. Y.
- RIPLEY CO., INC.**, Middletown, Conn. ADV. PG. 557.
- Scala Radio Co.**, 2814 19th St., San Francisco 10, Calif.
- Scott, Inc.**, Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
- SERVO CORP. OF AMERICA**, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
- Southwest Engineering & Mfg. Co.**, P. O. Box 3325, San Diego 3, Calif.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. ADV. PG. 127-131.
 Tektronix, Inc., P. O. Box 831, Portland 7, Oregon.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
VOLKERS & SCHAFFER MFG. CORP., P. O. Box 996, Schenectady, N. Y. ADV. PG. 484.

PRE-AMPLIFIERS—Phonograph

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Autocrat Electronics Co., 5024 Elm St., Skokie, Ill.
 Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 British Industries Corp., 164 Duane St., New York 13, N. Y.
 Brociner Electronics Laboratory, 344 E. 32nd St., New York 16, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Fairchild Recording Equipment Co., 154th St. & Seventh Ave., Whitestone, N. Y.
 Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.
 Freed Electronics & Controls Corp., 200 Hudson St., New York 13, N. Y.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Lesa, Via Bergamo 21, Milan, Italy.
 McIntosh Laboratory, Inc., 320 Water St., Binghamton, N. Y.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
MAGNECORD, INC., 225 W. Ohio St., Chicago 10, Ill. ADV. PG. 220.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
 Newcomb Audio Products Co., 682 Lexington Ave., Hollywood 38, Calif.
PARAPLEGICS MFG. CO., INC., 10068 Franklin Ave., Franklin Park, Ill. ADV. PG. 472.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 278.
 Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
 Precise Development Corp., 2 Neil Court, Oceanside, N. Y.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Pye Ltd., Cambridge, England.
 Radio Craftsmen, Inc., The, 4401 N. Ravenswood Ave., Chicago 40, Ill.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Shields Laboratories, Inc., 810 N. Lincoln Ave., Pittsburgh 12, Pa.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
 Special Products Co., 9118 Brookville Road, Silver Spring, Md.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Tech-Master Products Co., 443-5 Broadway, New York 13, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Weathers Industries, Inc., 66 E. Gloucester Pike, Barrington, N. J.
 Weingarten Electronic Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.

PRE-SELECTORS

AIR ASSOCIATES INC., Teterboro, N. J. ADV. PG. 83.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Electro-Voice, Inc., Buchanan, Mich.

POLARAD ELECTRONICS CORP., 100 Metropolitan Ave., Brooklyn 11, N. Y. ADV. PG. 54-56.
 Radio Mfg. Engineers, Inc., 300-302 First Ave., Peoria 6, Ill.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

PRESSES—Metal Forming

Alliance Mfg. Co., Lake Park Blvd., Alliance, Ohio.
 Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.
INFRA ELECTRONIC CORP., Roseland, N. J. ADV. PG. 580.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
PARISIAN NOVELTY CO., 3510 S. Western Ave., Chicago 9, Ill. ADV. PG. 590.
 Quality Name Plate Inc., Fisher Hill Rd., East Glastonbury, Conn.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.

PRESSURE

See **CONTROLS**

PRINTED, STAMPED or ETCHED CIRCUITS
 See **CIRCUITS**

PROBES

See also **LINES—Slotted**

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 Linear Equipment Labs., Brightwater Place, Massapequa, N. Y.
NATIONAL TEL-TRONICS CORP., 35 St. Casparys Ave., Yonkers, N. Y. ADV. PG. 312.
 Pacific Electricord Co., P. O. Box 15805, Cranshaw Sta., Los Angeles 10, Calif.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. Inside Back & Back Covers.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsham, Mass.
 Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
 Science Electronics, Box 237, Huntington, N. Y.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
 Yonkers Industries, 28 School St., Yonkers, N. Y.

PROBES—High Frequency

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St., New Rochelle, N. Y. ADV. PG. 601.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Gyro Electronics Co., 325 Canal St., New York, N. Y.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.

Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., York 4, N. Y. ADV. PG. 150.
MILLIVAC INSTRUMENT CORP., 444 Second St., 997, Schenectady, N. Y. ADV. PG. 484.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Precise Development Corp., 2 Neil Court, Oceanside, N. Y.
 Precision Apparatus Co., Inc., 92-27 Horace Hard Blvd., Elmhurst, N. Y.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsham, Mass.
 Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
SCIENTIFIC SPECIALTIES CORP., Snow & Union St., Brighton 35, Mass. ADV. PG. 598.
 Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Specialty Engineering Div. of Specialty Assembling Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
VOLKERS & SCHAFFER MFG. CORP., P. O. Box 996, Schenectady, N. Y. ADV. PG. 484.
 Weston Laboratories, Inc., Harvard, Mass.
 White Industries, Inc., 421 W. 54th St., New York 19, N. Y.
 Yonkers Industries, 28 School St., Yonkers, N. Y.

PROBES—High Voltage

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
 Javex, P. O. Box 646, Redlands, Calif.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 Peerless Products Industries, 812 N. Pulaski St., Chicago 51, Ill.
 Precise Development Corp., 2 Neil Court, Oceanside, N. Y.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
 Precision Apparatus Co., Inc., 92-27 Horace Hard Blvd., Elmhurst, N. Y.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Roflan Co., Corner Route 1 & Camp Meeting Rd., Topsham, Mass.
 Scala Radio Co., 2814 19th St., San Francisco 10, Calif.
SCIENTIFIC SPECIALTIES CORP., Snow & Union St., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 E. Ave., Mt. Vernon, N. Y. ADV. PG. 617.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Yonkers Industries, 28 School St., Yonkers, N. Y.

PROBES—Microwave

See **MICROWAVE ACCESSORIES**

PRODUCTION WORK BENCHES

Alden Systems Co., 1 Alden Research Center, Westborough, Mass.
 Angle Steel Stool Co., Plainwell, Mich.
 Equipto, Aurora, Ill.
 Standard Pressed Steel Co., Box 775, Jenkintown, Pa.

PROJECTION TUBES

See **TUBES—Television Projection**

PROTECTIVE SEALERS

See **INSULATING COMPOUNDS**

PSYCHO GALVANOMETERS

Electro-Medical Lab., Inc., South Woodstock 8, Vt.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
 Maico Co., Inc., 21 N. Third St., Minneapolis, Minn.

PUBLIC ADDRESS SYSTEMS

See also **SOUND SYSTEMS—Complete**

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.

Radio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.
 Radio-Master Corp., 17 E. 45th St., New York 17, N. Y.
 Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Radio Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Radio Labs, Inc., 24-28 45th St., Long Island City 3, N. Y.
 Best Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 Radio (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Radio Co., The, Seymour, Conn.
 Radio Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
 Radio Corp., 135th & Indiana Sts., St. Charles, Ill.
 Radio Co., 150-50 Melbourne Ave., Flushing 67, N. Y.
 Radio Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Radio & Son Electric Corp., C. C., 450 Avenue of the Americas, New York 11, N. Y.
 Radio Co., Quincy, Ill.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 645.
 Radio Corp. of America, 186 Granite St., Manchester, N. H.
PERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Radio Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Radio, Via Bergamo 21, Milan, Italy.
 Radio Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.
 Radio Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 Radio Laboratory, Inc., 320 Water St., Binghamton, N. Y.
 Radio Inter-Communication Systems, Inc., 1130 N. Milwaukee Ave., Chicago 22, Ill.
 Radio Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Radio Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Radio-Borg Corp., 3515 W. Addison St., Chicago 18, N. Y.
 Radio-Kut Co., 38-01 Queens Blvd., Long Island City 1, N. Y.
 Radio Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
 Radio Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
 Radio Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Radio-Carlson Co., Rochester 3, N. Y.
 Radio Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Radio Corp., Benton Harbor, Mich.
 Radio Electric Co., 1900 Clark St., Racine, Wis.
 Radio Sound & Electric Labs., Inc., 805 S. Fifth St., Milwaukee 4, Wis.
 Radio & W. Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

AMPS—Metering

Radio Co., Clark, 349 N. Market St., Palmyra, N. J.
 Radio Key Technical Associates, Inc., 75 Orchard St., Belmont 78, Mass.
 Radio INSULATOR CO., INC., Radio Specialties Div., 31 Albert St., Le Roy, N. Y. ADV. PG. 414, 415.
 Radio Inc., Edward E., 95 Park Ave., Nutley 10, N. J.

AMPS—Vacuum

See VACUUM PUMPS

AMPS—BUTTONS

Radio-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Radio Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Radio Multiplier Corp., Electronics Div., San Gabriel, Calif.
 Radio Co., Clark, 349 N. Market St., Palmyra, N. Y.
 Radio Electric Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Radio Div., General Motors Corp., Kokomo, Ind.
 Radio Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
 Radio RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.
 Radio Electric Products Co., 50 Paris St., Newark 5, N. J.
 Radio Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 Radio GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Radio Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
 Radio Equipment Co., 5740 Nevada, East, Detroit 34, Mich.
 Radio BROS., 8031 N. Monticello Ave., Skokie, Ill. ADV. PG. 260.
 Radio Manufacturing Co., 4739 Montrose Ave., Chicago 11, Ill.
 Radio D Co., 4041 N. Richards, Milwaukee 12, Wis.

AMPS—CRYSTALS

See also CRYSTALS

AMPS—Fused

Radio Fused Quartz Co., Inc., 18-20 Salem St., Dover, N. J.
 Radio Sil Co., Inc., Hillside, N. J.

Radio General Electric Co., Lamp Div., Nela Park, Cleveland 12, Ohio.
 Radio Hanovia Chemical & Mfg. Co., 233 N. J. R. R. Ave., Newark, N. J.
 Radio Thermal Syndicate, Ltd., 14 Bixley Heath, Lynbrook, N. Y.

RACKS, AGING—Vacuum Tube

Radio BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Radio Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 Radio Central Sales & Mfg. Co., 2 Richwood Place, Danville, N. J.
 Radio Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Radio KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
 Radio Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
 Radio PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Radio POWER DESIGNS, INC., 119-22 Atlantic Ave., Richmond Hill 19, N. Y. ADV. PG. 517.
 Radio RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
 Radio Research Electronics Laboratory, Roslyn, Pa.
 Radio Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Radio SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Radio Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y.

RACKS—Relay

Radio ABALON PRECISION MFG. CORP., 540 Cassanova St., Bronx 59, N. Y. ADV. PG. 490.
 Radio ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
 Radio Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Radio ART-LOYD METAL PRODUCTS CORP., 2973 Cropsey Ave., Brooklyn 14, N. Y. ADV. PG. 561.
 Radio Bennett Mfg. Co., Alden, N. Y.
 Radio BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Radio Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
 Radio Bud Radio Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Radio CHURCHILL CORP., 344 Franklin St., Melrose 76, Mass. ADV. PG. 470.
 Radio CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Radio E B Metal Products Co., Inc., 12-14 Bridge Plaza South, Long Island City 1, N. Y.
 Radio Elgin Metalformer Corp., 901 N. Liberty St., Elgin, Ill.
 Radio FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV. PG. 450.
 Radio FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Radio Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Radio Gates Radio Co., Quincy, Ill.
 Radio General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
 Radio KARP METAL PRODUCTS CO., DIV. OF H & B MACHINE CO., 215 63rd St., Brooklyn 20, N. Y. ADV. PG. 387.
 Radio KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
 Radio Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Radio North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
 Radio Northeastern Engineering, Inc., Manchester, N. H.
 Radio Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.
 Radio PAR-METAL PRODUCTS CORP., 32-62 49th St., Long Island City 3, N. Y. ADV. PG. 230.
 Radio PREMIER METAL PRODUCTS CO., 3160 Webster Ave., Bronx, N. Y. ADV. PG. 242.
 Radio REF Manufacturing Corp., Jericho Turnpike, Mineola, N. Y.
 Radio Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Radio Teller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Radio Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
 Radio Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.
 Radio Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

RACKS—RADAR SYSTEMS

Radio AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Radio American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 Radio Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Radio Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Radio Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Radio Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Radio Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 54, Calif.
 Radio Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
 Radio Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Radio Daystrom Instrument Co., Archbald, Pa.
 Radio General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.

Radio Giffilan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.
 Radio Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Radio LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 Radio MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Radio National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 Radio Phebo Inc., 3640 Woodland St., Baltimore 15, Md.
 Radio REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
 Radio SANDERS ASSOCIATES, INC., Nashau, N. H. ADV. PG. 622.
 Radio SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Radio Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Radio Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.

RADIOSONDES

Radio AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Radio American Radio Hardware Co., Inc., 152 S. MacQuessen Pkwy., Mt. Vernon, N. Y.
 Radio Automatic Mfg. Co., 65 Gouverneur St., Newark 4, N. J.
 Radio Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Radio Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Radio BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Radio KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Radio Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Radio Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Radio Northeastern Engineering, Inc., Manchester, N. H.
 Radio Phebo Inc., 3640 Woodland St., Baltimore 15, Md.
 Radio Scientific Radio Products Inc., 215 S. 11th, Omaha, Neb.
 Radio Seaboard Electric Co., 417 Canal St., New York 13, N. Y.

RADOMES

Radio Bolta Products Div. of The General Tire & Rubber Co., Lawrence, Mass.
 Radio Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio.
 Radio Keller Products Co., 41 Union St., Manchester, N. H.
 Radio Kennedy & Co., D. S., Cohasset, Mass.
 Radio McMillan Industrial Corp., Brownville Avenue Plant, Ipswich, Mass.
 Radio SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
 Radio U. S. Plywood Corp., Electrical Structures Dept., 55 W. 44th St., New York 17, N. Y.

RATIOMETERS

See INSTRUMENTS—Electrical Measuring

REACTORS

See also CHOKES and INDUCTANCES—Choke

REACTORS—Saturable

Radio Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
 Radio Acro Transformer Mfg. Corp., 26-04 Fourth St., Long Island City 2, N. Y.
 Radio AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 583.
 Radio Atlantic Transformer Co., Groton, Conn.
 Radio Atlas Coil, Inc., Cottage St., Derby, Conn.
 Radio Basler Electric Co., 601 Fifth St., Highland, Ill.
 Radio Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Radio BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
 Radio C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Radio California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.
 Radio Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.
 Radio Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.
 Radio COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 140, 144.
 Radio Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
 Radio ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. ADV. PG. 166.
 Radio FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
 Radio FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550.
 Radio FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
 Radio GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Radio GENERAL TRANSFORMER CO., 18240 Harwood Ave., Homewood, Ill. ADV. PG. 444.
 Radio I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
 Radio INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443.
 Radio Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulasaki Rd., Chicago 39, Ill.
 Radio LEONARD ELECTRIC PRODUCTS CO., INC., 67 34th St., Brooklyn 32, N. Y. ADV. PG. 569.
 Radio MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
 Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill.
 MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.
 Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
 Pantek Co., Box 212, El Segundo, Calif.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
 Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
 SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 50, 51.
 Sorgel Electric Co., 838 W. National Ave., Milwaukee 4, Wis.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 Todd Products, 156 Gramatan Ave., Mt. Vernon, N. Y.
 TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 VARI-L CO., INC., 432 Fairfield Ave., Stamford, Conn. ADV. PG. 192.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

RECEIVERS—Aircraft

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Bassett, Inc., Rex, 1314 N. E. 17 Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 MAGNAVOX CO., COMPONENT SALES, INDUSTRIAL & DEFENSE PRODUCTS, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 663.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

RECEIVERS—a-m Fixed Frequency

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Atlas Coils, Inc., Cottage St., Derby, Conn.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
 Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 CLEGG LABORATORIES, INC., 142 S. Livingston A., Livingston, N. J. ADV. PG. 572.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

DOLLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 368.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Gyro Electronics Co., 325 Canal St., New York, N. Y.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lehigh Valley Electronic Mfg. Co., 215 S. 3rd St., Allentown, Pa.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 McLaughlin Corp., J.L.A., 367 Bird Rock Ave., La Jolla, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 Motorola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
 Pye, Ltd., Cambridge, England.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
 Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Ore.
 Schuttig & Co., Inc., 5005 Calvert Rd., College Park, Md.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 SPECIFIC PRODUCTS, 14515 Dickens St., Sherman Oaks 13, Calif. ADV. PG. 608.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 Thordarson-Meissner Mfg. Div., Mt. Carmel, Ill.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

RECEIVERS—a-m/f-m Communication

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
 Bassett, Inc., Rex, 1314 N. E. 17 Court, P. O. 1759, Fort Lauderdale, Fla.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Daystrom Instrument Co., Archbald, Pa.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Electro Craft Industries, Inc., 68 Jackson St., Stamford, Conn.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.
 Freed Electronics & Controls Corp., 200 Hudson St., New York 13, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 MAGNAVOX CO., COMPONENT SALES, INDUSTRIAL & DEFENSE PRODUCTS, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.

Pilot Radio Corp., 37-06 36th St., Long Island N. Y.
 PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Symphony Radio & Television Co., 925 South West Ave., Los Angeles 6, Calif.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.
 Wurliitzer Co., Rudolph, North Tonawanda, N. Y.

RECEIVERS—Automatic Radio Alarm

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Atlas Coils, Inc., Cottage St., Derby, Conn.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 RADIO CORP. OF AMERICA, ENGINEERING PRODUCTIONS DIV., Camden, N. J. ADV. PG. Inside Back & Covers.

RECEIVERS—Automobile

Automatic Radio Mfg. Co., Inc., 122 Brookline Boston, Mass.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Delco Radio Div., General Motors Corp., Kokomo, Eckstein Radio & Television Co., 3400 E. 42nd St., Minneapolis 6, Minn.
 Electro Craft Industries Inc., 68 Jackson Ave., Stamford, Conn.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.
 Pye Ltd., Cambridge, England.

RECEIVERS—Coin Operated

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 Coradio, Inc., 196 Albion Ave., Paterson, N. J.
 Electron Enterprises, 6917-19-21 Stanley Ave., Berkeley 4, Calif.
 Mattison Television & Radio Corp., 10 W. 181st St., New York 53, N. Y.
 ORTHON CORP., THE, 196 Albion Ave., Paterson, N. J. ADV. PG. 628.
 Trutone Electronics, Inc., 812-14 N. Highland Ave., Los Angeles 38, Calif.

RECEIVERS—Communication and Amateur

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
 Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.
 Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. 1759, Fort Lauderdale, Fla.
 CLEGG LABORATORIES, INC., 142 S. Livingston A., Livingston, N. J. ADV. PG. 572.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148-149.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Crosby Labs., Inc., Box 233, Robbins Lane, Hicksville, N. Y.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Eldico of New York, Inc., 44-31 Douglaston Place, Douglaston, N. Y.
 Electro-Voice, Inc., Buchanan, Mich.
 Engineering Associates, 434 Patterson Rd., Dayton 4, Ohio.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 305-307.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 Heintz & Kaufman Equipment Div. of The Robert D. Co., 50 Drumm St., San Francisco 11, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
 Pye Ltd., Cambridge, England.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.

Radio Mfg. Engineers, Inc., 300-302 First Ave., Peoria 6, Ill.
TRVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wico Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Winderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.
 W & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

RECEIVERS—Diversity Reception

ARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Crosby Labs., Inc., Box 233, Robbins Lane, Hicksville, N. Y.
ELLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 368.
 Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
MMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 305-307.
 Marconi Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
 Laughlin Corp., J. L. A., 367 Bird Rock Ave., La Jolla, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
ARTHERN RADIO CO., INC., 143-145 W. 22nd St., New York 11, N. Y. ADV. PG. 324-326.
ESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
ELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 670.
 Technical Materiel Corp., The, P. O. Box 142, Mamaroneck, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Winderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

RECEIVERS—Fixed Frequency

ARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
ELLAR CO., ROBERT, COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 368.
 Elco of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn, Ill.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Radio Electronics Co., 325 Canal St., New York, N. Y.
 Mulline Corp. of America, 186 Granite St., Manchester, N. H.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
ATAWAN ELECTRONICS CO., INC., 236 Creek Rd., Keansburg, N. J. ADV. PG. 649.
 Measurements Engineering Ltd., Arnprior, Ontario, Canada.
 Arrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 Motorola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
ESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.

Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Ore.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London W.C. 2, England.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 670.
 Technical Materiel Corp., The, P. O. Box 142, Mamaroneck, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.

RECEIVERS—f-m

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
 Avco Mfg. Corp., 1329 Arlington St., Cincinnati 25, Ohio.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Crosby Labs., Inc., Box 233, Robbins Lane, Hicksville, N. Y.
 Cubic Corp., 2841 Canon St., San Diego 6, Calif.
 Daystrom Instrument Co., Archbald, Pa.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.
 Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lehigh Valley Electronic Mfg. Co., 215 S. 3rd St., Allentown, Pa.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Motorola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.
 Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
 Pye Ltd., Cambridge, England.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.

RECEIVERS—Loran

Bludworth Marine Div., National-Simplex-Bludworth Inc., 92 Gold St., New York 38, N. Y.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

RECEIVERS—Marine

Aero Marine Radio Corp., 135 W. 16th St., New York 11, N. Y.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Elenco of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.

Gray Radio Co., 501 Forest Hill Blvd., West Palm Beach, Fla.
 Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Hudson American Corp., 25 W. 43rd St., New York 36, N. Y.
 Jefferson, Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.
 Pye Ltd., Cambridge, England.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
REEVES-HOFFMAN CORP., 145 Cherry St., Carlisle, Pa. ADV. PG. 343.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

RECEIVERS—Microwave See MICROWAVE ACCESSORIES

RECEIVERS—Panoramic

C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

RECEIVERS—Portable & Mobile

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 583.
 Avco Mfg. Corp., 1329 Arlington St., Cincinnati 25, Ohio.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
 Bassett, Inc., Rex, 1314 N. E. 17 Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 Bludworth Marine Div., National-Simplex Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Eckstein Radio & Television Co., 3400 E. 42nd St., Minneapolis 6, Minn.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Engineering Associates, 434 Patterson Rd., Dayton 9, Ohio.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Industrial Radio Corp., 428 N. Parkside Ave., Chicago 44, Ill.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lehigh Valley Electronic Mfg. Co., 215 S. 3rd St., Allentown, Pa.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Measurement Engineering Ltd., Arnprior, Ontario, Canada.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
 National Electronics Laboratories, Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
 Pye Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside & Back Covers.
 Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Ore.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
 Wilcox-Gay Corp., Charlotte, Mich.

RECEIVERS—Radio Direction Finder

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 AIRCRAFT RADIO CORP., Boonton, N. J. ADV. PG. 583.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 175, 176.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
FAIRCHILD CAMERA & INSTRUMENT CORP., Robbins Lane, Syosset, N. Y. ADV. PG. 102, 103.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

RECEIVERS—Railroad

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Pye Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 670.

RECEIVERS—uhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
CARDWELL ELECTRONICS PRODUCTIONS CORP., ALLEN D., 97 Whiting St., Plainville, Conn. ADV. PG. 394.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Daystrom Instrument Co., Archbald, Pa.
 Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.
 Engineering Associates, 434 Patterson Rd., Dayton 9, Ohio.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Erco Radio Labs., E. Stewart Ave., Garden City, N. Y.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Corp. of America, Home Instrument Div., Camden, N. J.
 Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Symphony Radio & Television Co., 925 South Western Ave., Los Angeles 6, Calif.
 Telephonics Corp., Park Ave., Huntington, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 663.

Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 Wilcox-Gay Corp., Charlotte, Mich.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

RECEIVERS—vhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Daystrom Instrument Co., Archbald, Pa.
 Electro Craft Industries Inc., 68 Jackson Ave., Stamford, Conn.
 Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.
 Engineering Associates, 434 Patterson Rd., Dayton 9, Ohio.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Hallcrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Heintz & Kaufman Equipment Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 National Electronics Laboratories, Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 Pye Ltd., Cambridge, England.
 Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Corp. of America, Home Instrument Div., Camden, N. J.
 Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
 Radio Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Ore.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Schuttig & Co., Inc., 5005 Calvert Rd., College Park, Md.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Symphony Radio & Television Co., 925 South Western Ave., Los Angeles 6, Calif.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 Telephonics Corp., Park Ave., Huntington, N. Y.
TRAD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. ADV. PG. 663.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wilcox-Gay Corp., Charlotte, Mich.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

RECEIVERS—Home

1. a-m Clock Radio
2. a-m phono Console
3. a-m phono Table
4. a-m Console
5. a-m Portable
6. a-m Table
7. a-m Vest Pocket
8. a-m/f-m phono, Console
9. a-m/f-m phono, Table
10. a-m/f-m Console
11. a-m/f-m Portable
12. a-m/f-m Table
13. f-m Console
14. f-m Portable
15. f-m Table
16. t-v Console
17. t-v Portable

18. t-v Table
19. f-m/t-v Console
20. a-m/f-m/t-v Console
21. a-m/f-m/t-v Table
22. a-m/f-m/t-v phono, Console
23. Recorder and Phonograph Combination
24. Built-in Wall Type

Admiral Corp., 3800 Cortland St., Chicago 47
 1-3-5-6-16-18-22.
ALCO ELECTRONICS MFG. CO., 3 Wolcott Ave.,
 rance, Mass. 15. ADV. PG. 367.
 Andrea Radio Corp., 27-01 Bridge Plaza North
 Island City 1, N. Y. 16-18.
 Ansley Mfg. Co., Arthur, Doylestown, Pa. 8-12-24
 Approved Electronic Instrument Corp., 928 Broad
 New York 10, N. Y. 11.
 Arvin Industries, Inc., Radio & Television Div., Colu
 Ind. 1-5-6-12-16-18.
 Audar, Inc., P. O. Box 438 M, Pasadena 18,
 1-2-3-6.
 Audio Industries, Inc., Michigan City, Ind. 3.
 Audio-Master Corp., 17 E. 45th St., New York
 N. Y. 3-8.
 Automatic Radio Mfg. Co., Inc., 122 Brookline
 Boston, Mass. 1-2-3-5-6-16.
 Avco Mfg. Corp., 1329 Arlington St., Cincinnati
 Ohio. 1-3-5-6-12-16-18.
 Bogen Co., Inc., David, 29 Ninth Ave., New York
 N. Y. 12.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W.
 St., New York 1, N. Y. 23. ADV. PG. 201.
 Calbest Engineering & Electronics Co., 828 Hig
 Ave., Hollywood 38, Calif. 1-2-3-4-6-8-9-10-1
 15-16-18-20-21-22-24.
 Capehart-Farnsworth Corp., 3700 E. Pontiac, Fort V
 1, Ind. 1-2-5-6-8-16-18-22.
 Conrac, Inc., Glendora, Calif. 16-24.
DUBROW DEVELOPMENT CO., 235 Penn St., Bur
 ton, N. J. 1-3-6-15. ADV. PG. 536.
 DuMont Laboratories, Inc., Allen B., Television
 ceiver Div., 35 Market St., East Paterson, N
 16-18.
 Eckstein Radio & Television Co., 3400 E. 42nd St.,
 neapolis 6, Minn. 1-6.
 Electron Enterprises, 6917-19-21 Stanley Ave., Bew
 Ill. 5-6.
 Elex Co., 150-50 Melbourne Ave., Flushing 67, N
 3-5-6.
 Emerson Radio & Phonograph Corp., 111 Eighth
 New York, N. Y. 1-2-3-5-6-7-16-18.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York
 N. Y. 8-9-10.
 Esquire Radio Corp., 26 Court St., Brooklyn 2,
 1-2-3-4-5-6-7-12.
 Fada Radio & Electric Co., Inc., 525 Main St., B
 ville, N. J. 1-2-3-4-5-6-8-12-16-18-20-22.
 Feiler Engineering Co., 8026 Monticello Ave., Ski
 Ill. 23.
 Fisher Radio Corp., 21-21 Forty Fourth Drive,
 Island City 1, N. Y. 8-13-20-24.
 Flush Wall Radio Co., 1012 Cleveland St., Clearw
 Fla. 24.
 Freed Electronics & Controls Corp., 200 Hudson
 New York 13, N. Y. 8-11-12.
GAROD RADIO CORP., 79 Washington St., Brookly
 N. Y. 1-3-5-6-7-8-16-18-20-21-22-23. ADV.
 371.
 General Electric Co., Radio & Television Dept.,
 tronics Park, Syracuse, N. Y. 1-5-6-12-16-18.
 Gotham Television Corp., 123 W. 64th St., New
 23, N. Y. 2-3-4-16-17-18.
 Hallcrafters Co., 4401 W. Fifth Ave., Chicago 24,
 1-2-3-4-5-6-8-16-18.
HEATH CO., Benton Harbor, Mich. 6. ADV. PG. 72.
 Hoffman Radio Corp., 3716 S. Hill St., Los Angele
 Calif. 2-3-8-16-18-20-22.
 International Research Associates, 2221 Warwick
 Santa Monica, Calif. 16-24.
 Kaye-Halbert Corp., 3555 Hayden Ave., Culver
 Calif. 16-18-22.
 Laurehk Radio Mfg. Co., 3931 Monroe Ave., We
 Mich. 7.
 Lesa, Via Bergamo 21, Milan, Italy. 3.
 M P Engineering Co., Fairfield 3, Conn. 8-16-18-22
 24.
MAGNAVOX CO., Component Sales, Industrial & De
 Products, Fort Wayne 4, Ind. 2-3-6-8-12-13. A
 PG. 181.
MAGNECORP, INC., 225 W. Ohio St., Chicago 10,
 10-23. ADV. PG. 220.
 Mattison Television & Radio Corp., 10 W. 181st
 New York 53, N. Y. 16-18-19-20-21-22-24.
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Car
 Ill. 24.
 Midwest Radio & Television Corp., 909 Broadway,
 cinnati 2, Ohio. 8-10-16-18.
 Molded Insulation Co., 335 E. Price St., Philadel
 44, Pa. 6.
 Morrow Radio Mfg. Co., 2794 Market St., Sa
 Ore. 6.
 Motorola, Inc., Consumer Div., 4545 Augusta B
 Chicago 51, Ill. 1-2-4-5-6-8-10-16-18-20-22.
NATIONAL CO., INC., 61 Sherman St., Malden
 Mass. 12. ADV. PG. 395.
 National Electronics Mfg. Co., 314 W. 58th St.,
 Angeles, Calif. 16-18-20-22.
 Newcomb Audio Products Co., 6824 Lexington A
 Hollywood 38, Calif. 6-12.
 Olympic Radio & Television Co., 34-01 38th Ave., L
 Island City, N. Y. 5-6-8-16-18-20-22.

ATHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. 1-2-3-5-6-7-24. ADV. PG. 628.
 cific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif. 16-18-19-20-21-22.
 ckard-Bell Co., 12333 W. Olympic Blvd., Los Angeles 64, Calif. 1-3-6-16-18-22.
 illard Products Inc., 100 Sixth Ave., New York 13, N. Y. 2.
 lico Corp., C & Tioga Sts., Philadelphia 34, Pa. 1-2-3-5-6-8-12-16-18-22.
 ilmre Mfg. Co., Inc., 113 University Place, New York 3, N. Y. 6.
 ot Radio Corp., 37-06 36th St., Long Island City, N. Y. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24.
 ASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. 5-7. ADV. PG. 529.
 escott Television Co., 7350 Beverly Blvd., Los Angeles 36, Calif. 16-19-20-22.
 e Ltd., Cambridge, England 2-3-5-6-16-18.
 dio Corp. of America, Home Instrument Div., Camden, N. J. 1-2-3-5-6-12-16-18-20.
 dio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y. 15.
 ytheon Television & Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill. 1-5-6-12-16-18-20-22.
 tline Radio Corp., 2100 Dempster St., Evanston, Ill. 5-6-7-8-9-10-12-15-17-18-20-21-22.
 chell Carlson, Inc., 330 Fifth Ave., New Brighton, Minn. 16-18.
 eration Television Corp., 200 River St., Red Bank, N. J. 16-18-24.
 eak-O-Phone Recording & Equip. Co., 23 W. 60th St., New York, N. Y. 23.
 andard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England. 2-3-4-23.
 ewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago 14, Ill. 1-5-6-16-18.
 omburg-Carlson Co., Rochester 3, N. Y. 8-12-16-18-20-22.
 ania Electric Products, Inc., Radio & Television Div., 254 Rano St., Buffalo 7, N. Y. 1-2-5-6-8-16-18-19-20-22.
 equip Radio Co., 2559 W. 21st St., Chicago 8, Ill. 1-5-6-16-18-20.
 rdarson-Meissner Mfg. Divs., Mt. Carmel, Ill. 5-6-14-15.
 AD TELEVISION CORP., 1001 First Ave., Asbury Park, N. J. 1-16. ADV. PG. 663.
 nsvision, Inc., 460 North Ave., New Rochelle, N. Y. 6-18-19-20-21-22-24.
 v-Ler Radio Corp., 571 W. Jackson Blvd., Chicago, Ill. 3-5-6-16-18-22.
 one Electronics, Inc., 812-14 N. Highland Ave., Los Angeles 38, Calif. 6.
 aire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y. 16-18-19-20-22.
 uester-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill. 1.
 ngarten Electronic Labs., Inc., 7556 Milrose Ave., Los Angeles 46, Calif. 8-24.
 ls-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, Ill. 8-16.
 ock-Gay Corp., Charlotte, Mich. 1-3-5-6-7-8-16-18-20-21-22-23.
 litzer Co., Rudolph, North Tonawanda, N. Y. 2.
 th Radio Corp., 6001 Dickens Ave., Chicago 39, Ill. 5-6-8-12-14-15-16-18-20-22.
RECEIVING EQUIPMENT—vht Omni-Range
 onautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
CRAFT RADIO CORP., Boonton, N. J. ADV. PG. 583.
 n Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 dix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
LINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 48, 149.
 & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 , Ind., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 onal Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 nsvision, Inc., 460 North Ave., New Rochelle, N. Y.
RECORDERS—Blood Pressure, Electronic
 ridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
GRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
 kin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 away Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 on Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
BORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.
UNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 543.
RECORDERS—Density
RECORDERS—Specific Gravity
RECORDERS—Depth
 outh Marine Div., National-Simplex Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 ol Co., The, Waterbury 20, Conn.

Edo Corp., College Point, N. Y.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
RECORDERS—Electronic Rotary Stylus
 Bludworth Marine Div., National-Simplex Bludworth, Inc., 92 Gold St., New York 38, N. Y.
MOSELEY, FRANCIS L., 1325 N. Fair Oaks, Pasadena 3, Calif. ADV. PG. 320.
RECORDERS—Electronic Self-Balancing Recorders and Indicators
 Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Barnes Development Co., 213 W. Baltimore Pike, Lansdowne 1, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 California Computer Products, 3927 W. Jefferson Blvd., Los Angeles 16, Calif.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
ELECTRONIC ASSOCIATES, INC., Long Branch, N. J. ADV. PG. 434, 435.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., APPARATUS SALES DIV., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
LIBRASCOPE, INC., 1607 Flower St., Glendale 1, Calif. ADV. PG. 531.
MID-CENTURY INSTRUMATIC CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
 Richardson Scale Co., Clifton, N. J.
 Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
RECORDERS—Facsimile
 Acme Telectronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
ALDEN ELECTRONIC & IMPULSE RECORDING EQUIPMENT CO., Box 125, Westboro, Mass. ADV. PG. 441.
 Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
ALFAX PAPER & ENGINEERING CO., Washington St., P. O. Box 125, Westboro, Mass. ADV. PG. 441.
CARDWELL ELECTRONICS PRODUCTIONS CORP., Allen D., 97 Whiting St., Plainville, Conn. ADV. PG. 394.
 Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
 L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 662.
RECORDERS—Film
 Acme Telectronix Div. of NEA Service, Inc., W. Third & Lakeside, Cleveland 13, Ohio.
 Ampro Corporation, 2835 N. Western Ave., Chicago 18, Ill.
 Berndt-Bach, Inc., Auricon Div., 6914 Romaine St., Hollywood 38, Calif.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa 3, Okla.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Daystrom Electric Corp., 807 Main St., Poughkeepsie, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 International Research Associates, 2221 Warwick Ave., Santa Monica Calif.
 Laboratoire Industriel de Physique Appliquees, 67 Rue M. A.-Colombier, Bagnolet (Seine) France.
 Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Maurer Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
 Westrex Corp., 111 Eighth Ave., New York 11, N. Y.
RECORDERS—Film Thickness
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 Instrument Development Labs., Inc., 163 Highland Ave., Needham Heights, Mass.
RECORDERS—Fluid Conductivity, Electronic
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Foxboro Co., The, Foxboro, Mass.
 Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
RECORDERS—Fluid Flow, Electronic
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BERKELEY DIV., BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Bristol Co., The, Waterbury 20, Conn.
 Fischer & Porter Co., 476 Warmminster Rd., Hatboro, Pa.
 Foxboro Co., The, Foxboro, Mass.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
RECORDERS—Frequency
See INSTRUMENTS—Electrical Measuring
RECORDERS—Humidity, Electronic
 Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
LISTON-BECKER INSTRUMENT CO., INC., 649 Hope St., Springdale, Stamford, Conn. ADV. PG. 674.
 Serdex, Inc., 91 Cambridge St., Boston, Mass.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
RECORDERS—Liquid Level, Electronic
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
 Bristol Co., The, Waterbury 20, Conn.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
 Fischer & Porter Co., 476 Warmminster Rd., Hatboro, Pa.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.
RECORDERS—Materials Thickness, Electronic
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Foxboro Co., The, Foxboro, Mass.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
RECORDERS—Mechanical
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Anelix Corp., 150 Causeway St., Boston 14, Mass.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Entwistle Co., James L., 1475 Elmwood Ave., Providence 7, R. I.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Gorrell & Gorrell, Haworth, N. J.
 L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
LIBRASCOPE, INC., 1607 Flower St., Glendale, Calif. ADV. PG. 531.

Manning, Maxwell & Moore, Inc., Stratford, Conn.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

RECORDERS—Moisture, Electronic

Bristol Co., The, Waterbury 20, Conn.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
Foxboro Co., The, Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4 Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

RECORDERS—Oxygen

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.

RECORDERS—pH

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
Bristol Co., The, Waterbury 20, Conn.
Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
Foxboro Co., The, Foxboro, Mass.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.

RECORDERS—Potentiometer

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bristol Co., The, Waterbury 20, Conn.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
Foxboro Co., The, Foxboro, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
Richardson Scale Co., Clifton, N. J.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

RECORDERS—Power Level

See INSTRUMENTS—Electrical Measuring

RECORDERS—Pressure, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
BERKELEY DIV., BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
Bristol Co., The, Waterbury 20, Conn.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
Fischer & Porter Co., 476 Warminster Road, Hatboro, Pa. Foxboro Co., The, Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.

Photon Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
Richardson Scale Co., Clifton, N. J.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

RECORDERS—Smoke and Combustion, Electronic

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.
Bristol Co., The, Waterbury 20, Conn.
Combustion Control Corp., 718 Beacon St., Boston 15, Mass.
De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.

RECORDERS—Sound Level

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
Rek-O-Kut Co., 38-01 Queens Blvd., Long Island City 1, N. Y.
SOUND APPARATUS CO., Stirling, N. J. ADV. PG. 624.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

RECORDERS—Sound and Phonograph

Audak Co., 500 Fifth Ave., New York, N. Y.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
M P Engineering Co., Fairfield 3, Conn.
Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
Pentron Corp., The, 221 E. Cullerton St., Chicago 16, Ill.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 139.
Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
Soundscriber Corp., 146 Munson St., New Haven 4, Conn.
Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.
Symphony Radio & Television Co., 925 South Western Ave., Los Angeles 6, Calif.

RECORDERS—Specific Gravity, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bristol Co., The, Waterbury 20, Conn.
Fischer & Porter Co., 476 Warminster Rd., Hatboro, Pa. Foxboro Co., The, Foxboro, Mass.

RECORDERS—Strain

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
Bristol Co., The, Waterbury 20, Conn.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa 3, Okla.
Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.
Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
HEILAND RESEARCH CORP., 130 E. 5th Ave., Denver 9, Colo. ADV. PG. 95.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
Photon Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.
Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.
Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

RECORDERS—Tape

- 1. Cellophane Tape
- 2. Magnetic Tape

AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. 2. ADV. PG. 98, 99.
Amplifier Corp. of America, 396 Broadway, New York 1, N. Y. 2.
Ampro Corp., 2835 North Western Ave., Chicago 18, Ill. 2.
Audio-Master Corp., 17 E. 45th St., New York 17, N. Y. 2.
Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y. 2.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio. 2.
Berlant Associates, 4917 W. Jefferson Blvd., Los Angeles 16, Calif. 2.
Broadcast Equipment Specialties Corp., 135-01 Linden Blvd., Richmond Hill 19, N. Y. 2.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. 2. ADV. PG. 406, 407.
Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y. 2.
Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif. 2.
Cook Electric Co., 2700 Southport Ave., Chicago 11, Ill. 2.
Crestwood Recorder Div., Daystrom Electric Corp., N. LaSalle, Chicago 1, Ill. 2.
DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. 2. ADV. PG. 658.
Daystrom Electric Corp., 807 Main St., Poughkeepsie, N. Y. 2.
Dictaphone Corp., 420 Lexington Ave., New York 17, N. Y.
DUBROW DEVELOPMENT CO., 235 Penn St., Butte 1, N. J. 1-2. ADV. PG. 536.
Dukane Corp., 135th & Indiana Sts., St. Charles, Ill. Electro, Inc., Delaware, Ohio. 2.
EICOR, INC., 1501 W. Congress St., Chicago 7, Ill. ADV. PG. 636.
Fairchild Recording Equipment Co., 154th St. & 10th Ave., Whitestone, N. Y. 2.
FEDERAL MFG. & ENGINEERING CORP., 211 Stearns St., Brooklyn 5, N. Y. 1-2. ADV. PG. 642.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill. 2.
Fidelitone, Inc., 1616 Devon Ave., Chicago 26, Ill.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. 2. ADV. PG. 371.
General Industries Co., Taylor & Olive Sts., Elkhart, Ohio. 2.
International Radio & Electronics Corp., Elkhart, Ind.
Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J. 2.
Magnasyn Manufacturing Co., Ltd., 5517 Satsuma P. O. Box 707, North Hollywood, Calif. 2.
MAGNECORP, INC., 225 W. Ohio St., Chicago 10, Ill. 2. ADV. PG. 220.
Maurer, Inc., J. A., 37-01 31st St., Long Island City 1, N. Y. 2.
Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y. 1.
Orradio Industries, Inc., T-120 Marvyn Rd., Opelika, Ala. 2.
Peirce Wire Recorder Corp., 5900 Northwest Highway, Chicago 31, Ill. 2.
Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
Permacel Tape Corp., U. S. Highway 1, New Brunswick, N. J. 1.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. 2. ADV. PG. 403.
Premier Electronic Laboratories, 382 Lafayette St., New York 3, N. Y. 2.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. 2. ADV. PG. 92.
PRESTO RECORDING CORP., Paramus, N. J. 2. ADV. PG. 139.
Product Associates, Inc., 318 W. Olympic Blvd., Los Angeles, Calif. 2.
RADIO CORP. OF AMERICA, Engineering Products Dept., Camden, N. J. 2. ADV. PG. Inside Back & Covers.
Rangertone, Inc., 73 Winthrop St., Newark 4, N. J.
Recoton Corp., 147 W. 22nd St., New York 11, N. Y.
Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y. 2.
Soundscriber Corp., 146 Munson St., New Haven 4, Conn. 2.
Southwestern Industrial Electronics Co., 2831 Post Rd., P. O. Box 13058, Houston 19, Texas. 2.
Speak-O-Phone Recording & Equipment Co., 23 W. 11th St., New York, N. Y. 2.
Stromberg-Carlson Co., Rochester 3, N. Y. 2.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J. 2.
TELETRON INDUSTRIES CORP., 35-18 37th St., Island City 1, N. Y. 2. ADV. PG. 538.
V-M Corp., Benton Harbor, Mich. 2.
Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill. 2.
Webster Electric Co., 1900 Clark St., Racine, Wis.
Wilcox-Gay Corp., Charlotte, Mich. 1-2.

RECORDERS—Telemetering

See INSTRUMENTS—Electrical Measuring

RECORDERS—Telephone Recording Equipment

Edison, Inc., Thomas A., Ediphone Div., 51 Lakeside Ave., West Orange, N. J.

Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
MAGNECORD, INC., 225 W. Ohio St., Chicago 10, Ill. ADV. PG. 220.

Reproducers Co., Inc., 812 Broadway, New York 3, N. Y.

Reice Wire Recorder Corp., 5900 Northwest Highway, Chicago 31, Ill.

Reptron Corp., 221 E. Cullerton St., Chicago 16, Ill.

Reflux Corp., 4900 W. Grande Ave., Chicago 39, Ill.

Repeak-O-Phone Recording & Equipment Co., 23 W. 60th St., New York, N. Y.

Rancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.

Romberg-Carlson Co., Rochester 3, N. Y.

RECORDERS—Temperature, Electronic

Reiley Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.

Reistol Co., The, Waterbury 20, Conn.

REGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Reybro Co., The, Foxboro, Mass.

Reyez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

Reymore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.

R & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.

Reeds & Northrup Co., 414 N. 16th St., Philadelphia 30, Pa.

Reaming, Maxwell & Moore, Inc., Stratford, Conn.

INNAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windmill Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.

Reid, Inc., 91 Cambridge St., Boston, Mass.

Reiter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

REYTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

RECORDERS—Timing

REYDEN ELECTRONIC & IMPULSE RECORDING EQUIPMENT CO., Box 125, Westboro, Mass. ADV. PG. 441.

Reistol Co., The, Waterbury 20, Conn.

Rey Multiplier Corp., Electronics Div., San Gabriel, Calif.

REYMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.

Reyline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.

Reyner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, Ill.

Reyrell & Gorrell, Haworth, N. J.

Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.

CUTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Reiter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

Romberg-Carlson Co., Rochester 3, N. Y.

RECORDERS—Torque, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Reistol Co., The, Waterbury 20, Conn.

Reymore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.

Reyon Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.

RECORDERS—Vacuum

Reiley Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.

Reistol Co., The, Waterbury 20, Conn.

Reyline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.

Reybro Co., The, Foxboro, Mass.

Reyning, Maxwell & Moore, Inc., Stratford, Conn.

Reos Machine Co., F. J., 5850 Tabor Rd., Olney 2, Pa., Philadelphia 20, Pa.

Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.

REYTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

Rey Slow Co., Inc., 9 Liberty St., Newark 5, N. J.

RECORDERS—Weight, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Reistol Co., The, Waterbury 20, Conn.

Reybro Co., The, Foxboro, Mass.

Reykin Electronics, Inc., 415 W. Pike St., Philadelphia 10, Pa.

Reymore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.

Reyon Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.

Richardson Scale Co., Clifton, N. J.

Reiter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

Reyer & Cooper Co., 75 Front St., Brooklyn, N. Y.

RECORDERS—Wire

Rey Corp., 1117 N. Franklin St., Chicago 10, Ill.

Reytron Enterprises, 6917-19-21 Stanley Ave., Berwyn, Pa.

Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.

ELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.

Reyter-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.

RECORDING HEADS

See HEADS—Recording

RECORDING TAPE

See TAPE—Recording

RECORDING WIRE

See WIRE—Recording

RECORDS—Phonograph

Audio-Master Corp., 17 E. 45th St., New York 17, N. Y.

Cook Laboratories, 114 Manhattan St., Stamford, Conn.

Decca Records, Inc., 50 West 57th St., New York 19, N. Y.

Radio Corp. of America, Record Dept., New York, N. Y.

RECTIFIERS

1. Germanium Diode
2. Germanium Area Type
3. Copper Oxide
4. Copper Sulphide
5. Selenium
6. Tube

Aerolux Light Corp., 653 Eleventh Ave., New York 36, N. Y. 6.

Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y. 3-5.

Barry Electronics Corp., 136 Liberty St., New York 6, N. Y. 5.

BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. 5. ADV. PG. 242.

BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. 5. ADV. PG. 323.

BRADLEY LABS, INC., 170 G Columbus Ave., New Haven 11, Conn. 3-5. ADV. PG. 218.

CHATHAM ELECTRONICS CORP., Livingston, N. J. 6. ADV. PG. 132, 133.

Clark Electronic Corp., Box 165, Palm Springs, Calif. 5-6.

CLIFTON PRECISION PRODUCTS CO., INC., Broadway at Marple Ave., Clifton Heights, Pa. 6. ADV. PG. 394.

Conant Laboratories, 6500 O St., Lincoln 5, Neb. 3-5.

Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. 1-5-6.

Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo. 5.

EITEL-MCCULLOUGH, INC., San Bruno, Calif. 6. ADV. PG. 270, 271.

Electrical Facilities Inc., 4239 Holden St., Oakland 8, Calif. 5.

ELECTRONIC DEVICES, INC., PRECISION RECTIFIER DIV., 429 12th St., Brooklyn, N. Y. 5. ADV. PG. 651.

Fansteel Metallurgical Corp., 2220 Sheridan Rd., North Chicago, Ill. 5.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. 1-2-5. ADV. PG. 182-187.

FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. 6. ADV. PG. 670.

Gates Electric Co., 65 W. Broadway, New York, N. Y. 5.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-2-3-5-6. ADV. PG. 1-20.

General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y. 1-2.

GENERAL ELECTRIC CO., TUBE DEPT., 1 River Rd., Schenectady 5, N. Y. 6. ADV. PG. 1-20.

INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave., El Segundo, Calif. 1-2-5. ADV. PG. 101.

INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. 1-5. ADV. PG. 233-236.

Kemtron Electron Products, Inc., 5 Prince Place, Newbury Port, Mass. 1-2.

KOTRON RECTIFIER CORP., 175 Murray St., Newark, N. J. 5. ADV. PG. 490.

Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif. 5-6.

Lewis & Kaufman, Ltd., P. O. Box 337, Los Gatos, Calif. 6.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 4-5.

MODEL RECTIFIER CORP., 557 Rogers Ave., Brooklyn 25, N. Y. 5. ADV. PG. 424.

North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y. 6.

OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. 5. ADV. PG. 341.

Pioneer Electronics Corp., Santa Monica, Calif. 6.

Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J. 5.

PADIO CORP. OF AMERICA, TUBE DEPT., Harrison, N. J. 6. ADV. PG. Inside Back & Back Covers.

PADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. 1-2-5. ADV. PG. 88, 89.

RAPID ELECTRIC CO., 2881 Middletown Rd., New York 61, N. Y. 5. ADV. PG. 641.

Ravtheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass. 1-2-6.

Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif. 5-6.

SANFORD MILLER CO., 691 Bedford Ave., Brooklyn 6, N. Y. 5. ADV. PG. 162.

Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio. 3-5.

SHELDON ELECTRIC CO., DIV. OF ALLIED ELECTRIC PRODUCTS, INC., 76 Coit St., Irvington 11, N. J. 6. ADV. PG. 125.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 1-5-6.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-5-6. ADV. PG. 699-706.

Syntron Corp., 243 Lexington, Homer City, Pa. 5.

Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y. 5-6.

Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass. 1-2.

Transitron Electronic Corp., 403-407 Main St., Melrose 76, Mass. 1.

Union Switch & Signal Div. of Westinghouse Air Brake Co., General Apparatus Sales, Pittsburgh 18, Pa. 3-5.

VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. 5. ADV. PG. 38.

VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. 6. ADV. PG. 81.

Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich. 6.

Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y. 6.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. 1-3-5-6. ADV. PG. 113-124.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass. 1.

RECTIFIERS—Metallic, Power Supplies

American Rectifier Corp., 95 Lafayette St., New York 13, N. Y.

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. ADV. PG. 198.

Barry Electronics Corp., 136 Liberty St., New York 6, N. Y.

Bart-Messing Corp., 227 Main St., Belleville 9, N. J.

Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.

Bludworth Marine Div., National-Simplex Bludworth, Inc., 92 Gold St., New York 38, N. Y.

BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.

Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.

BRADLEY LABS, INC., 170 G Columbus Ave., New Haven 11, Conn. ADV. PG. 218.

Clark Electronic Corp., Box 165, Palm Springs, Calif.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo.

Dressen-Barnes Corp., 250 N. Vinado Ave., Pasadena 8, Calif.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.

ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 554.

ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.

EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490.

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

Gates Electric Co., 65 W. Broadway, New York, N. Y.

GENERAL ELECTRIC CO., APPARATUS SALES DIV., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GOOD-ALL ELECTRIC MFG. CO., 112 W. First St., Ogallala, Neb. ADV. PG. 160, 161.

Hall, Inc., F. Sumner, Amityville, N. Y.

INDUSTRIAL RECTIFIER CO., 323 Canal St., New York, N. Y. ADV. PG. 661.

INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. ADV. PG. 628.

INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave., El Segundo, Calif. ADV. PG. 101.

Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.

LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. ADV. PG. 259.

Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.

McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.

MAGNAVOX CO., COMPONENT SALES, INDUSTRIAL & DEFENSE PRODUCTS, Fort Wayne 4, Ind. ADV. PG. 181.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

MODEL RECTIFIER CORP., 557 Rogers Ave., Brooklyn 25, N. Y. ADV. PG. 424.

OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. ADV. PG. 341.

PERKIN ENGINEERING CORP., 345 Kansas St., El Segundo, Calif. ADV. PG. 561.

PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.

POWER DESIGNS, INC., 119-22 Atlantic Ave., Richmond Hill 19, N. Y. ADV. PG. 517.

Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich.

Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.

RAPID ELECTRIC CO., 2881 Middletown Rd., New York 61, N. Y. ADV. PG. 641.

Richardson-Allen Corp., 39-15 Main St., Flushing, N. Y.

SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.

SANFORD MILLER CO., 691 Bedford Ave., Brooklyn 6, N. Y. ADV. PG. 162.

Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio.
 Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y.
 Ther Electric & Machine Works, 17 S. Jefferson St., Chicago, Ill.
 Union Switch & Signal Div. of Westinghouse Air Brake Co., General Apparatus Sales, Pittsburgh 18, Pa.
 Universal Electronics Co., 2012 S. Sepulveda Blvd., Los Angeles 25, Calif.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

RECTIFIERS—Metallic Stack

Barry Electronics Corp., 136 Liberty St., New York 6, N. Y.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
BRADLEY LABS., INC., 170 G, Columbus Ave., New Haven 11, Conn. ADV. PG. 218.
 Clark Electronic Corp., Box 165, Palm Springs, Calif.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Gates Electric Co., 65 W. Broadway, New York, N. Y.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
INTERNATIONAL RECTIFIER CORP., 1521 E. Grand Ave., El Segundo, Calif. ADV. PG. 101.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
KOTRON RECTIFIER CORP., 175 Murray St., Newark, N. J. ADV. PG. 490.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
 McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
MODEL RECTIFIER CORP., 557 Rogers Ave., Brooklyn 25, N. Y. ADV. PG. 424.
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 88, 89.
RAPID ELECTRIC CO., 2881 Middletown Rd., New York 61, N. Y. ADV. PG. 641.
SANFORD MILLER CO., 691 Bedford Ave., Brooklyn 6, N. Y. ADV. PG. 162.
 Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio.
 Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y.
 Union Switch & Signal Div. of Westinghouse Air Brake Co., General Apparatus Sales, Pittsburgh 18, Pa.
VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

RECTIFIERS—Tube Rectifying Units

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
 Clark Electronic Corp., Box 165, Palm Springs, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hanover Developments, 401 E. 74th St., New York 21, N. Y.
LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. ADV. PG. 259.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
 McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
 Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich.
 Richardson-Allen Corp., 39-15 Main St., Flushing, N. Y.
 Servo-Tek Products Co., Inc., 1086 Goffie Rd., Hawthorne, N. J.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 Ther Electric & Machine Works, 17 S. Jefferson St., Chicago, Ill.
 Universal Electronics Co., 2012 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 Weltron Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

REELS—Tape Recording & Telemetering

AMERICAN MOLDED PRODUCTS CO., 1644 N. Honore St., Chicago 22, Ill. ADV. PG. 638.
 Hartland Plastics, Inc., Hartland, Wis.

REGULATORS—Current

AMPERITE CO., INC., 561 Broadway, New York 12, N. Y. ADV. PG. 92.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 146.
INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. ADV. PG. 628.
 Jobbins Electronic Enterprises, Menlo Park, Calif.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KEPCO LABS., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 23-25.
LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. ADV. PG. 259.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
 Mercury Electronic Co., Box 450, Red Bank, N. J.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
POWER DESIGNS, INC., 119-22 Atlantic Ave., Richmond Hill 19, N. Y. ADV. PG. 517.
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
RAPID ELECTRIC CO., 2881 Middletown Rd., New York 61, N. Y. ADV. PG. 641.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
 Richardson-Allen Corp., 39-15 Main St., Flushing, N. Y.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 50, 51.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 365, 366.

REGULATORS—Frequency

AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 36, N. Y. ADV. PG. 322.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 146.
INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. ADV. PG. 628.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
 Mercury Electronic Co., Box 450, Red Bank, N. J.
 Norrman Laboratories, Ernst, Williams Bay, Wis.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
 Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
SORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 50, 51.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 White-Rodgers Electric Co., Armament Dept., 1209 Ave., St. Louis 6, Mo.

REGULATORS—Voltage Regulators and Stabilizers

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
 American Machine & Foundry Co., Electronics Div., 1 Commonwealth Ave., Boston 15, Mass.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
AVION INSTRUMENT CORP., DIV. OF AMERICAN & FOUNDRY CO., 295 State Highway #17, Paramus 2, N. J. ADV. PG. 490.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
BRISTOL ENGINEERING CORP., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa. ADV. PG. 592.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Burlington Instrument Co., Burlington, Iowa.
 California Magnetic Control Corp., 7245 Atoll North Hollywood, Calif.
 Cinema-Television Ltd., Worsley Bridge Rd., London 26, England.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
 Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
COMPUTER CO. OF AMERICA, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.
ECLIPSE-PIONEER DIV., BENDIX AVIATION CO., Teterboro, N. J. ADV. PG. 105-108.
 Electric Machinery Mfg. Co., 1331 N. E. Tyler St., Minneapolis 13, Minn.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. ADV. PG. 473.
ELECTRONIC MEASUREMENTS CO., Lewis St. & Maple Ave., Eatontown, N. J. ADV. PG. 431.
 El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Fidelity Instrument Corp., 1320 W. Market St., York, Pa.
FURST ELECTRONICS, 3324-A W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 670.
 Gates Radio Co., Quincy, Ill.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL MAGNETICS, INC., 135 Bloomfield Ave., Bloomfield, N. J. ADV. PG. 146.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Hanover Developments, 401 E. 74th St., New York 21, N. Y.
INET DIV. OF LEACH CORP., 4441 Santa Fe Ave., Los Angeles 58, Calif. ADV. PG. 628.
 Jack & Heintz, Inc., Cleveland 1, Ohio.
 Jersey City Technical Laboratory, 880 Bergen Jersey City 6, N. J.
 Jobbins Electronic Enterprises, Menlo Park, Calif.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KEPCO LABS., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 23-25.
LAMBDA ELECTRONICS CORP., 103-02 Northern Blvd., Corona, N. Y. ADV. PG. 259.
 Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
MAGNETICS RESEARCH CO., 142 King St., Chappaqua, N. Y. ADV. PG. 651.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver New York 4, N. Y.
 Meissner Mfg. Div., Maguire Industries, Inc., Carmel, Ill.
 Mercury Electronic Co., Box 450, Red Bank, N. J.
MID-CENTURY INSTRUMENT CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
 Moulis Specialties Co., 1007 W. Washington St., Bloomington, Ill.

ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
POWER DESIGNS, INC., 119-22 Atlantic Ave., Richmond Hill 19, N. Y. ADV. PG. 517.
Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich.
Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
RAPID ELECTRIC CO., 2881 Middletown Rd., New York 61, N. Y. ADV. PG. 641.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
Richardson-Allen Corp., 39-15 Main St., Flushing, N. Y.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, Ill. ADV. PG. 316.
STORENSEN & CO., INC., 375 Fairfield Ave., Stamford, Conn. ADV. PG. 50, 51.
Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SUPERIOR ELECTRIC CO., THE, 4000 Mae Ave., Bristol, Conn. ADV. PG. 336, 337.
ELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
Thorndarson-Meissner Mfg. Division, Mt. Carmel, Ill.
Transformer Engineers, 161 E. California, Pasadena 1, Calif.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
UNIVERSAL ELECTRONICS CO., 2012 S. Sepulveda Blvd., Los Angeles 25, Calif. ADV. PG. 563.
Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

RELAYS—Capacitance Operated
See CONTROLS—Capacitance Operated

RELAYS

1. Coaxial
2. Cross-Bar
3. d'Arsonval
4. Differential
5. Electronic, Resistance Activated
6. Frequency Selective
7. High Voltage
8. Impulse
9. Keying and Break-in
10. Latching
11. Mercury
12. Overload
13. Overvoltage & Undervoltage
14. Polarized
15. Power
16. Rotary
17. Sensitive
18. Sequence
19. Stepping
20. Sub-Miniature
21. Telephone
22. Time Delay
23. Vacuum Contact
24. Vibrating Reed Type

Note: (h) indicates hermetically sealed types.

A Division of Elastic Stop Nut Corp. of America, 1029 Newark Ave., Elizabeth 3, N. J. 22.
RAMS & WESTLAKE CO., THE, Michigan St., Elkhart, Ind. 11-12-13-15-17-22. ADV. PG. 213-216 (h)
ADVANCE ELECTRIC & RELAY CO., 2435-L N. Naoml St., Burbank, Calif. 1-7-9-10-12-15-17-20-21-22. ADV. PG. 308.
craft Transformer Corp., West & Willow Aves., Long Branch, N. J. 7-16.
RPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-4-9-10-12-14-15-17. ADV. PG. 65. (h)
ten-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis. 10-12-22.
LIED CONTROL CO., INC., 2 East End Ave., New York 21, N. Y. 1-4-7-9-10-12-13-14-15-16-17-20-21-22. ADV. PG. 210, 211. (h)
erican Instrument Co., 8030 Georgia Ave., Silver Spring, Md. 15-17-22.
erican Relay & Controls Inc., 3621 Howard St., Skokie, Ill. 7-10-12-13-15-17-21-22. (h)
ERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. 24. ADV. PG. 198.
PERITE CO., INC., 561 Broadway, New York 12, N. Y. 22. ADV. PG. 92.
ow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn. 10-12-15.
sembly Products, Inc., Chagrin Falls 6, Ohio. 3-12-13-14-17. (h)
OCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. 20-22. ADV. PG. 669.

Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill. 20. Automatic Electric Mfg. Co., 62 State St., Mankato, Minn. 10-15-17-20-21-22. (h)
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill. 4-7-8-9-10-11-14-15-16-17-18-19-20-21-22-24. (h)
AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. 4-6-8-12-13-14-15-17-19-22. ADV. PG. 664.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa. 18-22.
B-T Mfg. Corp., 38 N. Second Ave., Mt. Vernon, N. Y. 22.
Babcock Radio Engineering Co., 7942 Woodley Ave., Van Nuys, Calif. 17.
Bennett Co., Inc., R. P., Frederick, Md. 1-5-7-9-15-20-21-22. (h)
Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa. 24.
Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J. 5.
BRANSON CORP., 113 Cornelia St., Boonton, N. J. 20-21-22. ADV. PG. 631.
Bright Radio Labs, Inc., 24-28 45th St., Long Island City 3, N. Y. 5-13.
Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 54, Calif. 20. (h)
C & B Manufacturing Co., 4169 Union Pacific Ave., Los Angeles 23, Calif. 13-15-21-22.
Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill. 8-9-10-11-14-15-16-19-20-21-22. (h)
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio. 6-10-12-13-14-15-22.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. 5. ADV. PG. 572.
Comar Electric Co., 3349 W. Addison, Chicago 18, Ill. 1-2-5-10-15-17-21-22. (h)
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. 6. ADV. PG. 141-144.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. 9-16-18-19-21.
Control Corp., 718 Central Ave., Minneapolis 14, Minn. 6-10-21.
Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill. 4-7-10-15-16-17-18-19-20-21-22. (h)
CRAMER CO, INC., R. W., Box 13, Centerbrook, Conn. 22. ADV. PG. 272. (h)
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis. 12-13.
Davis Electric Co., Cape Girardeau, Mo. 1-20-21. (h)
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J. 22.
Deltron, Inc., P. O. Box 192, Glenside, Pa. 5.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J. 5.
Diletron, Inc., 2661 Myrtle, Monrovia, Calif. 22. (h)
Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. 20-22.
Durakool, Inc., 1010 N. Main St., Elkhart, Ind. 11-22.
Eagle Signal Corp., Moline, Ill. 10-22.
Ebert Electronics Co., 212-26 Jamaica Ave., Queens Village 28, N. Y. 11-17.
EDISON, INC., THOMAS A., INSTRUMENT DIV., 81 Lakeside Ave., West Orange, N. J. 3-4-12-13-14-17-22. ADV. PG. 392, 393. (h)
EITEL-McCULLOUGH, INC., San Bruno, Calif. 7-23. ADV. PG. 270, 271.
Electric Design & Mfg. Corp., Burlington, Iowa. 3.
ELECTRIC REGULATOR CORP., Pearl St., Norwalk, Conn. 4-13-22. ADV. PG. 473.
Electrical Service Co., 1271 Mission St., San Francisco, Calif. 22.
Electro Craft Industries Inc., 68 Jackson Ave., Stamford, Conn. 22.
Electro-Mechanical Specialties Co., Inc., 6819 Melrose Ave., Los Angeles 38, Calif. 12-13-15-17. (h)
ELECTRO-SEAL CORP., 946 North Ave., Des Plaines, Ill. 16-18-21-22. ADV. PG. 206. (h)
ELLY ELECTRONICS CORP., P. O. Box 395, Fair Lawn, N. J. 12-13-22. ADV. PG. 661.
El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J. 5-17.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. 5. ADV. PG. 498.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. 1-2-4-8-9-17-18-19-21. ADV. PG. 182-187.
Filtors, Inc., 30 Sagamore Hill Drive, Port Washington, N. Y. 16-20. (h)
FIVE STAR CO., West Main St., Plantsville, Conn. 15-17. ADV. PG. 517.
G-V CONTROLS, INC., 12 Hollywood Plaza, East Orange, N. J. 12-13-22. ADV. PG. 469. (h)
GENERAL COMMUNICATION CO., 681 Beacon St., Boston 15, Mass. 1. ADV. PG. 542.
General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass. 17.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 4-5-7-12-13-14-15-17-20-21-22. ADV. PG. 1-20. (h)
GREIBACH INSTRUMENTS CORP., Metuchen, N. J. 3-4-17. ADV. PG. 641.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. 5-9-10-12-13-15-19-20-21-22. ADV. PG. 377. (h)
Haley Electronics Co., 57 William St., New York 5, N. Y. 5-11-13-22-23.
Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn. 4-15-17-20. (h)
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. 22. ADV. PG. 477. (h)
HAYDON MFG. CO., INC., 2400 E. Elm St., Torrington, Conn. 18-22. ADV. PG. 310, 311. (h)

Heinemann Electric Co., 97 Plum St., Trenton 2, N. J. 12-13-22. (h)
Hetherington, Inc., Sharon Hill, Pa. 10-15-18.
HI-G INC., Bradley Field, Windsor Locks, Conn. 16-20. ADV. PG. 284. (h)
Hoffman Engineering Corp., Anoka, Minn. 8-10.
Hufco Industries, 2815 W. Olive, Burbank, Calif. 20-21. (h)
Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn. 1.
Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y. 7-9-10-12-14-15-17-18-19-20-21-22. (h)
Iron Fireman, Electronics Div., 2800 S. E. Ninth Ave., Portland 2, Ore. 14-17. (h)
Jack & Heintz, Inc., Cleveland 1, Ohio. 6-18. (h)
JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. 1-7-8-9-10-12-23. ADV. PG. 268, 269.
JOHNSON CO., E. F., Waseca, Minn. 7. ADV. PG. 594, 595.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. 2-8-18-19-21. ADV. PG. 497.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. 16. ADV. PG. 253-256.
Kinetix Instrument Div., Ketay Mfg. Corp., 902 Broadway, New York 12, N. Y. 16.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. 1. ADV. PG. 199.
Kurman Electric Co., Inc., 35-18 37th St., Long Island City, N. Y. 1-2-3-4-5-6-7-8-9-10-12-13-14-15-16-17-18-19-20-21-22-23-24. (h)
LEACH RELAY DIV. OF LEACH CORP., 5915 Avalon Blvd., Los Angeles 3, Calif. 7-8-9-10-12-13-15-16-17-20-21-22. ADV. PG. 378. (h)
Lee Spring Co., Inc., 32 Main St., Brooklyn 1, N. Y. 7-9-15-16.
LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. 16-19. ADV. PG. 494. (h)
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill. 8-10-17-19-22.
Mack Electric Devices, 43 Glenside Ave., Wyncote, Pa. 11-15-17-23.
MAGNECRAFT ELECTRIC CO., 1448 W. Van Buren St., Chicago 7, Ill. 2-4-5-7-8-9-10-12-13-15-17-20-21-22-23-24. ADV. PG. 467. (h)
MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. 15. ADV. PG. 212.
Magnetic Devices, Inc., 712 East St., Frederick, Md. 4-7-10-14-15-16-17-19.
Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y. 12-13.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. 3. ADV. PG. 390.
May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif. 22.
Mercury Contacts, Inc., Box 615-E, Far Hills Station, Dayton 9, Ohio. 11. (h)
Mullenbach Electrical Mfg. Co., Electronic Div., 2300 E. 27th St., Los Angeles 58, Calif. 17.
NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. 23. ADV. PG. 585.
NEOMATIC, INC., 9010 Bellanca Ave., Los Angeles 45, Calif. 5-6-7-8-9-10-12-13-14-15-17-20-22-24. ADV. PG. 446. (h)
North Electric Mfg. Co., 501 S. Market St., Gallon, Ohio. 2-4-8-9-10-14-16-17-18-19-20-21-22.
Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill. 16.
Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash. 14-16-21-24.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. 5-22. ADV. PG. 504.
PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. 3-6-10-12-13-15-17-20-22. ADV. PG. 541.
Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa. 15-17-23.
PHILLIPS CONTROL CORP., Dept. EB 1420, Joliet, Ill. 4-5-8-9-10-15-17-18-21-22. ADV. PG. 544.
Photobell Company, 116 Nassau St., New York 38, N. Y. 5-22.
Pioneer Electronics Corp., Santa Monica, Calif. 7-23.
POLLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. 1-6-7-8-10-13-14-17-20-21-22-23-24. ADV. PG. 628. (h)
Polytron Engineering, Inc., 32 W. Biddle St., Baltimore 1, Md. 17-20. (h)
POTTER & BRUMFIELD, Princeton, Ind. 7-8-9-10-12-15-17-18-20-21. ADV. PG. 238. (h)
Price Electric Corp., Frederick, Md. 1-7-10-12-13-15-16-17-18-19-20-21-22.
R.B.M. DIVISION, ESSEX WIRE CORP., Logansport, Ind. 5-10-12-14-17-21. ADV. PG. 46. (h)
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. 16-23. ADV. PG. Inside Back & Back Covers. (h)
Radio Music Corp., 84 S. Water St., Port Chester, N. Y. 4-17. (h)
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. 13. ADV. PG. 110.
Robotron Corp., 21300A West Eight Mile Rd., P. O. Box 4885, Detroit 19, Mich. 5-22.
Scherma Mfg. Co., Inc., F. A., 424 Broome St., New York 13, N. Y. 1.
Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J. 5.
SHELDON ELECTRIC CO., DIV. OF ALLIED ELECTRIC PRODUCTS, INC., 76 Coit St., Irvington 11, N. J. 22. ADV. PG. 125. (h)
SIGMA INSTRUMENTS, INC., 180 Pearl St., South Braintree 85, Mass. 4-6-8-9-10-12-13-14-17-20-22. ADV. PG. 299.
SIGNAL ENGINEERING & MFG. CO., 273 Branchport Ave., Long Branch, N. J. 1-4-7-9-10-14-15-17-21-22. ADV. PG. 436. (h)

Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass. 22.
 Square D Co., 4041 N. Richards St., Milwaukee 1, Wis. 10-15-22.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio. 4-7-10-11-15-17. (h)
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England. 6-8-9-10-11-13-14-18-19-22-23-24.
STERLING ENGINEERING CO., INC., 54 Mill St., Laconia, N. H. 15-21. ADV. PG. 361. (h)
STEVENS-ARNOLD, INC., 22 Elkins St., South Boston 27, Mass. 6-9-14-24. ADV. PG. 486. (h)
 Stromberg-Carlson Co., Rochester 3, N. Y. 21-22.
 Struthers-Dunn, Inc., Lamb's Road, Pitman, N. J. 1-4-7-8-9-10-11-12-15-17-18-19-20-22.
 TV Products Corp., 1057 Summit Ave., Jersey City, N. J. 21.
TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. 7-22. ADV. PG. 538. (h)
TERADO CO., 1068 Raymond Ave., St. Paul 14, Minn. 17-20. ADV. PG. 418. (h)
 Thermo Instruments Co., Box 336, Belmont, Calif. 15.
 Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio. 3-17.
 Trumbull Components Dept., General Electric Co., 41 Woodford Ave., Plainville, Conn. 12-13.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 5, N. J. 12-22. ADV. PG. 385. (h)
ULANET CO., GEORGE, 413 Market St., Newark 5, N. J. 22. ADV. PG. 587.
 Union Switch & Signal Div. of Westinghouse Air Brake Co., General Apparatus Sales, Pittsburgh 18, Pa. 14-16-20. (h)
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas. 6-13.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. 20-22. ADV. PG. 81.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich. 10-12-15-17-20-21-22.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J. 6.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. 7-9-10-12-13-15-17-22. ADV. PG. 365, 366.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. 12. ADV. PG. 113-124.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. 3-15-17-21-22. ADV. PG. 530.
 Wilson & Co., G. C., 1950 Eighth Ave., Huntington, W. Va. 22. (h)
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J. 3-6-17-20-24.

RELAYS—Passive Microwave

Motorola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.

RESINS—Potting

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
 American Monomer Corp., 511 Lancaster St., Leominster, Mass.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
 Borden Co., The, Chemical Div., 350 Madison Ave., New York 17, N. Y.
BORTHIG CO., INC., GEORGE C., P. O. Box 11A, East Rutherford, N. J. ADV. PG. 534.
 Dow Corning Corp., Midland, Mich.
 Melpar, Inc., 452 Swann Ave., Alexandria, Va.
 Reichhold Chemicals, Inc., 525 N. Broadway, White Plains, N. Y.
 Shell Chemical Corp., 380 Madison Ave., New York 17, N. Y.
 Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.
ZOPHAR MILLS INC., 115 26th St., Brooklyn 32, N. Y. ADV. PG. 569.

RESISTORS

Fixed Composition

1. Low wattage
2. Temperature sensitive
3. High frequency
4. High megohm
5. High voltage
6. High wattage
7. Voltage sensitive
8. Resistor-suppressor

Variable Composition

9. Controls
10. Controls, High Resistance
11. Controls, High Voltage

Wire Wound

12. 2 Watts and under
13. 4 to 35 Watts
14. 4 to 225 Watts
15. 4 to 500 Watts
16. 500 to 1500 Watts
17. Precision low voltage
18. Precision high voltage
19. Rf non-inductive

Variable Wire Wound

20. 4 Watts and under

21. 5 to 25 Watts
22. 25 Watts and over
23. 500 Watts and over
24. Slide wire
25. Adjustable
26. Rheostat—potentiometer types

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. 12-17-18. ADV. PG. 496.
 Acme Electric Heating Co., 1217 Washington St., Boston, Mass. 14-15.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. 1-3-4-5-8-13-14-17-18-24.
 Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis. 1-4-6-9-10-11.
 Amalgamated Electronics, Electronic Rd., Clinton Corners, N. Y. 17-20-21.
 Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y. 4-5-6.
ATLAS RESISTOR CO., 24 E. Coulter St., Philadelphia 44, Pa. 14-21-22-25. ADV. PG. 470.
ATLAS SCREW & SPECIALTY CO., 450 Broome St., New York 13, N. Y. 12. ADV. PG. 312.
 Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y. 12.
 Avor Corp., 450 Broome St., New York 13, N. Y. 12-17.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y. 26.
 Birklan Corp., 200 E. Third St., Mt. Vernon, N. Y. 24-26.
 Bond Electronics Corp., 60 Springfield Ave., Springfield, N. J. 12-17-18-19.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. 20-25-26. ADV. PG. 369.
 Bradford Components, Inc., Bradford, Pa. 12-13-17-18.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 12-13-14-15-17-18-19-20-21-25-26.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. 17. ADV. PG. 201.
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. 12-17.
 Carter Parts Co., 213 Institute Place, Chicago 10, Ill. 20-21-26.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. 1-9-10-20-26. ADV. PG. 252, 342, 574, 607, 659.
CHATHAM ELECTRONICS CORP., Livingston, N. J. 4. ADV. PG. 132, 133.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. 9-10-20-25-26. ADV. PG. 48, 49.
CIMA CORP., 119 Braintree St., Allston, Mass. 14-17-19-25. ADV. PG. 379.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. 12-17. ADV. PG. 448.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio. 15-16-25-26.
CLAROSTAT MFG. CO., INC., Dover, N. H. 9-10-11-12-13-14-15-17-19-20-21-22-25-26. ADV. PG. 350, 351.
 Columbia Resistors, Inc., 23 W. Washington Ave., Pearl River, N. Y. 15-16-25.
 Computer Instrument Co., 1964 Utica Ave., Brooklyn 34, N. Y. 9.
 Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio. 8-12.
DALE PRODUCTS, INC., Box 136, Columbus, Neb. 12-15-17-18-19. ADV. PG. 134, 135.
DAVEN CO., 191 Central Ave., Newark 4, N. J. 12-17-19-22-26. ADV. PG. 243.
DE JUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. 20-21-22-24-25-26. ADV. PG. 411, 413.
 DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill. 12.
EASTERN PRECISION RESISTOR CORP., 130-11 90 Ave., Richmond Hill 18, N. Y. 12-17-19. ADV. PG. 520.
ELECTRO IMPULSE LABS., 62 White St., Red Bank, N. J. 3. ADV. PG. 408, 409.
 Electro-Measurements, Inc., 4312 S.E. Stark St., Portland-15, Ore. 24-26.
ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City 1, N. Y. 12-13-17-20-26. ADV. PG. 616.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. 1-4-5-8. ADV. PG. 313, 314.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. 12-13-17. ADV. PG. 182-187.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md. 2.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 13-14-15-16-17-18. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 12-17-19-20-21-25-26. ADV. PG. 177-180.
 Giannini & Co., Inc., G. M., Pasadena 1, Calif. 17-20-24-26.
GLENCO CORP., Metuchen, N. J. 1. ADV. PG. 640.
 Globar Division, Carborundum Co., Niagara Falls, N. Y. 1-2-6-7-8.
 Gorham Mfg. Corp., Sub. of International Resistance Co., 2240 Sepulveda Blvd., Los Angeles 64, Calif. 17.
GULTON MFG. CORP., Metuchen, N. J. 1. ADV. PG. 640.

Hardwick Hindle, Inc., 40 Hermon St., Newark 5, N. J. 13-14-15-21-22-24-25-26.
HELIPOT CORP., 916 Meridian Ave., South Pasadena, Calif. 20-25-26. ADV. PG. 335.
 Hycor Co., Inc., 11423 Vanowen St., North Hollywood, Calif. 12-17.
 I. E. Manufacturing, 321 N. Hoyle Ave., Chicago 1 III. 21-22-23.
 I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa. 12-13-14-15-17-18-19-25.
 Instrument Resistors Co., 1036 Commerce Ave., Union, N. J. 12-17-18-19.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. 1-3-4-5-6-9-10-11-12-13-14-17-18-19-25-26. ADV. PG. 233-236.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. 8. ADV. PG. 666.
 Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill. 12-13-17-18-20-21-24-25-26.
K-F DEVELOPMENT CO., 2606 Spring St., Redwood City, Calif. 13-17-18-19-24-26. ADV. PG. 60.
 Keystone Carbon Co., Inc., Saint Marys, Pa. 2.
 Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill. 12-13-14-15-19-21-22-25.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa. 12-18-19.
 Lesa, Via Bergamo 21, Milan, Italy. 26.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind. 9-12-13-14-15-20-21-24-25-26.
 Markite Corp., 155 Waverly Place, New York 17, N. Y. 4.
MEPCO, INC., 35-37 Abnett Ave., Morristown, N. J. 12-13-17-18-19. ADV. PG. 438.
MICAMOLD RADIO CORP., 1087 Flushing Ave., Brooklyn 6, N. Y. 12. ADV. PG. 352.
MICRO-CIRCUITS CO., New Buffalo, Mich. 1-2-4-6-7-8. ADV. PG. 504.
 Miller Research Laboratories, 5529 S. Fifth St., Milwaukee 7, Wis. 2-12-17-18-19.
 Milwaukee Resistor Co., 700 W. Virginia St., Milwaukee 4, Wis. 12-13-14-15-16-22-23-25.
 Model Engineering & Mfg. Inc., Huntington, Ind. 13-14-15-16-19-21-22-23-25-26.
 Muirhead & Co., Ltd., Beckenham, Kent, England. 1-17.
 Mullenbach Electrical Mfg. Co., Electronic Div., 230 E. 27th St., Los Angeles 58, Calif. 16.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill. 12-13-20.
 National Electric Controller Co., 7070 Glenwood Ave., Chicago 26, Ill. 22-23-25-26.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio. 1-3-4-5-7-12-13-14.
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. 1-9-12-13-14-15-16-17-18-19-21-22-23-24-25-26. ADV. PG. 44, 45.
OHMWEVE CO., 43 Darcy St., West Hartford 6, Conn. 19. ADV. PG. 228.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. 12-17-18-19. ADV. PG. 541.
 Precision Electronic Components, Ltd., 560 King St. W., Toronto, Ontario. 9-10-11.
PRECISION, INC., 730 Lyndale Ave., N., Minneapolis, Minn. 14-17-21-22-25. ADV. PG. 637.
 Precision Resistor Co., 109 U. S. Highway #22, Hillsdale 5, N. J. 12-17-18.
 Pye Ltd., Cambridge, England 17.
REON RESISTOR CORP., 117 Stanley Ave., Yonkers, N. Y. 12-13-14-17-25. ADV. PG. 281.
RESISTANCE PRODUCTS CO., 714 Race St., Harrisburg, Pa. 3-4-5-6-12-17-18. ADV. PG. 626, 627.
 Resistors, Inc., 5226 W. 26th St., Chicago 50, Ill. 15-19-21-22-25.
REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y. 23-24-25-26. ADV. PG. 650.
 Rubicon Co., Ridge Ave. at 35th St., Philadelphia 28, Pa. 12-17.
SANDERS ASSOCIATES, INC., Nashua, N. H. 1-3. ADV. PG. 622.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 E. Ave., Mt. Vernon, N. Y. 4-5-17-18. ADV. PG. 613.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. 9-10-12-13-14-17-18-19-26. ADV. PG. 362.
 Speer Carbon Co., St. Marys, Pa.
 Speer Resistor Division, Speer Carbon Co., St. Marys, Pa. 1.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass. 4-5-13-14-15-17-18-19.
STACKPOLE CARBON CO., St. Marys, Pa. 1-8. ADV. PG. 202, 203.
 Standard Telephone & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 2.
STUPAKOFF CERAMICS & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
TECHNOLOGY INSTRUMENT CORP., 533 Main St., Acton, Mass. 20-24. ADV. PG. 127-131.
 Telewave Laboratories, Inc., 100 Metropolitan Ave., Brooklyn 11, N. Y. 3.
 Tomore Electric Corp., 131 Gould St., Rochester 1, N. Y. 12-13-14-17.
TRIMM, INC., 400 W. Lake St., Libertyville, Ill. 2. ADV. PG. 639.
TRU-OHM PRODUCTS DIV., MODEL ENGINEERING MFG. INC., 2800 Milwaukee Ave., Chicago, Ill. 13-15-16. ADV. PG. 247.
 U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif. 17-26.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. 12-13-17-18-19. ADV. PG. 493.
VECTRON, INC., 404 Main St., Waltham 54, Mass. 20-21-25-26. ADV. PG. 474, 475.

VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. 4-6. ADV. PG. 81.
Ward Leonard Electric Co., 7300 Huron River Drive, Dexter, Mich. 12-13.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. 13-14-15-16-19-21-22-23-25-26. ADV. PG. 365, 366.
WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York 16, N. Y. 4. ADV. PG. 348.
Wirt Co., 5221 Greene St., Philadelphia 33, Pa. 12-13-20-25-26.
Yorkman TV, Inc., 309 Queen Anne Road, Teaneck, N. J. 5.
Yonkers Industries, 28 School St., Yonkers, N. Y. 17-19.
Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y. 3.

RESISTORS—Carbon Film

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
Allies Products Corp., 1028 Connecticut Ave., N.W., Washington 6, D. C.
Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAMPBELL INDUSTRIES, INC., St. Elmo Station, Chattanooga 9, Tenn. ADV. PG. 502.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
Computer Instrument Co., 1964 Utica Ave., Brooklyn 34, N. Y.
DALE PRODUCTS, INC., Box 136, Columbus, Neb. ADV. PG. 134, 135.
DWYER ENGINEERING CO., INC., P. O. Box 483, Nashua, N. H. ADV. PG. 342.
ELECTRA MFG. CO., Resistor Div., 2537 Madison Ave., Kansas City, Mo. ADV. PG. 571.
Elektro-Serv Co., 480 Johnson Ave., Brooklyn 37, N. Y.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J. ADV. PG. 438.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
Radell Corp., 7900 Pendleton Pike, Indianapolis 26, Ind.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.

RESISTORS—Deposited Carbon

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
Allies Products Corp., 1028 Connecticut Ave., N.W., Washington 6, D. C.
Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAMPBELL INDUSTRIES, INC., St. Elmo Station, Chattanooga 9, Tenn. ADV. PG. 502.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
DALE PRODUCTS, INC., Box 136, Columbus, Neb. ADV. PG. 134, 135.
ELECTRA MFG. CO., Resistor Div., 2537 Madison Ave., Kansas City, Mo. ADV. PG. 571.
Elektro-Serv Co., 480 Johnson Ave., Brooklyn 37, N. Y.
IE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J. ADV. PG. 438.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Radell Corp., 7900 Pendleton Pike, Indianapolis 26, Ind.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

RESISTORS—Fuse

Allen-Bradley Co., 60 Springfield Ave., Springfield, N. J.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
IE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.
Truohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.
Waukegan Resistor Co., 700 W. Virginia St., Milwaukee 1, Wis.
Model Engineering & Manufacturing Inc., Huntington, Ind.
Wirt Co., 1255 S. Michigan Ave., Chicago 5, Ill.
J-OHM PRODUCTS DIV., MODEL ENGINEERING & MFG. INC., 2800 Milwaukee Ave., Chicago 18, Ill. ADV. PG. 247.

RESISTORS—Miniature Variable

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.

BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 48, 49.
Computer Instrument Co., 1964 Utica Ave., Brooklyn 34, N. Y.
ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City 1, N. Y. ADV. PG. 616.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.

RESISTORS—Precision Film Type

Allies Products Corp., 1028 Connecticut Ave., N.W., Washington 6, D. C.
Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
Balco Research Laboratories, 49-53 Edison Place, Newark 2, N. J.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAMPBELL INDUSTRIES, INC., St. Elmo Station, Chattanooga 9, Tenn. ADV. PG. 502.
Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio.
Corning Glass Works, Corning, N. Y.
DALE PRODUCTS, INC., Box 136, Columbus, Neb. ADV. PG. 134, 135.
ELECTRA MFG. CO., Resistor Div., 2537 Madison Ave., Kansas City, Mo. ADV. PG. 571.
Electronics of Colorado, Inc., 1026 S. Tejon St., Colorado Springs, Colo.
Elektro-Serv Co., 480 Johnson Ave., Brooklyn 37, N. Y.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
LITTON INDUSTRIES, 336 N. Foothill Rd., Beverly Hills, Calif. ADV. PG. 327.
MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J. ADV. PG. 438.
Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Radell Corp., 7900 Pendleton Pike, Indianapolis 26, Ind.
Resistor Corporation of Nevada, P. O. Box 2502, Reno, Nev.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.
Telewax Laboratories, Inc., 100 Metropolitan Ave., Brooklyn 11, N. Y.
Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

RESISTORS—Printed Strip

California Bent Glass Corp., Torrance, Calif.
DWYER ENGINEERING CO., INC., P. O. Box 483, Nashua, N. H. ADV. PG. 342.
Herlec Corp., 6th & Beech St., Grafton, Wis.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
Moore Co., Howard J., 266 William St., New York 38, N. Y.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
SANDERS ASSOCIATES, Nashua, N. H. ADV. PG. 622.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.

RESISTORS—Sub-Miniature

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
Arnhold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.
Avor Corp., 450 Broome St., New York 13, N. Y.
Bond Electronics Corp., 60 Springfield Ave., Springfield, N. J.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CAMPBELL INDUSTRIES, INC., St. Elmo Station, Chattanooga 9, Tenn. ADV. PG. 502.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 48, 49.
CIMA CORP., 119 Braintree St., Allston 34, Mass. ADV. PG. 379.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
DALE PRODUCTS, INC., Box 136, Columbus, Neb. ADV. PG. 134, 135.
DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill.
EASTERN PRECISION RESISTOR CORP., 130-11 90th Ave., Richmond Hill 18, N. Y. ADV. PG. 520.
Fortiphone Ltd., 247 Regent St., W1, London, England.
I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
Instrument Resistors Co., 1036 Commerce Ave., Union, N. J.

INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
MEPCO, INC., 35-37 Abbett Ave., Morristown, N. J. ADV. PG. 438.
MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
Precision Resistor Co., 109 U. S. Highway #22, Hillside 5, N. J.
REON RESISTOR CORP., 117 Stanley Ave., Yonkers, N. Y. ADV. PG. 281.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

RESOLVERS

Diehl Mfg. Co., 1129 Finnerne Ave., Somerville, N. J. ADV. PG. 434, 435.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
FORD INSTRUMENT CO. DIV. OF THE SPERRY CORP., 31-10 Thomson Ave., Long Island City 11, N. Y. ADV. PG. 614.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 253-256.
Kinetix Instrument Div., Ketay Mfg. Co. Corp., 902 Broadway, New York 12, N. Y.
Muirhead & Co., Ltd., Beckenham, Kent, England.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.

RHEOSTATS

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 48, 49.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City 1, N. Y. ADV. PG. 616.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Hardwick Hindle Inc., 40 Hermon St., Newark 5, N. J.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
Lesca, Via Bergamo 21, Milan, Italy.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Model Engineering & Manufacturing Inc., Huntington, Ind.
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.
REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y. ADV. PG. 650.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
TRU-OHM PRODUCTS DIV., MODEL ENGINEERING & MFG. INC., 2800 Milwaukee Ave., Chicago, Ill. ADV. PG. 247.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
WARD LEONARD ELECTRIC CO., 31 South St., Mt. Vernon, N. Y. ADV. PG. 365, 366.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

RHEOSTATS—Electronic

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
BETA ELECTRIC CORP., 33 E. 103rd St., New York 29, N. Y. ADV. PG. 225.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City 1, N. Y. ADV. PG. 616.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

RHEOSTATS—Slide Wire

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
 Electro-Measurements, Inc., 4312 S. E. Stark St., Portland 15, Ore.
ELECTRO-MEC LABORATORY, INC., 21-09 43rd Ave., Long Island City 1, N. Y. ADV. PG. 616.
 Glannin & Co., Inc., G. M., Pasadena 1, Calif.
 Hardwick Hindle Inc., 40 Hermon St., Newark 5, N. J.
 Lesa, Via Bergamo 21, Milan, Italy.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.
REX RHEOSTAT CO., 3 Foxhurst Rd., Baldwin, N. Y. ADV. PG. 650.
 Sticht Co., Herman H., 27 Park Place, New York 7, N. Y.

RINGS—Carbon Packing

Garlock Packing Co., Palmyra, N. Y.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
 Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.
NATIONAL CARBON CO., DIVISION OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 304.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
 St. Marys Carbon Co., State Rd., St. Marys, Pa.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 United States Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.

RINGS—Collector

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
 Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
COLLECTRON CORP., 216 E. 45th St., New York 17, N. Y. ADV. PG. 599.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
ELECTRO TEC CORP., South Hackensack, N. J. ADV. PG. 77, 79.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
 Industrial Electrical Works, 1509 Chicago St., Omaha 2, Nebr.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
 Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.
NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
 P. M. Industries, Inc., Stamford, Conn.
 Slip Ring Co. of America, 2038 Broadway, Santa Monica, Calif.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

RINGS—Oil Sealing

Auburn Mfg Co., Pease Ave. & Stack St., Middletown, Conn.
 Garlock Packing Co., Palmyra, N. Y.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
 Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minnesota Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 United States Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

RINGS—Retaining

CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
 Industrial Retaining Ring Co., 8 W. Sidney Ave., Mount Vernon, N. Y.
 National Lock Washer Co., 40 Hermon St., Newark 5, N. J.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
 Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
RICHARDSON CO., 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
 Shakeproof Div., Illinois Tool Works, 2501 N. Keeler Ave., Chicago 39, Ill.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
STAVER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 282.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 Waldes Kohinoor Inc, 47-16 Austel Place, Long Island City 1, N. Y.

RIVETS

ALLMETAL SCREW PRODUCTS CO., INC., 821 Stewart Ave., E., Garden City, N. Y. ADV. PG. 457.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 Autoscrew Co., 216-222 West 18th St., New York, N. Y.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Chicago Rivet & Machine Co., Bellwood, Ill.
 Continental Screw Co., New Bedford, Mass.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Gries Reproducer Corp., 151 Beechwood St., New Rochelle, N. Y.
 Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
 Hassall, Inc., John P. O. Box 2242, Westbury, N. Y.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.
 Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
 Milford Rivet & Machine Co., Milford, Conn.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
 Progressive Mfg. Co. 50 Norwood St., Torrington, Conn.
 Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N. Y.
 Sinclair Mfg. Co., Chartley, Mass.
 Southco Division, South Chester Corp., 1417 Finance Bldg., Philadelphia 2, Pa.
 Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
 Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
 Stronghold Screw Products, Inc., 1801 W. Winnemac St., Chicago 40, Ill.
TUBULAR RIVET & STUD CO., Linden St., Quinncy, Mass. ADV. PG. 300.
 United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

ROCHELLE SALTS
See CRYSTALS**RODS—Tungsten**

Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
 Northern Electronic & Vacuum Industries, St. Sauveur des Monts P. Q., P. O. Box 105, Canada.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York, N. Y. ADV. PG. 699-706.

ROOMS—Screen

ACE ENGINEERING & MACHINE CO., INC., 3644 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 318.
 British Electric Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
LINDGREN & ASSOCIATES, ERIK A., 4515 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 540.
SHIELDING, INC., Box 217, Dept. E, Riverside, N. J. ADV. PG. 536.

RUBBER**RUBBER—Conductive**
See INSULATION MATERIALS**ROTOR CASTINGS**

CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
 Duraloy Co., Scotdale, Pa.
 Michigan Steel Casting Co., 1999 Guion St., Detroit 7, Mich.
 Sorenson Industries, Fifth St., Darby 1, Pa.

SCALES—Oscilloscope

DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

SCANNERS—Reflected & Transmitted Light

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Daystrom Instrument Co., Archbald, Pa.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 236th St., New York 70, N. Y. ADV. PG. 460.
 Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

SCRAMBLERS—Speech

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

SCREENS—Television Projection

General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
 SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.

SCREWS—Self-Tapping

ALLMETAL SCREW PRODUCTS CO., INC., 821 Stewart Ave., E., Garden City, N. Y. ADV. PG. 457.
 American Screw Co., Willimantic, Conn.
ATLAS SCREW & SPECIALTY CO., 450 Broome St., New York 13, N. Y. ADV. PG. 312.
 Blake & Johnson Co., Waterville 48, Conn.
 Camcar Screw & Mfg. Corp., 600 18th Ave., Rockford, Ill.
 Central Screw Co., 3501 Shields Ave., Chicago 9, Ill.
 Continental Screw Co., New Bedford, Mass.
 Eaton Mfg. Co., Reliance Div., Massillon, Ohio.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.
 Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
 National Screw & Mfg. Co., The, Cleveland 4, Ohio.
 Parker-Kalon Division of General American Transportation Corp., 200 Varick St., New York 14, N. Y.
 Pheoil Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
 Pilgrim Screw Co., 259 Dexter St., Providence, R. I.
 Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N. Y.
 Scovill Manufacturing Co., Waterbury 20, Conn.
 Shakeproof Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
 Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
 Stronghold Screw Products, Inc., 1801 W. Winnemac St., Chicago 40, Ill.
 United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.

SCREWS—Set

ALLEN MFG. CO., Hartford 2, Conn. ADV. PG. 104.
ALLMETAL SCREW PRODUCTS CO., INC., 821 Stewart Ave., E., Garden City, N. Y. ADV. PG. 457.
 American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y.
 Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.
ATLAS SCREW & SPECIALTY CO., 450 Broome St., New York 13, N. Y. ADV. PG. 312.
 Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Bristol Co., The, Waterbury 20, Conn.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.
 Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
 National Screw & Mfg. Co., The, Cleveland 4, Ohio.
 Parker-Kalon Division of General American Transportation Corp., 200 Varick St., New York 14, N. Y.
 Pheoil Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
 Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N. Y.
 Set Screw & Mfg. Co., 470 Main St., Bartlett, Ill.
 Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.
 Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
 Stronghold Screw Products, Inc., 1801 W. Winnemac St., Chicago 40, Ill.
 United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.
 Waltham Screw Co., Waltham, Mass.

SEALING SERVICE—Hermetic

Aircraft Transformer Corp., West & Willow Aves., Lodi Branch, N. J.
CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. ADV. PG. 167.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 645.
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
HERMASEAL CO., INC., 1101 Lafayette St., Elkhart, Ind. ADV. PG. 258.
 Sealtron Corp., Reading Rd. at Amity, Cincinnati 1, Ohio.
TELETRON INDUSTRIES CORP., 35-18 37th St., Long Island City, N. Y. ADV. PG. 538.
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

SEALS—Carbon

Garlock Packing Co., Palmyra, N. Y.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
 Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.
NATIONAL CARBON CO., DIVISION OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 304.

Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
 Caloil Corp., 45 Willard Ave., Providence 5, R. I.
 Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.
 United States Graphite Co., Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.

SEALS—Hermetic

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
Automatic & Precision Mfg. Co., 252 Hawthorne Ave., Yonkers 5, N. Y.
ANNETT PRODUCTS MFG. CO., P. O. Box 1055, Palo Alto, Calif. ADV. PG. 529.
Am Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
ANSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 167.
ARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 645.
Ass-Solder Engineering, 300 N. Lake Ave., Pasadena 4, Calif.
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
ORMASEAL CO., INC., 1101 Lafayette St., Elkhart, Ind. ADV. PG. 258.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
Industrial Devices, Inc., 22 State Rd., Edgewater, N. J.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
LYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
MASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Quality Products Co., 387 Charles St., Providence 4, R. I.
altron Corp., Reading Rd. at Amity, Cincinnati 15, Ohio.
ertl-Faraday, Inc., Cincinnati Div., Cincinnati 2, Ohio.
UPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
LVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
ELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
RWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.
I-POINT MFG. & DEVELOPING CO., 401 Grand St., Brooklyn 11, N. Y. ADV. PG. 655.
AD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.
S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
Warren Plastics Corp., Warren, Pa.
Life Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.
Products Corp., 276-80 Main St., Norwalk, Conn.

SEALS—Metal-to-Glass

urn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
ANNETT PRODUCTS MFG. CO., P. O. Box 1055, Palo Alto, Calif. ADV. PG. 529.
gs Co., Carl H., 2255 Barry Ave., West Los Angeles 54, Calif.
entral Sales & Mfg. Co., 2 Richwood Place, Denville, N. J.
ro de Pasco Corp., 40 Wall St., New York 5, N. Y.
ANSTANTIN & CO., L. L., Route No. 6 at Lodi Circle, Lodi, N. J. ADV. PG. 167.
ing Glass Works, Corning, N. Y.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 645.
Ass-Solder Engineering, 300 N. Lake Ave., Pasadena 4, Calif.
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
ORMASEAL CO., INC., 1101 Lafayette St., Elkhart, Ind. ADV. PG. 258.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark, N. J. ADV. PG. 223.
ncaster Lens Co., Lancaster, Ohio.
ton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
LYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
thern Electronic & Vacuum Industries, St. Sauveur des Monts P.Q., P. O. Box 105, Canada.
MASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Quality Products Co., 387 Charles St., Providence 4, R. I.
ertl-Faraday, Inc., Cincinnati Div., Cincinnati 2, Ohio.
andard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
UPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
LVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
uum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
Warren Plastics Corp., Warren, Pa.
Products Corp., 276-80 Main St., Norwalk, Conn.

SEALS—Oil

stol Co., The Waterbury 20, Conn.
ne Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.

Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.
Garlock Packing Co., Palmyra, N. Y.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
Johns-Manville, 22 E. 40th St., New York 16, N. Y.
Minnesota Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
Sealor Corporation, 45 Willard Ave., Providence 5, R. I.
TRI-POINT MFG. & DEVELOPING CO., 401 Grand St., Brooklyn 11, N. Y. ADV. PG. 655.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 United States Graphite Co., Div. of the Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

SEALS—Switch

Automatic & Precision Mfg. Co., 252 Hawthorne Ave., Yonkers 5, N. Y.
Gonset Co., 801 S. Main St., Burbank, Calif.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 609.

SELECTIVE CALLING APPARATUS

Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
Codetyper Laboratories, 550 Fifth Ave., New York 19, N. Y.
Electrical Communications Co., 765 Clementina St., San Francisco, Calif.
Electronic Products Co., 1418 N. Highland Ave., Hollywood 28, Calif.
Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 305-307.
Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
Motorola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.
National Inter-Communication Systems, Inc., 1130 N. Milwaukee Ave., Chicago 22, Ill.
North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
Pye Ltd., Cambridge, England.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

SELENIUM

See RECTIFIERS—CRYSTALS

SERVICES

See

Encapsulation
Engraving & Profiling
Frequency Calibration
Packaging—Electronic Equipment
Plating—Metal on Plastic
Plating—Precision Metal

Sealing—Hermetic
Silk Screen Processing
Subminiaturization
Tinning—Hot Dipped
Tower Service
Treating—Fungus & Moisture Proof
Wire Marking

SERVOMECHANISMS

ASSOCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. ADV. PG. 669.
Ahrend Instrument Co., 4910 Calvert Rd., College Park, Md.
Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.
AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway No. 17, Paramus, N. J. ADV. PG. 490.
Belock Instrument Corp., 13-11 111th St., College Point, N. Y.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
Boeing Airplane Co., Seattle Div., Seattle 14, Wash.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323.
Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
Bristol Co., The Waterbury 20, Conn.
CLIFTON PRECISION PRODUCTS CO., INC., Broadway at Marple Ave., Clifton Heights, Pa. ADV. PG. 394.
CONTROL ELECTRONICS CO., INC., 1925 New York Ave., Huntington Station, N. Y. ADV. PG. 647.
Control Engineering Corp., Providence Highway, Norwood, Mass.
Daco Machine Tool Co., 202 Tillary St., Brooklyn 1, N. Y.
Daystrom Instrument Co., Archbald, Pa.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.

Feedback Controls, Inc., 503 Rhode Island Ave., N. E. Washington 2, D. C.
FORD INSTRUMENT CO. DIV. OF THE SPERRY CORP., 31-10 Thomson Ave., Long Island City 11, N. Y. ADV. PG. 614.
G-M LABORATORIES, 4336 N. Knox Ave., Chicago, Ill. ADV. PG. 608.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Globe Industries, Inc., P. O. Box 101, North Dayton Station, Dayton 4, Ohio.
Hycron Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
INDUSTRIAL CONTROL CO., Straight Path & Arlington Ave., Wyandanch, N. Y. ADV. PG. 47.
Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.
KETAY MFG. CORP., 555 Broadway, New York 12, N. Y. ADV. PG. 253-256.
L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
LIBRASCOPE, INC., 1607 Flower St., Glendale, Calif. ADV. PG. 531.
LINK AVIATION, INC., Binghamton, N. Y. ADV. PG. 507.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
MID-CENTURY INSTRUMENTAL CORP., 611 Broadway, New York 12, N. Y. ADV. PG. 217.
Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
MINNEAPOLIS-HONEYWELL REGULATOR CO., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.
ORTHO FILTER CORP., 198 Alblon Ave., Paterson 2, N. J. ADV. PG. 312.
OSTER MFG. CO., JOHN, I, 1 N. Main St., Racine, Wis. ADV. PG. 425.
Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.
Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
Phebo Inc., 3640 Woodland St., Baltimore 15, Md.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
Richardson Scale Co., Clifton, N. J.
Robinette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 54, 55.
SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.
Servo-Tek Products Co., Inc., 1086 Goffe Rd., Hawthorne, N. J.
Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
Trans-Sonics, Inc., 5 Forrest Ave., Bedford, Mass.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
White-Rodgers Electric Co., Armament Dept., 1209 Cass Ave., St. Louis 6, Mo.

SHAFTS—Flexible

Birnback Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
Flexible Shaft Div., Walker Turner Div., Kearney & Trecker Corp., Plainfield, N. J.
Freedom Electric Co., 27 Park Place, New York 7, N. Y.
JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
STEWART MFG. CORP., F. W., 4311 Ravenswood Ave., Chicago 13, Ill. ADV. PG. 260.
Stow Mfg. Co., 101 Shear St., Binghamton, N. Y.
WHITE DENTAL MFG. CO., S. S., Industrial Div., 10 E. 40th St., New York, N. Y. ADV. PG. 348.

SHAPERS—Television Signal

TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.

SHEETS—Molybdenum

North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

SHIELDING—Electrostatic

ACCURATE PAPER TUBE CO., 801 N. Peoria St., Chicago 22, Ill. ADV. PG. 629.
American Siscalcraft Corp., 55 Starkey Ave., Attleboro, Mass.
Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.

INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. ADV. PG. 575.
 METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 653.
 Mica Insulator Co., Schenectady 1, N. Y.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
 SHIELDING, INC., Box 217, Dept. E., Riverside, N. J. ADV. PG. 536.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Swift & Sons, M., 10 Love Lane, Hartford 1, Conn.
 Vulcanized Rubber Products Co., Morrisville, Pa.

SHIELDING—Radio Ignition

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Breeze Corps., Inc., 41 S. Sixth St., Newark 7, N. J.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
 Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 653.
 New England Electrical Works, Inc., Lisbon, N. H.
 Swift & Sons, M., 10 Love Lane, Hartford 1, Conn.
 Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.
 Vulcanized Rubber Products Co., Morrisville, Pa.

SHIELDING—Sheet or Screen

ACE ENGINEERING & MACHINE CO., INC., 3642 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 318.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 Bennett Mfg. Co., Alden, N. Y.
 Braun Tool & Instrument Co., Inc., H., 140 Fifth Ave., Hawthorne, N. J.
 Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio.
 Connecticut Hard Rubber Co., 413 East St., New Haven, Conn.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 653.
 Mica Insulator Co., Schenectady 1, N. Y.
 SHIELDING, INC., Box 217, Dept. E., Riverside, N. J. ADV. PG. 536.
 Swift & Sons, M., 10 Love Lane, Hartford 1, Conn.
 TRI-POINT MFG. & DEVELOPING CO., 401 Grand St., Brooklyn 11, N. Y. ADV. PG. 655.
 Vulcanized Rubber Products Co., Morrisville, Pa.

SHIELDING—Wire

ACE ENGINEERING & MACHINE CO., INC., 3642 N. Lawrence St., Philadelphia 40, Pa. ADV. PG. 318.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.
 Eldico of New York, Inc., 4-31 Douglaston Pkwy., Douglaston, N. Y.
 Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
 J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 TENSOLITE INSULATED WIRE CO., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
 U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 York Co., Inc., Otto H., 69 Glenwood Place, East Orange, N. J.

SHIELDS—Cathode Ray Tube

DuMont Laboratories, Inc., Allen B. Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.
 MAGNETICS, INC., P.O. Box 230-E, Butler, Pa. ADV. PG. 28.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 MULTI-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.

SHIELDS—Coil

Aluminum Goods Mfg Co., Manitowoc, Wis.
 GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 196.
 I. E. Manufacturing, 321 N. Hoyne Ave., Chicago 12, Ill.
 Paul & Beekman Inc., 1801 Cortland St., Philadelphia 40, Pa.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

SHIELDS—Ferrite

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

SHIELDS—Lead

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
 BERKELEY DIVISION, BECKMAN INSTRUMENT, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
 Chicago Expansion Bolt Co., 1339 W. Concord Place, Chicago 22, Ill.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 INTERNATIONAL PUMP & MACHINE WORKS, 11-13 Governor St., Newark 2, N. J. ADV. PG. 154.
 National Lead Co., 111 Broadway, New York 6, N. Y.
 Nuclear Research & Development Co., 6425 Etzel, St. Louis 14, Mo.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 NUCLEONIC COMPANY OF AMERICA, 497 Union St., Brooklyn 31, N. Y. ADV. PG. 646.

SHIELDS—Transformer

Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind.
 HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
 Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.
 MAGNETICS, INC., P.O. Box 230-E, Butler, Pa. ADV. PG. 28.
 MULTI-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.
 Transformer Engineers, 161 E. California, Pasadena 1, Calif.
 VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

SHIELDS—Tube

ACCURATE PAPER TUBE CO., 801 North Peoria St., Chicago 22, Ill. ADV. PG. 629.
 ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
 ATLAS E-E CORP., Bedford Airport, Bedford, Mass. ADV. PG. 674.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 Cinch Mfg. Corp., 1026 S. Homan Ave., Chicago 24, Ill.
 EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
 Elco Corporation, 190 W. Glenwood Ave., Philadelphia 40, Pa.
 Formatic Co., 178 Bridge St., Naugatuck, Conn.
 Goat Co., Inc., Fred, 308 Dean St., Brooklyn 7, N. Y.
 HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 INTERNATIONAL ELECTRONIC RESEARCH CORP., 175 W. Magnolia Blvd., Burbank, Calif. ADV. PG. 398.
 JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.
 JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
 Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.
 KAUPP & SONS, C. B., 32 Newark Way, Maplewood, N. J. ADV. PG. 265.
 METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 454, 455.
 MULTI-METAL CO., 1350 Garrison Ave., New York 59, N. Y. ADV. PG. 297.
 NORTH HILLS ELECTRIC CO., INC., 246-32 54th Ave., Douglaston 62, N. Y. ADV. PG. 645.
 Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.
 Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 STAVER CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 282.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

SHIFTERS—Phase, Microwave
See MICROWAVE ACCESSORIES**SHIPPING CONTAINERS**
See PACKAGING MATERIALS**SHUNTS—Meter**

Assemblies Products Co., Chagrin Falls 6, Ohio.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.

HOYT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
 Jack & Heintz, Inc., Cleveland 1, Ohio.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Precision Resistor Co., 109 U. S. Hwy. #22, Hillside 5, N. J.
 RAPID ELECTRIC CO., 2881 Middletown Rd., New York 61, N. Y. ADV. PG. 641.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SILICON

See METALS

SILICONE—Compounds
See INSULATING COMPOUNDS**SILICONE CRYSTALS**
See CRYSTALS**SILICONE GREASES**

Dow Corning Corp., Midland, Mich.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 LINDE AIR PRODUCTS CO., A DIV. OF UNION CARBID & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 502.

SILICONE OILS

Dow Corning Corp., Midland, Mich.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 91 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 LINDE AIR PRODUCTS CO., A DIV. OF UNION CARBID & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 502.

SILICONE RUBBER

Connecticut Hard Rubber Co., 413 East St., New Haven 9, Conn.
 Dow Corning Corp., Midland, Mich.
 ELECTRO-TECHNICAL PRODUCTS DIV. OF SUN CHEMICAL CORP., 113 E. Centre St., Nutley 10, N. J. ADV. PG. 619.
 Garlock Packing Co., Palmyra, N. Y.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 General Tire & Rubber Co., The, Akron, Ohio.
 Mica Insulator Co., Schenectady 1, N. Y.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 Western Felt Works, 4029 Ogden Ave., Chicago, Ill.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

SILK SCREEN PROCESSING

BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 BRUNO NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Cadre Industries Corp., Box 117, 19 Delaware Ave., Endicott, N. Y.
 Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.
 INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Bellville, N. J. ADV. PG. 279.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 MICRO-CIRCUITS CO., New Buffalo, Mich. ADV. PG. 504.
 PHOTO CHEMICAL PRODUCTS, INC., 479 Walton Ave., New York 51, N. Y. ADV. PG. 450.
 Precision Marking Co., 87 Dorsa Ave., Livingston, N. J.
 Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 476.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.

SLEEVEING—Electrical Insulating
See INSULATION PARTS**SLIDES—Chassis**

Bennett Mfg. Co., Alden, N. Y.
 Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.
 CHASSIS TRAK CORP., 6250 E. Iona Rd., Indianapolis, Ind. ADV. PG. 629.
 CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.

GRANT PULLEY & HARDWARE CO., 31-85 Whitestone Parkway, Flushing, N. Y. ADV. PG. 316.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Plaza, New York, N. Y. ADV. PG. 599.
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 609.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

SLIP RING ASSEMBLIES

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
Aremac Associates, 329 W. Washington St., Pasadena 3, Calif.
Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
BRILHART PLASTICS CORP., Old Country Rd., Mineola, N. Y. ADV. PG. 653.
COLLECTOR CORP., 216 E. 45th St., New York 17, N. Y. ADV. PG. 599.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.

EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
ELECTRO DEVELOPMENT CO., 6006 W. Washington Blvd., Culver City, Calif. ADV. PG. 221.
ELECTRO TEC CORP., South Hackensack, N. J. ADV. PG. 77, 79.
GRAPHITE METALIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
INSTRUMENT CORP. OF AMERICA, Blacksburg, Va. ADV. PG. 267.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.

METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.
MAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
MEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
M. Industries, Inc., Stamford, Conn.
Molyphen Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
RESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
Rip Ring Co. of America, 2038 Broadway, Santa Monica, Calif.
Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.
ELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.

MOKE See DETECTORS

SOCKETS

- | | |
|--------------------|------------------|
| 1. Crystal | 8. Relay |
| 2. Diode | 9. Sub-Miniature |
| 3. Lamp | 10. Transistor |
| 4. Miniature | 11. Tube |
| 5. Pencil Tube | 12. Turret |
| 6. Pilot Light | 13. UHF Tube |
| 7. Printed Circuit | |

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio. 1-2-3-4-6-11-13.
EROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. 3-4-6. ADV. PG. 615.
LDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. 3-4-6-8-11. ADV. PG. 440.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. 4-9-11. ADV. PG. 80.
American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y. 4-6.
Grow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn. 3-6.
Innbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y. 11.

BRILHART PLASTICS CORP., Old Country Rd., Mineola, N. Y. 11. ADV. PG. 653.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 2-3-4-6-7-11-13.
Electric Products Inc., Providence, R. I. 3-4-6.
BRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. 2. ADV. PG. 240.
ANNON ELECTRIC CO., 3209 Humboldt St., Los Angeles 31, Calif. 9. ADV. PG. 87.
ENGCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. 1-2-4-5-7-9-10-11-12-13. ADV. PG. 354, 355.
LARK CRYSTAL CO., Farm Rd., Marlboro, Mass. 1. ADV. PG. 581.
ALIGHT CORP., 60 Stewart Ave., Brooklyn 37, N. Y. 3-6. ADV. PG. 39.
igital Products, Inc., 7643 Fay Ave., LaJolla, Calif. 7.
RAKE MFG. CO., 1713 Hubbard St., Chicago 22, Ill. 3-6. ADV. PG. 111.
ngle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y. 3-6.
Y CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. 1-2-4-5-7-8-9-10-11-12-13. ADV. PG. 465.
TEL-McCULLOUGH, INC., San Bruno, Calif. 11-13. ADV. PG. 270, 271.
co Corp., 190 W. Glenwood Ave., Philadelphia 40, Pa. 1-4-7-8-9-10-11-12-13.

Electro Craft Industries Inc., 68 Jackson Ave., Stamford, Conn. 13.
Gates Radio Co., Quincy, Ill. 11.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. 4-6-11. ADV. PG. 380.
GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. 3. ADV. PG. 1-20.

General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill. 2-5-9-10.
Gombos Co., Inc., John, 103 Montgomery St., Irvington 11, N. J. 4.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. 2-4-7-11. ADV. PG. 457.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. 7. ADV. PG. 279.

Insuline Corp. of America, 186 Granite St., Manchester, N. H. 11.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. 11. ADV. PG. 666.
Javex, P. O. Box 646, Redlands, Calif. 1.
JOHNSON CO., E. F., Waseca, Minn. 1-4-6-11. ADV. PG. 594, 595.
Kemtron Electron Products, Inc., 5 Prince Place, Newburyport, Mass. 2.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. 2.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. 3-4-6. ADV. PG. 567.
Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill. 7-11-13.
METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. 1-2-4-7-9-11-12-13. ADV. PG. 454, 455.

Mica Insulator Co., Schenectady 1, N. Y. 11.
Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill. 6.
Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif. 2-9-10.
Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. 1-3-4-11.
Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass. 4.

MYCALEX TUBE SOCKET CORPORATION, 125 Clifton Blvd., Clifton, N. J. 4-7-9-10-11-13. ADV. PG. 136, 137.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. 11. ADV. PG. 621.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. 1-4-11. ADV. PG. 395.
NEOMATIC, INC., 9010 Bellanca Ave., Los Angeles 45, Calif. 4-7-9-10. ADV. PG. 446.

Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y. 1-4-11.
Raypar, Inc., 7800 W. Addison St., Chicago, Ill. 11.
Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J. 3.
RICHARDSON CO., 27th Ave. Lake St., Melrose Park, Ill. 7. ADV. PG. 546.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif. 11.

Royal Electric Co., Inc., Pawtucket, R. I. 3.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England. 5.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. 2-10-11. ADV. PG. 293-296.
Super Ear Products Co., 675 Merrick Rd., Lynbrook, N. Y. 9.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. 1-2-3-4-6-9-10-11-12-13. ADV. PG. 699-706.

Symphony Radio & Television Co., 925 S. Western Ave., Los Angeles 6, Calif. 1-6-9.
Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass. 10.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. 3-6-11. ADV. PG. 329.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. 1-4-11-13. ADV. PG. 604, 605.

VECTOR ELECTRIC CO., 3352 San Fernando Rd., Los Angeles 65, Calif. 4-12. ADV. PG. 620.
Wade Electric Products Co., 400 Jacob St., Sturgis, Mich. 3.
Warren Plastics Corp., Warren, Pa. 2.
WINCHESTER ELECTRONICS, INC., 15 Crescent St., Glenbrook, Conn. 11. ADV. PG. 164, 165.

SOLDER

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Bow Solder Products Co., Inc., 251 Freeman St., Brooklyn 22, N. Y.
Brah Mfg. Corp., 200 Central Ave., Newark 4, N. J.
Cerro de Pasco Corp., 40 Wall St., New York 5, N. Y.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

Division Lead Co., 7742 W. 61st Place, Summit, Ill.
Dunton Co., M. W., 7 Goff St., Providence 3, R. I.
Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 27, N. Y.
Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.

KESTER SOLDIER CO., 4212 Wrightwood Ave., Chicago 39, Ill. ADV. PG. 100.
Lenk Mfg. Co., The, 30 Cummington St., Boston 15, Mass.
London Chemical Co., 325 W. 32nd St., Chicago 16, Ill.
Multicore Sales Corp., 164 Duane St., New York 13, N. Y.

Multicore Solders, Ltd., Multicore Works, Maylands Ave., Hemel, Hempstead, Hertfordshire, England.
National Lead Co., 111 Broadway, New York 6, N. Y.
New York Solder Co., 684 E. 133rd St., New York 54, N. Y.
Ruby Chemical Co., 68 McDowell St., Columbus, Ohio.
Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
Wall Mfg. Co., Grove City, Pa.

SOLDER—Aluminum

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.
Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Bow Solder Products Co., Inc., 251 Freeman St., Brooklyn 22, N. Y.

Division Lead Co., 7742 W. 61st Place, Summit, Ill.
Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 37, N. Y.
Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 39, Ill. ADV. PG. 100.

Lenk Mfg. Co., The, 30 Cummington St., Boston 15, Mass.
Sightmaster of California Co., Gillespie Airport Santee, Calif.
SOLDER—Platinum

AMERICAN PLATINUM WORKS, N.J. R.R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 663.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
Bishop & Co., J., Platinum Works, Malvern, Pa.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.

HANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
METZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.
SOLDER—Rings and Preforms

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
Bow Solder Products Co., Inc., 251 Freeman St., Brooklyn 22, N. Y.

Division Lead Co., 7742 W. 61st Place, Summit, Ill.
Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.
Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 37, N. Y.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
HANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.

KESTER SOLDER CO., 4212 Wrightwood Ave., Chicago 39, Ill. ADV. PG. 100.
Lenk Mfg. Co., 30 Cummington St., Boston 15, Mass.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
Multicore Sales Corp., 164 Duane St., New York 13, N. Y.
Multicore Solders Ltd., Multicore Works, Maylands Ave., Hemel, Hempstead, Hertfordshire, England.

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
Soldering Specialties Co., 18 Chatham Rd., Summit, N. J.
Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.

SOLDER—Silver

ALPHA METALS, INC., 60 Water St., Jersey City, N. J. ADV. PG. 68.
AMERICAN PLATINUM WORKS, N.J. R.R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 663.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Baker & Co., Inc., 113 Astor St., Newark 5, N. J.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

Cook-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.
Division Lead Co., 7742 W. 61st Place, Summit, Ill.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
HANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.

MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
METZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.
 Multicore Solders, Ltd., Multicore Works, Maylands Ave., Hemel, Hempstead, Hertfordshire, England.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
 Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
 Trlcon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

SOLDERING IRONSSee **IRONS—Soldering****SOLENOIDS**

A. P. W. Co., 72 W. Main St., Rockaway, N. J.
 Aerocoil, Inc., 24 Cliff St., Jersey City, N. J.
AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
 Cable Electric Products Inc., Providence, R. I.
 Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
CANNON ELECTRIC CO., 3209 Humboldt St., Los Angeles 31, Calif. ADV. PG. 87.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Comar Electric Co., 3349 W. Addison St., Chicago 18, Ill.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.
FIVE STAR CO., West Main St., Plantsville, Conn. ADV. PG. 517.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 377.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
 Jack & Heintz, Inc., Cleveland 1, Ohio.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
MODELECTRIC PRODUCTS CORP., 1500 Bangs Ave., Asbury Park, N. J. ADV. PG. 140.
 National Acme Co., 170 E. 131st St., Cleveland 8, Ohio.
NORTH HILLS ELECTRIC CO., INC., 246-32 54th Ave., Douglaston 62, N. Y. ADV. PG. 645.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
 PSP Engineering Co., 8420 Otis St., South Gate, Calif.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
PHILLIPS CONTROL CORP., Dept. EB1420, Joliet, Ill. ADV. PG. 544.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 278.
 Price Electric Corp., Frederick, Md.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
 Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.
 Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 West Coast Electrical Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.
 White-Rodgers Electric Co., Armament Dept., 1209 Cass Ave., St. Louis 6, Mo.

SOLENOIDS—Rotary

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.
 Lee Spring Co., Inc., 32 Main St., Brooklyn 1, N. Y.
LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. ADV. PG. 494.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Price Electric Corp., Frederick, Md.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.

SOLENOIDS—Sub-Miniature

CANNON ELECTRIC CO., 3209 Humboldt St., Los Angeles 31, Calif. ADV. PG. 87.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill.

FIVE STAR CO., West Main St., Plantsville, Conn. ADV. PG. 517.
 Johnson Electronics Div. of Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 39, Ill.
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
 PSP Engineering Co., 8420 Otis St., South Gate, Calif.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
PHILLIPS CONTROL CORP., Dept. EB 1420, Joliet, Ill. ADV. PG. 544.
PICKERING & CO., 309 Woods Ave., Oceanside, N. Y. ADV. PG. 278.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 West Coast Electrical Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.

SONAR

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
 Atlantic Research Corp., 901 N. Columbus, Alexandria, Va.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Dyna Labs., Inc., 1075 Stewart Ave., Garden City, N. Y.
 Edo Corp., College Point, N. Y.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.

SOUND SYSTEMS—Complete

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 98, 99.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Dilks Co., The, Seymour, Conn.
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 Farmers Engineering & Mfg. Co., Irwin, Pa.
 Gates Radio Co., Quincy, Ill.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Lesa, Via Bergamo 21, Milan, Italy.
 M P Engineering Co., Fairfield 3, Conn.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Pye Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
 Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Z & W Machine Products, Inc., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

SPEAKER DRIVER UNITS

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 98, 99.
 Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Brocner Electronics Laboratory, 344 E. 32nd St., New York 16, N. Y.
 Dilks Co., The, Seymour, Conn.
 Electro-Voice, Inc., Buchanan, Mich.
 Eltran Corp., St. Anne, Ill.
 Goodmans Industries Ltd., Axiom Works, Wembley, Middlesex, England.
 Jensen Mfg. Co., 6601 S. Larmie Ave., Chicago 38, Ill.
 Lansing Sound, Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.

Lesla, Via Bergamo 21, Milan, Italy.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Cover.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 556.
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 654.

SPEAKERS

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
AMPEX ELECTRIC CORP., 934 Charter St., Redwood City, Calif. ADV. PG. 98, 99.
 Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Becker Electronics Mfg. Corp., Horton & Rockaway Aves., Valley Stream, N. Y.
 Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. Y.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
 Bozak Co., The, R. T., 114 Manhattan St., Stamford, Conn.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 British Industries Corp., 164 Duane St., New York 1, N. Y.
 Carbonneau Industries, Inc., 100 Lexington W., Grand Rapids, Mich.
 Cinaudograph Speakers, 7334 N. Clark St., Chicago 2, Ill.
 Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland 13, Ohio.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 17, Ill.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.
 Duotone Co., Inc., Keyport, N. J.
 Electro-Voice, Inc., Buchanan, Mich.
 Eltran Corp., St. Anne, Ill.
 Galbraith & Son Electric Corp., C. C., 450 Avenue of the Americas, New York 11, N. Y.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
 Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
 Goodmans Industries, Ltd., Axiom Works, Wembley, Middlesex, England.
 Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.
HEPPNER MFG. CO., P. O. Box 612, Round Lake, Ill. ADV. PG. 226.
 Holl Audio Inc., 5014 N. Encinita Ave., Temple City, Calif.
 Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
 Klipsch & Associates, P. O. Box 64, Hope, Ark.
 Lansing Sound Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 McGregor Electronic Industries, McGregor, Iowa.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 496.
 Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, Ill.
 Quam-Nichols Co., Marquette Rd. & Prairie Ave., Chicago 37, Ill.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Cover.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Rola Co., Inc., The, 2530 Superior Ave., Cleveland 1, Ohio.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Stephens Mfg. Corp., 8535 Warner Drive, Culver City, Calif.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Ultrasonic Corp., 640 Memorial Drive, Cambridge 3, Mass.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 556.
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 654.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Wright-Zimmerman, Inc., New Brighton, Minn.

SPEAKERS—Dual Cone

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Brocner Electronics Laboratory, 344 E. 32nd St., New York 16, N. Y.
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
 Electro-Voice, Inc., Buchanan, Mich.
 Goodmans Industries, Inc., Axiom Works, Wembley, Middlesex, England.
 Jensen Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.
 McGregor Electronic Industries, McGregor, Iowa.
 Quam-Nichols Co., Marquette Rd. & Prairie Ave., Chicago 37, Ill.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Cover.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
Stromberg-Carlson Co., Rochester 3, N. Y.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 556.
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 654.

SPEAKERS—Flame & Explosion-proof

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.
Goodmans Industries Ltd., Axiom Works, Wembley Middlesex, England.
McGregor Electronic Industries, McGregor, Iowa.
Racon Electric Co., 1261 Broadway, New York 1, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 556.

SPEAKERS—Marine Speaker Systems

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.
Eltran Corp., St. Anne, Ill.
Galbraith & Son Electric Corp., C. C., 450 Avenue of the Americas, New York 11, N. Y.
Goodmans Industries, Ltd., Axiom Works, Wembley, Middlesex, England.
McGregor Electronic Industries, McGregor, Iowa.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Racon Electric Co., 1261 Broadway, New York 1, N. Y.
Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
UNIVERSITY LOUDSPEAKERS, INC., 80 S. Kensico Ave., White Plains, N. Y. ADV. PG. 556.

SPECTROMETERS—Mass

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
HANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.
Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

SPECTROMETERS and SPECTROGRAPHS

American Optical Co., Box A, Buffalo 15, N. Y.
Applied Research Labs., 3717 Park Place, Glendale 8, Calif.
Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
Milano Optica, S.P.A., Snow & Union Sts., Brighton 35, Mass.
National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland 3, Ohio.
North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.
Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
ARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

SPECTROPHOTOMETERS

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
American Optical Co., Box A, Buffalo 15, N. Y.
Applied Physics Corp., 362 W. Colorado St., Pasadena 1, Calif.
Baird Associates, Inc., 23 University Rd., Cambridge 38, Mass.
Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.
iddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
Pleman Instruments, Inc., 318 Madison St., Maywood, Ill.

FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Instrument Development Labs., Inc., 163 Highland Ave., Needham Heights, Mass.
Milano Optica, S.P.A., Snow & Union Sts., Brighton 35, Mass.
Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn. Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
Pye Ltd., Cambridge, England.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
Warren Electronics, Inc., Bound Brook, N. J.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

SPECTROSCOPIC SOURCE UNITS

Applied Research Labs., 3717 Park Place, Glendale 8, Calif.
Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.
Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.
Milano Optica, S.P.A., Snow & Union Sts., Brighton 35, Mass.
National Spectrographic Labs., Inc., 6300 Euclid Ave., Cleveland 3, Ohio.

SPEECH INPUT CONSOLES

See AMPLIFIERS—Audio Input Systems

SPLICERS—for Magnetic Recording Tape

Maurer, Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.
SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.
Yale Industries Corp., 82-09 251st St., Bellrose 26, N. Y.

SPRINGS

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
Ace Spring Mfg. Co., 77 W. Houston St., New York 12, N. Y.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
Eastern Tool & Mfg. Co., 1 Montgomery St., Belleville 9, N. J.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Gorrell & Gorrell, Haworth, N. J.
Hunter Spring Co., 21 Spring Ave., Lansdale, Pa.
INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. ADV. PG. 575.
Lee Spring Co., Inc., 32 Main St., Brooklyn 1, N. Y.
Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, Ill.
Newcomb Spring Corp., 72 E. Hawthorne Ave., Valley Stream, N. Y.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
Queens Tool Engineering & Mfg. Co., 15 Front St., Rockville Centre, N. Y.
Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
TELETOB INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
Texas Instruments Inc., 6000 Lemmor Ave., Dallas, Texas.

SPRINGS—Antenna Tension

Newcomb Spring Corp., 72 E. Hawthorne Ave., Valley Stream, N. Y.
Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
Wind Turbine Co., E. Market St. & Penna. R.R., West Chester, Pa.

SPRINGS—Instrument Hairsprings

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.

SPRINGS—Precision

Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
Ace Spring Mfg. Co., 77 West Houston St., New York 12, N. Y.
All-Weather Springs, 140 Cedar St., New York, N. Y.
Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
Braun Tool & Instrument Co., Inc., H., 140 Fifth Ave., Hawthorne, N. J.
Chatillon & Sons, John, 85 Cliff St., New York, N. Y.
Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
Hunter Spring Co., 21 Spring Ave., Lansdale, Pa.
Lewis Spring & Mfg. Corp., 2656 W. North Ave., Chicago 47, Ill.

Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, Ill.
Newcomb Spring Corp., 72 E. Hawthorne Ave., Valley Stream, N. Y.
Reliable Spring & Wire Forms Co., Fulton Rd. & Paris Ave., Cleveland 9, Ohio.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

STAMPS—Marking

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.
Diamond Union Stamp Works, 81 Washington St., Boston, Mass.
KRENGEL MFG. CO., INC., 227 Fulton St., New York, N. Y. ADV. PG. 599.
Noble & Westbrook Mfg. Co., 27 Westbrook St., East Hartford 8, Conn.
Numberall Stamp & Tool Co., Huguenot Park, Staten Island 12, N. Y.
Schmidt, Inc., Geo. T., 1804 Belle Plaine, Chicago 13, Ill.

STANDARDS—Capacitance

STANDARDS—Frequency

STANDARDS—Inductance

See **INSTRUMENTS—Electrical Measuring**

STANDARDS—Frequency, Microwave

See **MICROWAVE ACCESSORIES**

STANDARDS—Laboratory Time

AMERICAN TIME PRODUCTS, INC., 580 Fifth Ave., New York 36, N. Y. ADV. PG. 322.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
Norrman Laboratories, Ernst, Williams Bay, Wis.
Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.
Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

STANDARDS—Q

BOONTON RADIO CORP., Boonton, N. J. ADV. PG. 158.

STANDARDS—Resistance

See **INSTRUMENTS—Electrical Measuring**

STANDARDS EQUIPMENT—Calibration

CALIDYNE CO., P. O. Box 72, Winchester, Mass. ADV. PG. 509.
Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
El Mec Laboratories, Inc., 730 Boulevard, Kenilworth, N. J.
EMPIRE DEVICES PRODUCTS CORP., 38-15 Bell Blvd., Bayside, N. Y. ADV. PG. 277.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GERTSCH PRODUCTS, INC., 11846 Mississipp Ave., P. O. Box 13856, Los Angeles 25, Calif. ADV. PG. 671.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 609.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.

STANDARD WAVE

See **DETECTORS**

STANDS—Microphone

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
Eastern Mike-Stand Co., 56 Christopher Ave., Brooklyn 12, N. Y.
Electro-Voice, Inc., Buchanan, Mich.
Magnasno Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
Racon Electric Co., 1261 Broadway, New York 1, N. Y.
Snyder Mfg. Co., Philadelphia 40, Pa.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Stephens Mfg. Co., 8538 Warner Drive, Culver City, Calif.
Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.

STANDS—Speaker

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.
Queens Tool Engineering & Mfg. Co., 15 Front St., Rockville Centre, N. Y.

STEATITE

See **INSULATION MATERIALS**

STETHOGRAPHS AND STETHOPHONES

Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.

STETHOSCOPES—Amplifying

Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
SANBORN CO., 39 Osborn St., Cambridge 39, Mass. ADV. PG. 353.
Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

STILLS & DEMINERALIZERS

See **DEMINERALIZERS & STILLS—Water**

STIMULATORS

BIRTCHEP CORP., 4371 Valley Blvd., Los Angeles 32, Calif. ADV. PG. 545.
EDIN CO., INC., 207 Main St., Worcester, Mass. ADV. PG. 489.
Electro-Medical Lab., Inc., South Woodstock 8, Vt.
Gorrell & Gorrell, Haworth, N. J.
Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
Wappler, Inc., 27-10 Astoria Blvd., Long Island City 2, N. Y.

STOOLS & BENCHES—for Work Assembly

Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
Royal Metal Mfg. Co., 175 N. Michigan Ave., Chicago 1, Ill.
Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.

STRAIGHTENERS—Pin, Tube

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
DURO SPECIALTY CO., INC., 8 Bennett St., Lynn, Mass. ADV. PG. 371.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
Production Tool & Fixture Co., 37 West Main St., Oyster Bay, N. Y.
Schott Co., Waite L., 3225 Exposition Pl., Los Angeles 18, Calif.
STAR EXPANSION PRODUCTS CO., 147 Cedar St., New York 6, N. Y. ADV. PG. 631.

STRAIN INDICATORS

See **INDICATORS**

STRAIN RELIEFS

B & M Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
HEYMAN MFG. CO., Kenilworth 2, N. J. ADV. PG. 464.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
Thomas & Betts Co., 36 Butler St., Elizabeth 1, N. J.
WALKER CO., GEORGE, 118 Amsterdam Ave., Passaic, N. J. ADV. PG. 624.

STRIPPERS—Wire

See **MACHINES—Wire Stripping**

WIRE STRIPPERS—Chemical
WIRE STRIPPERS—Hand
WIRE STRIPPERS—Mechanical

STRIPS—Grounding

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.
HENRY AND MILLER INDUSTRIES, 45 Rockefeller Industries, 45 Rockefeller Plaza, New York, N.Y. ADV. PG. 599.
INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. ADV. PG. 575.
Janco Corp., 3111 Winona Ave., Burbank, Calif.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 653.
Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
Vulcanized Rubber Products Co., Morrisville, Pa.

STRIPS—Mounting

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
American Radio Hardware Co., Inc., 152 S. MacQuesten Pkwy., Mt. Vernon, N. Y.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
VECTOR ELECTRONIC CO., 3352 San Fernando Rd., Los Angeles 65, Calif. ADV. PG. 620.

STROBOSCOPES

American Speedlight Corp., 480 Lexington Ave., New York 17, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.
Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.
Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
J F D MFG CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
Mercury Electronic Co., Box 450, Red Bank, N. J.
Pantek Co., Box 212, El Segundo, Calif.
Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

SUBMINIATURIZATION SERVICES

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 333.
AVION INSTRUMENT CORP., DIV. OF AMERICAN CAR & FOUNDRY CO., 295 State Highway #17, Paramus, N. J. ADV. PG. 490.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
California Bent Glass Corp., Torrance, Calif.
CENTRAL LAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
Codetypor Laboratories, 550 Fifth Ave., New York 19, N. Y.

Daystrom Instrument Co., Archbald, Pa.
Digital Products, Inc., 7643 Fay St., La Jolla, Calif.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
ELECTRALAB, INC., 76 Atherton St., Boston 30, Mass. ADV. PG. 264.
Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.
Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241.
Hillyer Instrument Co., Inc., 54 Lafayette St., New York 13, N. Y.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Instrument Development Labs., Inc., 163 Highland Ave., Needham Heights, Mass.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
RESEARCH DEVELOPMENT MANUFACTURE, 429 E. Colom St., Philadelphia 44, Pa. ADV. PG. 462.
SANDERS ASSOCIATES, INC., Nashua, N. H. ADV. PG. 622.
Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449.

Transistor Components Co., 301 Oakwood Ave., East Aurora, N. Y.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493
VICTOREEN INSTRUMENT CO., COMPONENT DIV., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.
WALKIRT CO., 145 W. Hazel St., Inglewood, Calif. ADV. PG. 467.
WAVEFORMS, INC., 333 Sixth Ave., New York 14, N. Y. ADV. PG. 560.

SUPPRESSORS—Auto Radio Ignition

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Hopkins Engineering Co., 2082 Lincoln Ave., Altadena, Calif.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
ORTHO FILTER CORP., 198 Albion Ave., Paterson, N. J. ADV. PG. 312.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London, W. 3, England.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
Wirt Co., 5221 Greene St., Philadelphia 44, Pa.

SUPPRESSORS—Noise

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.
Cornell-Dublier Electric Corp., South Plainfield, N. J.
ERIE RESISTOR CORP., 644 W. 12th St., Erie, Pa. ADV. PG. 313, 314.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Hopkins Engineering Co., 2082 Lincoln Ave., Altadena, Calif.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
Miller Co., J. W., 5917 S. Main St., Los Angeles 1, Calif.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
ORTHO FILTER CORP., 198 Albion Ave., Paterson, N. J. ADV. PG. 312.
Potter Co., 1850 Sheridan Rd., North Chicago, Ill.
Scott, Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
TELETRON INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London, W. 3, England.
U. S. ELECTRONICS CORP.; 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
Wirt Co., 5221 Greene St., Philadelphia 44, Pa.

SURFACE ANALYZERS AND COMPARATORS
See **ANALYZERS**

SURPLUS NEW & USED EQUIPMENT
See **Pages 677 to 697**

SUSPENSIONS—for Speaker Cones

Hawley Products Co., St. Charles, Ill.
Stevens Products, Inc., 86-88 Main St., East Orange, N. J.

SWITCHBOARDS—Television Master

FALSTROM CO., 44 Falstrom Court, Passaic, N. J. ADV. PG. 450.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

SWITCHES—Automatic

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
Bristol Co., The, Waterbury 20, Conn.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
Cooper Co., Clark, 349 N. Market St., Palmyra, N. Y.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-183.
GENERAL ELECTRIC CO., Apparatus Sales Div., River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
Mallory & Co., Inc., P. R. 3029 E. Washington St., Indianapolis 6, Ind.
Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
North Electric Mfg. Co., 501 S. Market St., Gallon, Ohio.
Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.
Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.

SWITCHES—Automatic Transfer

AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

SWITCHES—Coaxial Cable

ARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
ARD ELECTRONIC CORP., 1800 E. 38th St., Cleveland 14, Ohio. ADV. PG. 519.
OGART MFG. CO., 315 Stiegel St., Brooklyn 6, N. Y. ADV. PG. 569.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood St., New Rochelle, N. Y. ADV. PG. 601.
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
GENERAL COMMUNICATION CO., 681 Beacon St., Boston 15, Mass. ADV. PG. 542.
Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn.
INGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
ELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
HOMPSON PRODUCTS, INC., ELECTRONICS DIV., 2196 Clarkwood Rd., Cleveland 3, Ohio. ADV. PG. 60.
ansco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif.

SWITCHES—Control

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
erovox Corp., 740 Belleville Ave., New Bedford, Mass.
IRTRON, INC., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J. ADV. PG. 428.
LDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
is-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
istol Co., The, Waterbury 20, Conn.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardsley Ave., Elkhart, Ind. ADV. PG. 48, 49.
mar Electric Co., 3349 W. Addison St., Chicago 18, Ill.
Cunningham Son & Co., Inc., James, 13 Canal St., Rochester, N. Y.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
ert Electronics Co., 212-26 Jamaica Ave., Queens Village 28, Pa.
eral Electric Products Co., 50 Paris St., Newark 5, N. J.
braith & Son Electric Corp., C. C., 450 Ave. of the Americas, New York 11, N. Y.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
eneral Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
rt Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
ndon Switch Co., 232 N. Elm St., Waterbury 20, Conn.
hetherington, Inc., Sharon Hill, Pa.
MULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
n & Co., Inc., 541 Windsor St., Hartford 1, Conn.
llory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
ro Switch, Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
hional Acme Co., 170 E. 131st St., Cleveland 8, Ohio.
th Electric Manufacturing Co., 501 S. Market St., Gallon, Ohio.
MITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.
Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
LLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. ADV. PG. 628.
STER & BRUMFIELD, Princeton, Ind. ADV. PG. 38.
ELECTRONICS, INC., 291 N.E. 61st St., Miami 37, Fla. ADV. PG. 284.
er-Smith Corporation, Bethlehem, Pa.
andard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
h Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
trumbull Components Dept., General Electric Co., 41 Woodford Ave., Plainville, Conn.
ele & Kift, 1823 N. Monitor St., Chicago 39, Ill.
ed Electric Controls Co., 85 School St., Watertown 12, Mass.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.
terburn Mfg. Co., P. O. Box 386, Putnam, Conn.

SWITCHES—Crossbar

Cunningham Son & Co., Inc., James, 13 Canal St., Rochester, N. Y.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.

SWITCHES—Decade

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Hetherington, Inc., Sharon Hill, Pa.
Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.
J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.
Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
Pye Ltd., Cambridge, England.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SWITCHES—Duplex

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

SWITCHES—Electronic

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bristol Co., The, Waterbury 20, Conn.
C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
Cinema-Television, Ltd., Worsley Bridge Rd., London SE 26, England.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
Codetypor Laboratories, 550 Fifth Ave., New York 19, N. Y.
Comar Electric Co., 3349 W. Addison, Chicago 18, Ill.
Daystrom Instrument Co., Archbald, Pa.
De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
Ebert Electronics Co., 212-26 Jamaica Ave., Queens Village 28, Pa.
Electro Craft Industries, Inc., 68 Jackson Ave., Stamford, Conn.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
General Devices, Inc., P. O. Box 253, Princeton, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Gombos Co., Inc., John, 103 Montgomery Ave., Irvington 11, N. J.
Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 377.
Haydon Switch Co., 232 N. Elm St., Waterbury 20, Conn.
HEALTH CO., Benton Harbor, Mich. ADV. PG. 73-76.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
Kahn Research Labs., Elizabeth Bldg., 22 Pine St., Freeport, N. Y.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
R-F ELECTRONICS, INC., 291 N. E. 61st St., Miami 37, Fla. ADV. PG. 284.
Research Electronics Laboratory, Roslyn, Pa.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

SWITCHCRAFT, INC., 1320 N. Halsted St., Chicago 22, Ill. ADV. PG. 491.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.

SWITCHES—Float Type

Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
Bristol Co., The, Waterbury 20, Conn.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Gorn Electric Co., Gorn Electronics Div., 837 Main St., Stamford, Conn.
Revere Corporation of America, Wallingford 2, Conn.
Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
Trumbull Components Dept., General Electric Co., 41 Woodford Ave., Plainville, Conn.

SWITCHES—Key

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
Clare Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
Hetherington, Inc., Sharon Hill, Pa.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
SWITCHCRAFT, INC., 1320 N. Halsted St., Chicago 22, Ill. ADV. PG. 491.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SWITCHES—Knife

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
Cable Electric Products Inc., Providence, R. I.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
Hetherington, Inc., Sharon Hill, Pa.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J-B-L Instrument Co., Sycamore & Mill Rds., Clifton Heights, Pa.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
Philmore Mfg. Co., Inc., 113 University Pl., New York 13, N. Y.
Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.
Trumbull Components Dept., General Electric Co., 41 Woodford Ave., Plainville, Conn.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SWITCHES—Limit

Acro-Mu Switch Div., Acro Mfg. Co., Columbus, Ohio.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
Cherry Electrical Products Corp., 3080 Skokie Valley Rd., Highland Park, Ill.
Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Electro-Snap Switch & Mfg. Co., 4218-30 W. Lake St., Chicago 24, Ill.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 498.
Galbraith & Son Electric Corp., C. C., 450 Ave. of the Americas, New York 11, N. Y.

General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Haydon Switch Co., 232 N. Elm St., Waterbury 20, Conn.
 Hetherington, Inc., Sharon Hill, Pa.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Iron Fireman Electronics Div., 2800 S. E. Ninth Ave., Portland 2, Ore.
 Kahn & Co., Inc., 541 Windsor St., Hartford 1, Conn.
 McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.
 Micro Switch, Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 National Acme Co., 170 E. 131st St., Cleveland 5, Ohio.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Ultrasonic Corp., 640 Memorial Drive, Cambridge 39, Mass.
 Unimac Switch Div. of W. L. Maxson Corp., 460 W. 34th St., New York 1, N. Y.

SWITCHES—Mercury

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
CLIFTON PRECISION PRODUCTS CO., INC., Broadway at Marple Ave., Clifton Heights, Pa. ADV. PG. 394.
 Durakool, Inc., 1010 N. Main St., Elkhart, Ind.
 Ebert Electronics Co., 212-26 Jamaica Ave., Queens Village 28, Pa.
GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
LITTLEFUSE, INC., Des Plaines, Ill. ADV. PG. 527.
 Mack Electric Devices, Inc., 43 Glenside Ave., Wyncote, Pa.
 Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.
 Mercury Contacts, Inc., Box 615-E, Far Hills Station, Dayton 9, Ohio.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

SWITCHES—MicrowaveSee **MICROWAVE ACCESSORIES****SWITCHES—Miniature**

R-F ELECTRONICS, INC., 291 N. E. 61 St., Miami 37, Fla. ADV. PG. 284.
SWITCHES—Remote Control
AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868 Pittsburgh 30, Pa. ADV. PG. 113-124.

SWITCHES—Rotary and Band Change

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
 Ark-les Switch Corp., 51 Water St., Watertown 72, Mass.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Communication Products Co., Inc., Marlboro, N. J.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
ELECTRO DEVELOPMENT CO., 6006 W. Washington Blvd., Culver City, Calif. ADV. PG. 221.
ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 508.
 Elektro-Serv Co., 480 Johnson Ave., Brooklyn 37, N. Y.
GAMEWELL CO., THE, Newton Upper Falls 64, Mass. ADV. PG. 458.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
 General Devices, Inc., P. O. Box 253, Princeton, N. J.
GRAPHITE METALLIZING CORP., 1041 Nepperhan Ave., Yonkers, N. Y. ADV. PG. 388, 389.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
 Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
 Haydon Switch Co., 232 N. Elm St., Waterbury 20, Conn.
 Hetherington, Inc., Sharon Hill, Pa.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 J-B-T Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.
LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. ADV. PG. 494.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Micro Switch Div., Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
 Network Mfg. Co., 213 W. Fifth St., Bayonne, N. J.
 North Electric Manufacturing Co., 501 S. Market St., Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Galion, Ohio.
OHMITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.
 P. M. Industries, Inc., Stamford, Conn.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
POLLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. ADV. PG. 628.
 Price Electric Corp., Frederick, Md.
R-F ELECTRONICS, INC., 291 N. E. 61st St., Miami 37, Fla. ADV. PG. 284.
 Roller-Smith Corporation, Bethlehem, Pa.
 Royal Electric Co., Inc., Pawtucket, R. I.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
SPECIALTY AUTOMATIC MACHINE CORP., 88 Gerrish Ave., Chelsea, Mass. ADV. PG. 578.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
SWITCHCRAFT, INC., 1320 N. Halsted St., Chicago 22, Ill. ADV. PG. 491.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
THOMPSON PRODUCTS, INC., ELECTRONICS DIV., 2196 Clarkwood Ave., Cleveland 3, Ohio. ADV. PG. 60.
 Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SWITCHES—Safety

Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Electro-Snap Switch & Mfg. Co., 4218-30 W. Lake St., Chicago 24, Ill.
 Federal Electric Products Company, 50 Paris St., Newark, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hetherington, Inc., Sharon Hill, Pa.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
 Micro Switch Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.
 National Acme Co., 170 E. 131st St., Cleveland 5, Ohio.
 Recora Co., 56 W. 103rd St., Chicago 28, Ill.
 Roller-Smith Corporation, Bethlehem, Pa.
 Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Trumbull Components Dept., General Electric Co., 41 Woodford Ave., Plainville, Conn.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.
 Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.

SWITCHES—Slide

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
CENTRALAB DIV. OF GLOBE-UNION INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Hetherington, Inc., Sharon Hill, Pa.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Micro Switch Div., Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
POLLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. ADV. PG. 628.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

SWITCHES—Snap Action

Acro-Mu Switch Div., Acro Mfg. Co., Columbus, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Cable Electric Products Inc., Providence, R. I.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.
 Cherry Electrical Products Corp., 3080 Skokie Valley Rd., Highland Park, Ill.
CHICAGO TELEPHONE SUPPLY CORP., 1142 W. Beardley Ave., Elkhart, Ind. ADV. PG. 48, 49.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 11, Ohio.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.
 Comar Electric Co., 3349 W. Addison St., Chicago 18, Ill.
 Control Products, Inc., 306 Sussex St., Harrison, N. J.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Electro-Snap Switch & Mfg. Co., 4218-30 W. Lake St., Chicago 24, Ill.
ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 508.
 General Control Company 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.
GRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV. PG. 445.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
 Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
 Haydon Switch Co., 232 N. Elm St., Waterbury 20, Conn.
 Hetherington, Inc., Sharon Hill, Pa.
 Iron Fireman Electronics Div., 2800 S.E. Ninth Ave., Portland 2, Oregon.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Micro Switch Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 National Acme Co., 170 E. 131st St., Cleveland 8, Ohio.
 Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
 Price Electric Corp., Frederick, Md.
ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Sears Co., N. J., Delaware County, Roxbury, N. Y.
 Sessions Clock Co., Industrial Products Div., Forestville, Conn.
STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.
 Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
 Unimac Switch Div. of W. L. Maxson Corp., 460 W. 34th St., New York 1, N. Y.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

SWITCHES—Step Type

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&R, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-183.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
LELAND, INC., G. H., 123 Webster St., Dayton 2, Ohio. ADV. PG. 494.
 Minneapolis-Honeywell Regulator Co., 27533 Fourth Ave., S., Minneapolis, Minn.
 North Electric Manufacturing Co., 501 S. Market St., Galion, Ohio.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
POLLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. ADV. PG. 628.
 Price Electric Corp., Frederick, Md.
 Recora Co., 56 W. 103rd St., Chicago 28, Ill.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
 Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.

SWITCHES—Sub-Miniature

Micro Switch Div., Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
F ELECTRONICS, INC., 291 N.E. 61st St., Miami 37, Fla. ADV. PG. 284.

SWITCHES—Tap

Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass.
 British Electronic Sales Co., 23-3 45th Rd., Long Island City 1, N. Y.
 Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914Y E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CINEMA ENGINEERING CO., 1510 W. Verdugo Ave., Burbank, Calif. ADV. PG. 448.
CLAROSTAT MFG. CO., INC., Dover, N. H. ADV. PG. 350, 351.

Communication Products Co., Inc., Marlboro, N. J.
DAVEN CO., 191 Central Ave., Newark 4, N. J. ADV. PG. 243.
 Eastern Specialty Co., Philadelphia 40, Pa.
ELECTRO SWITCH CORP., 167 King Ave., Weymouth 88, Mass. ADV. PG. 508.

FRAYHILL, 537 Hillgrove Ave., La Grange, Ill. ADV. PG. 445.
 Grigsby-Allison Co., 407 N. Salem Ave., Arlington Heights, Ill.

Art Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.

B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
WHITE MFG. CO., 3601 Howard St., Skokie, Ill. ADV. PG. 44, 45.

WALLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. ADV. PG. 628.

F ELECTRONICS, INC., 291 N.E. 61st St., Miami 37, Fla. ADV. PG. 284.

HALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Pallsades Park, N. J.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

SWITCHES—Telemetering

SCALEX ELECTRONICS CORP., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 136, 137.
 M. Industries, Inc., Stamford, Conn.

SWITCHES—Time

S/A Div. of Elastic Stop Nut Corp. of America, 1029 Newark Ave., Elizabeth 3, N. J.
 Automatic Electric Mfg. Co., 62 State St., Mankato, Minn.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.

Coral Designs Div., Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
AMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.

Inco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 Krakool, Inc., 1010 N. Main St., Elkhart, Ind.

Electro Craft Industries Inc., 68 Jackson Ave., Stamford, Conn.
 The Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.

General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 General Controls Co., Glendale 1, Calif.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Gorn Electric Co., Gorn Electronics Div., 837 Main St., Stamford, Conn.

Gen Mfg. Co., Inc., Baraboo, Wis.
LYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.

LYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.

Hetherington, Inc., Sharon Hill, Pa.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.

In Fireman, Electronics Div., 2800 S.E. Ninth Ave., Portland 2, Oregon.

INDIS & GYR, INC., 45 W. 45th St., New York 26, N. Y. ADV. PG. 576.

Extra Laboratories, 154 11th Ave., New York 3, N. Y.
 Granite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.

Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
 Oregon Electric Co., Two Rivers, Wisconsin.

Parora Co., 56 W. 103rd St., Chicago 28, Ill.
 Radiance Automatic Lighting Co., 1919 Mead St., Racine, Wis.

Rodes, Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.
 Rock Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
 South Electric Co., 152 W. Walton St., Chicago 10, Ill.

SWITCHES—Toggle and Pushbutton

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass.

Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

Cable Electric Products Inc., Providence, R. I.
 Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.

Carter Parts Co., 213 Institute Place, Chicago 10, Ill.
 Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.

Control Products, Inc., 306 Sussex St., Harrison, N. J.
 Cutler-Hammer Inc., 411 N. 12th St., Milwaukee 1, Wis.

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza, S., Long Island City, N. Y.
 Electro-Snap Switch & Mfg. Co., 4218-30 W. Lake St., Chicago 24, Ill.

Federal Electric Products Co., 50 Paris St., Newark 5, N. J.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.

GEE-LAR MFG. CO., 919 Elm St., Rockford, Ill. ADV. PG. 292.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.
 Haydon Switch Co., 232 N. Elm St., Waterbury 20, Conn.

Hetherington, Inc., Sharon Hill, Pa.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.

JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.

KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.

Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.

MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.

Micro Switch Div. of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.

National Acme Co., 170 E. 131st St., Cleveland 8, Ohio.

Network Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.

Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.
 Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.

POLLAK CORP., JOSEPH, 75-99 Freeport St., Dorchester 22, Mass. ADV. PG. 628.

Power Equipment Co., 5740 Nevada East, Detroit 34, Mich.

Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.

ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.

Royal Electric Co., Inc., Pawtucket, R. I.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.

STACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

SWITCHCRAFT, INC., 1320 N. Halstead St., Chicago 22, Ill. ADV. PG. 491.

UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.

Ultrasonic Corp., 640 Memorial Drive, Cambridge 39, Mass.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

SWITCHES—Transformer

J-B-L Instrument Co., Sycamore & Mill Rd., Clifton Heights, Pa.
 Koltan Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

Tech Laboratories, Inc., Bergen & Edsall Blvds., Pallsades Park, N. J.

SWITCHES—Vacuum

CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.

Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
 Coral Designs Div., Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

EITEL-McCULLOUGH INC., San Bruno, Calif. ADV. PG. 270, 271.

Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Gorn Electric Co., Gorn Electronics Div., 837 Main St., Stamford, Conn.

JENNINGS RADIO MFG. CO., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif. ADV. PG. 268, 269.

Mack Electric Devices, Inc., 43 Glenside Ave., Wyncote, Pa.

McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.

NAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.

National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.

Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.

Pioneer Electronics Corp., Santa Monica, Calif.
 Sperti-Faraday Inc., Cincinnati Div., Cincinnati 2, Ohio.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.

SYNCHROS
 See **SERVO**

SYNCHROSCOPES
BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.

Control Corp., 718 Central Ave., Minneapolis 14, Minn.
 Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Hycon Mfg. Co., 2961 E. Colbrado St., Pasadena 8, Calif.

LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.

Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

TACHOMETERS—Electronic
 Airmeac Ltd., High Wycombe, Buckinghamshire, England.

ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.

BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.

Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television, Ltd., Worsley Bridge Rd., London SE 26, England.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

Courter Electric Products, Inc., Boyne City, Mich.
 Detector Corp., 5420 Vineland Ave., North Hollywood, Calif.

Feedback Controls, Inc., 503 Rhode Island Ave., N.E., Washington 2, D. C.
 Foxboro Co., The, Foxboro, Mass.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.

HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.

KEARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.

Metron Instrument Co., 432 Lincoln St., Denver 9, Colo.
 Micro Balancing, Inc., 191 Herricks Rd., Garden City Park, N. Y.

MINNEAPOLIS-HONEYWELL REGULATOR INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.

Potter Aeronautical Co., Route No. 22, Union, N. J.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Servospeed Div. of Electro Devices Inc., 4 Godwin Ave., Paterson, N. J.

STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 154.

Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

TAPES—Electrical Insulation
 Accurate Mfg. Co., 44 Hepworth Place, Garfield, N. J.
 American Mica Insulation Co., Manasquan, N. J.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
 Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.
 Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.

CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Dow Corning Corp., Midland, Mich.
 du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Delaware.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
 ETHYLENE CHEMICAL CORP., 245 Broad St., Summit, N. J. ADV. PG. 560.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.
 Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.
 IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 National Electric Coil Co., Columbus 16, Ohio.
 NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
 New Jersey Wood Finishing Co., Amboy Ave., Woodbridge, N. J.
 Permacel Tape Corp., U. S. Highway 1, New Brunswick, N. J.
 POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 RESIN INDUSTRIES, INC., Santa Barbara, Calif. ADV. PG. 154.
 Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
 Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
 U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 Wright & Sons Co., William E., West Warren, Mass.

TAPES—Lacing

See CORDS—Lacing

TAPES—Recording

Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Audio Devices Inc., 444 Madison Ave., New York 22, N. Y.
 Audio-Master Corp., 17 E. 45th St., New York 17, N. Y.
 Bristol Co., The, Waterbury 20, Conn.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Fidelitone Corp., 1616 Devon Ave., Chicago 26, Ill.
 GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Jensen Industries, Inc., 329 S. Wood St., Chicago, Ill.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 Permo, Inc., 6415 Ravenswood Ave., Chicago 26, Ill.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Recoton Corp., 147 W. 22nd St., New York 11, N. Y.
 Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.
 Soundscriber Corp., 146 Munson St., New Haven 4, Conn.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.
 Wilcox-Gay Corp., Charlotte, Mich.
 Zephyr Products Co., 129 E. 124th St., New York 35, N. Y.

TECHNICAL BOOKS—Publishers

Academic Press Inc., 125 E. 23rd St., New York 10, N. Y.
 American Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y.
 American Institute of Electrical Engineers, 33 W. 39th St., New York, N. Y.
 American Radio Relay League, West Hartford, Conn.
 American Standards Association, 70 E. 45th St., New York, N. Y.
 Audel & Co., Theodore, 49 W. 23rd St., New York, N. Y.
 Bernards Publishers Ltd., The Gramplans, Western Gate, London W. 6, England.
 Blakiston Co., 1012 Walnut St., Philadelphia 5, Pa.
 Boyce-Roche Book Co., 460 Bloomfield Ave., Montclair, N. J.
 Chapman & Hall Ltd., 37 Essex St., London, W. C. 2, England.
 Day Co. Inc., John, 62 W. 45th St., New York, N. Y.

Dover Publications Inc., 1780 Broadway, New York, N. Y.
 Editors and Engineers Ltd., Santa Barbara, Calif.
 Electronics Research Publishing Co., Inc., 480 Canal St., New York 13, N. Y.
 Elsevier Publishing Co., Inc., 215 Fourth Ave., New York, N. Y.
 Engineers Council for Professional Development, 29 W. 39th St., New York, N. Y.
 Federal Telephone & Radio Corp., Publication Dept., 67 Broad St., New York 4, N. Y.
 Harper & Brothers, 49 E. 33rd St., New York, N. Y.
 Industrial Research Service, Dover, N. H.
 Institute of Radio Engineers, Inc., 1 E. 79th St., New York, N. Y.
 International Publishers Co., 381 Fourth Ave., New York, N. Y.
 Interscience Publishers Inc., 215 Fourth Ave., New York 3, N. Y.
 Irwin Inc., Richard D., 3201 S. Michigan Ave., Chicago 16, Ill.
 MacMillan Co., The, 60 Fifth Ave., New York 11, N. Y.
 McGRAW-HILL BOOK COMPANY, INC., 330 W. 42nd St., New York 36, N. Y. ADV. PG. 638, 648, 654.
 Maedel Publishing House, 593 East 38th St., Brooklyn 3, N. Y.
 National Bureau of Standards, Washington, D. C.
 Nelson & Sons, Thomas, 385 Madison Ave., New York, N. Y.
 Oxford University Press, 114 Fifth Ave., New York, N. Y.
 Philips Gloeilampenfabrieken, N. V., Eindhoven, The Netherlands.
 Philosophical Library, Publishers, 15 E. 40th St., New York 16, N. Y.
 Pitman Publishing Corp., 2 W. 45th St., New York, N. Y.
 Prentice-Hall Inc., 70 Fifth Ave., New York, N. Y.
 Princeton University Press, Princeton, N. J.
 Radcraft Publications Inc., 25 W. Broadway, New York, N. Y.
 Radio Corporation of America, R C A Laboratories Div., Princeton, N. J.
 Radio Corporation of America, Tube Dept., Harrison, N. J.
 Rider Publications Inc., John F., 480 Canal St., New York 13, N. Y.
 Rinehart Books Inc., 232 Madison Ave., New York 16, N. Y.
 Ronald Press Co., The, 15 E. 26th St., New York 10, N. Y.
 Sams Co., Inc., Howard W., 2201 E. 46th St., Indianapolis 5, Ind.
 Stechert-Hafner Inc., 31 East 10th St., New York, N. Y.
 Technical Associates, Inc., 129 W. 52nd St., New York 19, N. Y.
 United Catalog Publishers Inc., 106-110 Lafayette St., New York 13, N. Y.
 Universal Scientific Co. Inc., Vincennes, Ind.
 University of Chicago Press, The, Chicago, Ill.
 VanNostrand Co., Inc., D., 250 Fourth Ave., New York 3, N. Y.
 Wiley & Sons Inc., John, 440 Fourth Ave., New York, N. Y.

TEES—Microwave

See MICROWAVE ACCESSORIES
 Hybrid Junctions—Microwave

TEFLON

See PLASTIC MATERIALS
 Polytetrafluorethylene

TELEMETERING SYSTEMS—Electronic

AIR ASSOCIATES, INC., Teterboro, N. Y. ADV. PG. 83.
 APPLIED SCIENCE CORP. OF PRINCETON, THE, P. O. Box 44, Princeton, N. J. ADV. PG. 618.
 AUDIO PRODUCTS CORP., 2265 Westwood Blvd., Los Angeles 64, Calif. ADV. PG. 653.
 Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
 Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bristol Co., The, Waterbury 20, Conn.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 54, Calif.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. 406, 407.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
 Control Corp., 718 Central Ave., Minneapolis 14, Minn.
 DAVIES LABORATORIES, INC., 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 658.
 Daystrom Instrument Co., Archbald, Pa.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro-Mechanical Research, Inc., Ridgefield, Conn.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF I T & T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Feedback Controls, Inc., 503 Rhode Island Ave., N. E., Washington 2, D. C.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 General Devices, Inc., P. O. Box 253, Princeton, N. J.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 HAMMARLUND MFG. CO., 460 W. 34th St., New York 1, N. Y. ADV. PG. 305-307.

Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.
 MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Parsons Co., Ralph H., 135 W. Dayton St., Pasadena 5, Calif.
 Phecco Inc., 3640 Woodland St., Baltimore 15, Md.
 POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Radiation, Inc., Melbourne, Fla.
 Rosen Engineering Products, Inc., Raymond, 32nd Walnut Sts., Philadelphia 4, Pa.
 SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Vapor Recovery Systems Co., 2820 N. Alameda, P. O. Box 231, Compton, Calif.

TELEPHONES—Handsets

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Electro-Voice, Inc., Buchanan, Mich.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 KELLOGG SWITCHBOARD & SUPPLY CO., 79 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
 Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.
 ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 TRIMM, INC., 400 W. Lake St., Libertyville, Ill. ADV. PG. 639.

TELEPHONES—Handsets, Sound Powered

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
 KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Palmer, Inc., M. V., 4002 Fruit Valley Rd., Van Nuys, Wash.
 RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Cover.
 ROANWELL CORP., 662 Pacific St., Brooklyn 17, N. Y. ADV. PG. 384.
 Sears Co., M. J., Delaware County, Roxbury, N. Y.
 Telephonics Corp., Park Ave., Huntington, N. Y.
 WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138.

TELEVISION MASKS

See MASKS—Television

TELEVISION PROJECTION SCREENS

See SCREENS—Television Projection

TELEVISION SYSTEMS—Industrial

B-T Mfg. Corp., 38 N. Second Ave., Mount Vernon, N. Y.
 Bace Television Corp., Green & Leuning Sts., South Hackensack, N. J.
 Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Capehart-Farnsworth Corp., 3700 E. Pontiac, Fort Wayne 1, Ind.
 Conrac, Inc., Glendora, Calif.
 Dage Electronics Div. of Thompson Products, Inc., 69 N. Second St., Beach Grove, Ind.
 Diamond Power Specialty Corp., Electronics Dept., Lancaster, Ohio.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 International Telemeter Corp., Ampli-Vision Div., 200 Stoner Ave., Los Angeles 25, Calif.
 Jerrold Electronics Corp., 26th & Dickinson Sts., Philadelphia 6, Pa.
 KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 Kaye-Halbert Corp., 3555 Hayden Ave., Culvert City, Calif.
 Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
 Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 Pye Ltd., Cambridge, England.
 RADIO CORP. OF AMERICA, ENGINEERING PRODUCTS DIV., Camden, N. J. ADV. PG. Inside Back & Back Covers.

SPENCER-KENNEDY LABS., INC., 186 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 555.
ELECTROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
ELECTRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
 Television Utilities Corp., 1315 Jericho Turnpike, New Hyde Park, N. Y.
 Transvision, Inc., 460 North Ave., New Rochelle, N. Y.
 Willys Electronics Div. of Willys Motors, Inc., Toledo, Ohio.

TEMPERATURE See INDICATORS

ENSIONS—Coil Winding

ASSOCIATED AMERICAN TRADING DIVISION, 8010 Empire State Bldg., New York 1, N. Y. ADV. PG. 669.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 34th St., Brooklyn 32, N. Y. ADV. PG. 569.
 Stanat Mfg. Co., 47-32 37th St., Long Island City 1, N. Y.
 Tensitron, Inc., Harvard, Mass.

TERMINAL BLOCKS

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
 American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
 Ark-les Switch Corp., 51 Water St., Watertown 72, Mass.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 22, Hillside, N. J. ADV. PG. 488.
 Cable Electric Products Inc., Providence, R. I.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Continental Connector Corp., 30-30 Northern Blvd., Long Island City, N. Y.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
 Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.
HARVEY HUBBELL, INC., State St. & Bostwick Ave., Bridgeport 2, Conn. ADV. PG. 515.
 Isco Copper Tube & Products, Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
J. F. D. MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
JONES DIV. HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
 Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
 Marathon Electric Mfg. Corp., Randolph & Cherry Sts., Wasau, Wis.
 Mica Insulator Co., Schenectady 1, N. Y.
 Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.

Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Molding Corp. of America, 40 Church St., Pawtucket, R. I.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 North Electric Mfg. Co., 501 S. Market St., Gallon, Ohio.
 Pfeiffer Products, 3901 W. 54th St., Los Angeles, Calif.
RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
 Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
 Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.
 Shaw Insulator Co., 160 Coist St., Irvington 11, N. J.
 Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Square D Co., 4041 N. Richards, Milwaukee 12, Wis.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 States Co., 19 New Park Ave., Hartford 6, Conn.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
TELETRO INDUSTRIES CORP., 35-18 37th St., Long Island City, N. Y. ADV. PG. 538.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

TERMINAL BOARDS

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
 American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
 Ark-les Switch Corp., 51 Water St., Watertown 72, Mass.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
BENNETT PRODUCTS MFG. CO., P. O. Box 1055, Palo Alto, Calif. ADV. PG. 529.
 Bliss Electronics Corp., Box 123, Sussex, N. J.
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 22, Hillside, N. J. ADV. PG. 488.
 Burken Lamination Corp., 811 Whittier St., Bronx 59, N. Y.
 Cable Electric Products Inc., Providence, R. I.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Continental Connector Corp., 30-30 Northern Blvd., Long Island City, N. Y.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 Duramark, Inc., 2 Secatoag Ave., Port Washington, N. Y.
EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.
HARVEY HUBBELL, INC., State St. & Bostwick Ave., Bridgeport 2, Conn. ADV. PG. 515.
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 457.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Johns-Manville, 22 E. 40th St., New York 16, N. Y.
JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
 Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
 Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
LYNN ELECTRONIC RESEARCH CO., 9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 580.
Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
 Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Molding Corporation of America, 40 Church St., Pawtucket, R. I.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
 Newton Co., 55 Elm St., Manchester, Conn.
 Pfeiffer Products, 3901 W. 54th St., Los Angeles, Calif.
 Precision Metal Products Co. of Malden, 41 Elm St., Stoneham 80, Mass.
RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
 Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.
 Shaw Insulator Co., 160 Coit St., Irvington 11, N. J.
 Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 States Co., 19 New Park Ave., Hartford 6, Conn.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
TELETRO INDUSTRIES CORP., 35-18 37th St., Long Island City, N. Y. ADV. PG. 538.
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
 U. M. & F. Mfg. Corp., 10929 Vanowen St., North Hollywood, Calif.
UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.
 Warren Plastics Corp., Warren, Pa.
 Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.

TERMINAL STRIPS

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
 Actloncraft Products, 8 Sagamore Hill Dr., Port Washington, N. Y.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg, Pa.
ALDEN PRODUCTS CO., 112 No. Main St., Brockton 64, Mass. ADV. PG. 440.
 American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
 Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
BENNETT PRODUCTS MFG. CO., P. O. Box 1055, Palo Alto, Calif. ADV. PG. 529.
 Birnbach Radio Co., 145 Hudson St., New York 13, N. Y.
 Brach Mfg. Co., 200 Central Ave., Newark 4, N. J.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BRUNO NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 22, Hillside, N. J. ADV. PG. 488.
 Burken Lamination Corp., 811 Whittier St., Bronx 59, N. Y.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.

- Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
- Continental Connector Corp., 30-30 Northern Blvd., Long Island City, N. Y.
- CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del-ADV. PG. 399-402.
- Cook Electric Co., 2700 Southport Ave., Chicago 14, Ill.
- Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.
- DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
- Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
- Duramark, Inc., 2 Secatoga Ave., Port Washington, N. Y.
- EBY, CO., HUGH H., 2700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
- ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
- Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.
- FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
- FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
- GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
- GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
- GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
- General Laminated Products, Inc., 2857 S. Halsted St., Chicago 8, Ill.
- HARVEY HUBBELL, INC., State St. & Bostwick Ave., Bridgeport 2, Conn. ADV. PG. 515.
- HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176.
- HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
- INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 457.
- INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
- Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
- Insuline Corp of America, 186 Granite St., Manchester, N. H.
- Isolantite Manufacturing Corp., Stirling, N. J.
- J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
- JONES DIV., HOWARD B., CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
- Jowit Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
- KELLOGG SWITCHBOARD & SUPPLY CO., 70 W. Monroe St., Chicago 3, Ill. ADV. PG. 497.
- Kellogg Electronics Corp., 423 Broome St., New York 12, N. Y.
- KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-hoe, N. Y. ADV. PG. 199.
- Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
- KULKA ELECTRIC CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
- Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
- Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
- LYNN ELECTRONIC RESEARCH CO., 9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 580.
- Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
- Mica Insulator Co., Schenectady 1, N. Y.
- Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
- Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
- Molding Corporation of America, 40 Church St., Pawtucket, R. I.
- Moore Co., Howard J., 266 William St., New York 38, N. Y.
- MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
- NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
- NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
- North Electric Mfg. Co., 501 S. Market St., Galion, Ohio.
- Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
- Olympic Plastics Co., Inc., 215 E. Washington Blvd., Los Angeles 15, Calif.
- Pfeger Products, 3901 W. 54th St., Los Angeles, Calif.
- Precision Metal Products Co. of Malden, 41 Elm St., Stoneham 80, Mass.
- RICHARDSON CO., INC., 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
- Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.
- Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
- Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
- Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
- Square D Co., 4041 N. Richards St., Milwaukee 12, Wis.
- Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London W.C. 2, England.
- States Co., 19 New Park Ave., Hartford 6, Conn.
- Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
- Stromberg-Carlson Co., Rochester 3, N. Y.
- SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
- TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
- THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
- TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496.
- UCINITE CO., DIV. OF UNITED-CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
- U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
- U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
- Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.
- Warren Plastics Corp., Warren, Pa.
- TERMINALS**
- (h) Indicates hermetically sealed types.
- Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
- AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
- Aircraft Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
- ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
- American Brass Co., 414 Meadow St., Waterbury 20, Conn.
- AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
- American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
- Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass.
- Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
- BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524.
- BENNETT PRODUCTS MFG. CO., P. O. Box 1055, Palo Alto, Calif. ADV. PG. 529.
- Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
- BRILHART PLASTICS CORP., Old Country Rd., Mineola, N. Y. ADV. PG. 653.
- British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
- BUCHANAN ELECTRICAL PRODUCTS CORP., 223 Route 22, Hillside, N. J. ADV. PG. 488.
- Burdny Engineering Co., Inc., Norwalk, Conn. (h)
- CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
- Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
- CINCH MFG. CORP., 1026 S. Homan Ave., Chicago 24, Ill. ADV. PG. 354, 355.
- CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
- CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. ADV. PG. 167.
- Continental Connector Corp., 30-30 Northern Blvd., Long Island City, N. Y.
- Dante Electric Mfg. Co., Bantam, Conn.
- DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413.
- Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
- Eastern Specialty Co., Philadelphia 40, Pa.
- EBY CO., HUGH H., 4700 Stenton Ave., Philadelphia 44, Pa. ADV. PG. 465.
- ELECTRICAL INDUSTRIES, INC., 44 Summer Ave., Newark 4, N. J. ADV. PG. 229.
- FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
- FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
- Fusite Corp., 6000 Fernview Ave., Cincinnati 13, Ohio. (h)
- GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
- GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
- GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61. (h)
- GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.
- Glass-Solder Engineering, 300 N. Lake Ave., Pasadena 4, Calif. (h)
- HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176. (h)
- HERMASEAL CO., INC., 1101 Lafayette St., Elkhart, Ind. ADV. PG. 258. (h)
- HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223. (h)
- INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 457. (h)
- Insuline Corp of America, 186 Granite St., Manchester, N. H.
- INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236. (h)
- IPPOLITO & CO., INC., JAMES, 401 Concord Ave., Newark 54, N. Y. ADV. PG. 625.
- Isolantite Manufacturing Corp., Stirling, N. J.
- J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
- JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
- Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y. (h)
- KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.
- Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
- KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-hoe, N. Y. ADV. PG. 199.
- Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
- KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567.
- Lundey Associates, 694 Main St., Waltham 54, Mass.
- LYNN ELECTRONIC RESEARCH CO., 9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 580.
- MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, Ill. ADV. PG. 656.
- Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
- Marshall Associates, Inc., John, Box 2463, Bridgeport 8, Conn.
- METHODE MFG. CORP., 2021 W. Churchill St., Chicago 47, Ill. ADV. PG. 454, 455.
- Micarta Fabricators, Inc., 5324 Ravenswood Ave., Chicago 40, Ill.
- Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
- Mitronics Inc., 232 Thirteenth Ave., Newark, N. J. (h)
- Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
- Molding Corp. of America, 40 Church St., Pawtucket, R. I. (h)
- Moore Co., Howard J., 266 William St., New York 38, N. Y.
- Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
- MYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137. (h)
- NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621. (h)
- NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
- NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
- North Electric Manufacturing Co., 501 S. Market St., Galion, Ohio.
- Northfield-Linden Corp., 4400 Austin Blvd., Island Park, N. Y.
- Pacific Electriccord Co., P. O. Box 15805, Cranshaw Sta., Los Angeles 8, Calif.
- Patton-MacGuey Co., 17 Virginia Ave., Providence 5, R. I.
- PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
- Precision Metal Products Co. of Malden, 41 Elm St., Stoneham 80, Mass.
- Quality Products Co., 387 Charles St., Providence 4, R. I. (h)
- Robco Mfg. Div. of Pilot International Corp., 27-02 Bridge Plaza, N., Long Island City 1, N. Y. (h)
- Rohden Manufacturing Co., 4739 Montrose Ave., Chicago 41, Ill.
- Sargent & Co., New Haven 9, Conn.
- Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
- SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 587. (h)
- Sealtron Corp., Reading Rd. at Amity, Cincinnati 15, Ohio. (h)
- Shakeproof, Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
- SHERMAN MFG. CO., H. B., 22 Barney St., Battle Creek, Mich. ADV. PG. 661.
- Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
- Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
- Sparti-Faraday, Inc., Cincinnati Div., Cincinnati 2, Ohio. (h)
- SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 562. (h)
- Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
- Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.
- Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
- STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
- SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706. (h)
- TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538. (h)
- Thomas & Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J.
- THOMPSON-BREMER & CO., 1644 W. Hubbard St., Chicago 22, Ill. ADV. PG. 93.
- THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424. (h)
- TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496. (h)
- TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
- TUBULAR RIVET & STUD CO., Linden St., Quincy, Mass. ADV. PG. 300.
- UCINITE CO., DIV. OF UNITED CARR FASTENER CORP., 459 Watertown St., Newtonville, Mass. ADV. PG. 329.
- United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.
- U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
- U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.

Vitroseal Corp., 6325 Guilford Ave., Box 6048, Indianapolis 20, Ind.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.
 Waltham Screw Co., Waltham, Mass.
 Warren Plastics Corp., Warren, Pa. (h)
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITSO, INC., 2037 Churchill St., Chicago 47, Ill. ADV. PG. 112.
WINCHESTER ELECTRONICS, INC., 15 Crescent Rd., Glenbrook, Conn. ADV. PG. 164, 165.
 Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif. (h)
 Wright Hepp Associates, Inc., 251 West St., South Hackensack, N. J. (h)
 Zlerick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

TERMINALS—Miniature & Subminiature

M—Miniature . . . S—Subminiature
 Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio. M
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615. M-S
 Aircraft-Marine-Products, Inc., 2100 Paxton St., Harrisburg 10, Pa. M-S
ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440. M
 Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass. M-S
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524. M
BENNETT PRODUCTS MFG. CO., P. O. Box 1055, Palo Alto, Calif. ADV. PG. 529. M-S
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. M-S
 Burndy Engineering Co., Inc., Norwalk, Conn. M
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240. M-S
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616. S
 Continental Connector Corp., 30-03 Northern Blvd., Long Island City, N. Y. M-S
DEJUR-AMSCO CORP., Northern Blvd. at 45th St., Long Island City 1, N. Y. ADV. PG. 411, 413. M-S
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492. M-S
HARVEY HUBBELL, INC., State St. & Bostwick Ave., Bridgeport 2, Conn. ADV. PG. 515. M-S
HELDOR MFG. CORP., HELDOR BUSHING & TERMINAL CO., INC., 238 Lewis St., Paterson, N. J. ADV. PG. 176. M
HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223. M-S
INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. ADV. PG. 575. S
 Isolantite Manufacturing Corp., Stirling, N. J. M
 Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y. M
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y. M-S
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199. M-S
KULKA ELECTRIC MFG. CO., INC., 633 S. Fulton Ave., Mount Vernon, N. Y. ADV. PG. 567. M-S
 Lundy Associates, 694 Main St., Waltham 54, Mass. M
LYNN ELECTRONIC RESEARCH CO., 9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif. ADV. PG. 580. M-S
MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, Ill. ADV. PG. 656. M-S
 Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill. M
 Molding Corporation of America, 40 Church St., Pawtucket, R. I. M-S
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621. M-S
NATIONAL TEL-TRONICS CORP., 35 St. Casimir Ave., Yonkers, N. Y. ADV. PG. 312. M-S
 North Electric Manufacturing Co., 501 S. Market St., Gallion, Ohio. M-S
 Northfield-Linden Corp., 4400 Austin Blvd., Island Park, N. Y. M
 Precision Metal Products Co. of Malden, 41 Elm St., Stoneham 80, Mass. M-S
RESEARCH DEVELOPMENT MANUFACTURE, 429 E. Colom St., Philadelphia 44, Pa. ADV. PG. 462. M-S
SEAELECTRO CORP., 186 Union Ave., New Rochelle, N. Y. ADV. PG. 611. M-S
SPHERE CO., INC., P. O. Box 557, Short Hills, N. J. ADV. PG. 562. S
THOR CERAMICS, INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424. M
TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496. M-S
TUBULAR RIVET & STUD CO., Linden St., Quincy, Mass. ADV. PG. 300. M
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif. M
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605. M
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511. M
WHITSO, INC., 2037 Churchill St., Chicago 47, Ill. ADV. PG. 112. M-S
WINCHESTER ELECTRONICS, INC., 15 Crescent St., Glenbrook, Conn. ADV. PG. 164, 165. M
 Wright-Hepp Associates, Inc., 251 West St., South Hackensack, N. J. M-S

TERMINALS—Solderless

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
BENNETT PRODUCTS MFG. CO., P. O. Box 1055, Palo Alto, Calif. ADV. PG. 529.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
BUCHANAN ELECTRICAL PRODUCTS CORP., 223 U. S. Route 22, Hillside, N. J. ADV. PG. 488.
 Burndy Engineering Co., Inc., Norwalk, Conn.
 Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.
 Dente Electric Mfg. Co., Bantam, Conn.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
 Frankel Connector Co., 27 Vestry St., New York, N. Y.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
HARVEY HUBBELL, INC., State St. & Bostwick Ave., Bridgeport 2, Conn. ADV. PG. 515.
 Ilisco Copper Tube & Products Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 457.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.
MALCO TOOL & MFG. CO., 4025 W. Lake St., Chicago 24, Ill. ADV. PG. 656.
 Mandex Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
 Molding Corporation of America, 40 Church St., Pawtucket, R. I.
NATIONAL TEL-TRONICS CORP., 35 St. Casimir Ave., Yonkers, N. Y. ADV. PG. 312.
 North Electric Manufacturing Co., 501 S. Market St., Gallion, Ohio.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
SHERMAN MFG. CO., H. B., 22 Barney St., Battle Creek, Mich. ADV. PG. 661.
 Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
 Thomas & Betts Co., 36 Butler St., Elizabeth 1, N. J.
THOMPSON-BREMER & CO., 1644 W. Hubbard St., Chicago 22, Ill. ADV. PG. 93.
TUBULAR RIVET & STUD CO., Linden St., Quincy, Mass. ADV. PG. 300.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 Vaco Products Co., 317 E. Ontario St., Chicago 11, Ill.
 Whitaker Cable Corp., Kansas City 16, Mo.
 Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.

TERMINATIONS—Microwave
 See **MICROWAVE ACCESSORIES**
TEST CHAMBERS
 See **CHAMBERS—Test**
TEST EQUIPMENT—Environmental
AMERICAN RESEARCH CORP., 11 Brook St., Bristol, Conn. ADV. PG. 591.
CONRAD, INC., 52 W. 4th, Holland, Mich. ADV. PG. 647.
 Environmental Equipment Corp., 369 Linden St., Brooklyn 27, N. Y.
 Hudson Bay Division, Refrigeration Systems, Inc., 646 W. Washington, Chicago 6, Ill.
 International Radiant Corp., 40 Matinecock Ave., Port Washington, N. Y.
 Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.
MURPHY & MILLER, INC., 1322 S. Michigan Ave., Chicago 5, Ill. ADV. PG. 334.
TENNEY ENGINEERING INC., 1090 Springfield Rd., Union, N. J. ADV. PG. 487.
 Webber Mfg. Co., Inc., 2745 Madison Ave., Indianapolis 3, Ind.

TEST LEADS
 See **LEADS—Test**
TESTERS—Automatic Tube
 Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W.C. 2, England.
RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
 Research Electronics Laboratory, Roslyn, Pa.
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

TESTERS—Battery
 Booth Co., Arthur E. 265 S. Alexandria Ave., Los Angeles, Calif.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
HOYT ELECTRICAL INSTRUMENT WORKS, 42 Carleton St., Cambridge 42, Mass. ADV. PG. 196.
 King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.
OPAD-GREEN CO., 71-5 Warren St., New York 7, N. Y. ADV. PG. 341.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
 Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif.
 Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.
 Sterling Mfg. Co., 1201 Wentworth, Cleveland, Ohio.
 Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.
 Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio.
 Supreme, Inc., Greenwood, Miss.

TESTERS—Capacitor

Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Hivolt Ltd., 34A Pottery Lane, London W, 11, England.
 Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
 Lehigh Valley Electronic Mfg. Co., 215 S. 3rd St., Allentown, Pa.
 MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W.C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
TELETRON INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.

TESTERS—Cathode Tube

Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
 International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.
 Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
 Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.
 Massachusetts Institute of Television, Crow's Nest, South Lee, Mass.
 Miller Television Co., 2840 Naomi St., Burbank, Calif.
 National Union Radio Corp., 237 Jacksonville Rd., Hattboro, Pa.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Precise Development Corp., 2 Neil Court, Oceanside, N. Y.
 Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
 Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.
RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
 Research Electronics Laboratory, Roslyn, Pa.
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
 Suporex Electronics Corp., 23 Atherton Ave., Yonkers, N. Y.
 Superior Instrument Co., 2435 White Plains Rd., New York 67, N. Y.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
TELEPHONE INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
Transvision, Inc., 460 North Ave., New Rochelle, N. Y.

TESTERS—Circuit

Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
Bliss Electronic Corp., Box 123, Sussex, N. J.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.
Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Fordham Mfg. Co., 2220 Pearsall Ave., New York 69, N. Y.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
Hall, Inc., F. Sumner, Amityville, N. Y.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Ideal Industries, Inc., 5103 Park & Borden Aves., Sycamore, Ill.
Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.
Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
McShan Development Corp., 71 Murray St., New York 7, N. Y.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
ORTHON CORP., THE, 196 Albion Ave., Paterson 2, N. J. ADV. PG. 628.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
Precision Electronics, 643 Milwaukee Ave., Chicago 22, Ill.
Radar Engineers, 4528 Fifth Ave., N. E., Seattle 5, Wash.
Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
Roller-Smith Corporation, Bethlehem, Pa.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
Superior Instrument Co., 2435 White Plains Rd., New York 67, N. Y.
Supreme Inc., Greenwood, Miss.
TELETRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
Vidarie Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

TESTERS—Coating Thickness

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.
BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.
Gardner Labs., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

TESTERS—Color Infra Red

FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 20, N. Y. ADV. PG. 460.
Gardner Labs., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Instrument Development Labs., Inc., 163 Highland Ave., Needham Heights, Mass.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.

TESTERS—Continuity

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.
Bliss Electronic Corp., Box 123, Sussex, N. J.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
Dante Electric Mfg. Co., Bantam, Conn.
Daystrom Instrument Co., Archbald, Pa.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo.
Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.
Hycon Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.
Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
LINK AVIATION, INC., Binghamton, N. Y. ADV. PG. 507.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
Philo Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
Radar Engineers, 4528 Fifth Ave., N. E. Seattle 5, Wash.
Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
Superior Instrument Co., 2435 White Plains Rd., New York 67, N. Y.
TELETRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

TESTERS—Crystal Testing

Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
CLARK CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.
Dunn Engineering Associates, Inc., 11 Windsor St., Cambridge 39, Mass.
Lehigh Valley Electronic Mfg. Co., 215 S. 3rd St., Allentown, Pa.
Mercury Electronic Co., Box 450, Red Bank, N. J.
MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 609.
Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.
Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.

TESTERS—Distortion

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
HEWLETT-PACKARD CO., 395 Page Mill Rd., Palo Alto, Calif. ADV. PG. 29-36.
PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 670.

TESTERS—Inductance

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
Lehigh Valley Electronic Mfg. Co., 215 S. 3rd St., Allentown, Pa.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. ADV. PG. 591.

TESTERS—Insulation

Airmec Ltd., High Wycombe, Buckinghamshire, England.
Associated Research, Inc., 3758 W. Belmont Ave., Chicago 18, Ill.
Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.
BETA ELECTRIC CORP., 33 E. 103rd St., New York 29, N. Y. ADV. PG. 225.
Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.
Bliss Electronic Corp., Box 123, Sussex, N. J.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
Dice Co., J. W., Englewood, N. J.
Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo.
Eastern Specialty Co., Philadelphia 40, Pa.
Entwistle Co., James L., 1475 Elmwood Ave., Providence 7, R. I.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL HERMETIC SEALING CORP., 99 E. Hawthorne Ave., Valley Stream, N. Y. ADV. PG. 645.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Hewson Co., Inc., John, 443 Broad St., Newark 2, N. J.
Hivolt Ltd., 34A Pottery Lane, London W. 11, England.
INDUSTRIAL TRANSFORMER CO., Gouldsburg, Pa. ADV. PG. 442, 443.
Janco Corp., 3111 Winona Ave., Burbank, Calif.
Lee Electronic Labs., Inc., 233 Dudley St., Roxbury 19, Mass.
MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.
Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
National Pneumatic Co., Inc., and Holtzer-Cabot Divisions, 125 Amory St., Boston 19, Mass.
Nothofer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
PRECISE MEASUREMENTS CO., 942 King Highway, Brooklyn 23, N. Y. ADV. PG. 650.
SHALLCROSS MFG. CO., 10 Jackson Ave., Collingdale, Pa. ADV. PG. 362.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 422, 423.
Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
Takk Corp., The, Newark, Ohio.
TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 591.
Transiron, Inc., 154 Spring St., New York 12, N. Y.
Trenton Transformer Corp., Box 568B, Trenton, N. J.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

TESTERS—Meter

Booth Co., Arthur E., 265 S. Alexandria Ave., Los Angeles, Calif.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Eastern Specialty Co., Philadelphia 40, Pa.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
PHASTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.
Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
RADIO FREQUENCY LABS., INC., Boonton 2, N. J. ADV. PG. 609.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
SPELLMAN TELEVISION CO., INC., 3029 Webster Ave., New York 67, N. Y. ADV. PG. 422, 423.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. Y.

TESTERS—Microwave Testing Equipment See MICROWAVE ACCESSORIES**TESTERS—Moisture Detection, Electronic**

American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
General Mills, Inc., Mechanical Div., 1620 Central Ave., Minneapolis 13, Minn.
MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
PESCHEL ELECTRONICS, INC., 13 Garden St., New Rochelle, N. Y. ADV. PG. 504.
Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
Tech Laboratories, Inc., Bergen & Edsall Blvds., Palisades Park, N. J.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

TESTERS—Multitesters

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 360.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.
Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.
Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.
Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

Feller Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Gyro Electronics Co., 325 Canal St., New York, N. Y.

HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.

Hycan Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

INTERNATIONAL INSTRUMENTS, INC., P. O. Box 2954, New Haven 15, Conn. ADV. PG. 248.

Jackson Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.

Jersey City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.

Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

Mercury Electronic Co., Box 450, Red Bank, N. J.

PHAOSTRON CO., 151 Pasadena Ave., South Pasadena, Calif. ADV. PG. 541.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.

Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.

RADIO CORP. OF AMERICA, TUBE DEPT., Harrison, N. J. ADV. PG. Inside Back & Back Covers

RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.

Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

Superior Instrument Co., 2435 White Plains Rd., New York 67, N. Y.

Supreme, Inc., Greenwood, Miss.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.

TESTERS—Radar Tube

LEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

R MACHINE WORKS INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.

Reiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

RAWSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.

PANORAMIC RADIO PRODUCTS, INC., 10 S. Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.

REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.

Research Electronics Laboratory, Roslyn, Pa.

TESTERS—Synchro Error

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.

INDUSTRIAL TEST EQUIPMENT CO., 55 E. 11th St., New York 3, N. Y. ADV. PG. 657.

RAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.

EARFOTT CO., INC., 1150 McBride Ave., Little Falls, N. J. ADV. PG. 372.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.

ubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.

TESTERS—Transconductance Tube

LEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

Reiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

RAWSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.

NEW LONDON INSTRUMENT CO., P. O. Box 189, New London, Conn. ADV. PG. 451.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.

Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

TESTERS—Transistor

Arborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.

LEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

BURROW DEVELOPMENT CO., 235 Penn St., Burlington, N. J. ADV. PG. 536.

Electronic Engineering Associates Inc., 11 Windsor St., Cambridge 39, Mass.

Electronic Research Associates, Inc., 715 Main St., North Caldwell, N. J.

airchild Engine & Airplane Corp., Guided Missiles Div., Wyandanch, N. Y.

KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212

Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.

Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.

Research Electronics Laboratory, Roslyn, Pa.

SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.

TELETRONICS LABORATORY, INC., Kinkel St., Westbury, N. Y. ADV. PG. 447.

Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass.

TESTERS—Vacuum Tube

American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.

CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.

Colortone Electronics, Inc., 238 William St., New York 38, N. Y.

Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.

Hycan Mfg. Co., 2961 E. Colorado St., Pasadena 8, Calif.

Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.

Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.

Massachusetts Institute of Television, Crow's Nest, South Lee, Mass.

Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.

PENNSYLVANIA TESTING LABORATORY, Doylestown, Pa. ADV. PG. 330.

Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

Precision Development Corp., 2 Neil Court, Oceanside, N. Y.

Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.

Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.

Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.

RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.

Reiner Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

Simpson Electric Co., Div. American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Sorensen Industrial Electronic Co., 87 N. Day St., Orange, N. J.

Superior Instrument Co., 2435 White Plains Rd., New York 67, N. Y.

Supreme, Inc., Greenwood, Miss.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Triplett Electrical Instrument Co., Harmon Rd., Bluffton, Ohio.

THERMISTORS

See also **CRYSTAL MOUNTS & MIXERS**

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.

CARBOLLOY DEPT. OF GENERAL ELECTRIC CO., 11139 E. Eight Mile Blvd., Detroit 32, Mich. ADV. PG. 22.

Ferroxcube Corp. of America, 125 E. Bridge St., Saugerties, N. Y.

Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

Keystone Carbon Co., Inc., St. Marys, Pa.

SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.

Standard Telephones & Cables Ltd., Connaught House, Aldwych London, W. C. 2, England.

STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.

VIBRO CERAMICS CORP., Metuchen, N. J. ADV. PG. 641.

VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 466.

THERMOCOUPLES

American Thermo Electric Co., 198-11 Hollis Ave., Hollis 12, N. Y.

Assembly Products Co., Chagrin Falls 6, Ohio.

Bristol Co., The Waterbury 20, Conn.

Electro-Tech Equipment Co., 308 Canal St., New York 13, N. Y.

FARRAND OPTICAL CO., INC., Bronx Blvd., at 238th St., New York 20, N. Y. ADV. PG. 460.

Fenwal, Inc., 60 Pleasant St., Ashland, Mass.

FIELDEN INSTRUMENT DIV. OF ROBERTSHAW-FULTON CONTROLS CO., 2920 N. Fourth St., Philadelphia 33, Pa. ADV. PG. 610.

Foxboro Co., The, Foxboro, Mass.

General Controls Co., Glendale 1, Calif.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

LEWIS ENGINEERING CO., 52 Rubber Ave., Naugatuck, Conn. ADV. PG. 228.

Manufacturers Engineering & Equipment Co., York & Mill Roads, Hatboro, Pa.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.

Reeder & Co., Charles M., 173 Victor Ave., Detroit 3, Mich.

Revere Corporation of America, Wallingford 2, Conn.

Richards Co., Inc., Arklay S., 38 Winchester St., Newton Highlands 61, Mass.

SENSITIVE RESEARCH INSTRUMENT CORPORATION, 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.

Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.

Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

THERMOCOUPLES—Pyrometric

Assembly Products Co., Chagrin Falls 6, Ohio.

Bristol Co., The, Waterbury 20, Conn.

Electro-Tech Equipment Co., 308 Canal St., New York 13, N. Y.

Foxboro Co., The, Foxboro, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.

LEWIS ENGINEERING CO., 52 Rubber Ave., Naugatuck, Conn. ADV. PG. 228.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.

Richards Co., Inc., Arklay S., 38 Winchester St., Newton Highlands 61, Mass.

West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.

Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

THERMOCOUPLES—Vacuum Type

American Thermo Electric Co., 198-11 Hollis Ave., Hollis 12, N. Y.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Consolidated Vacuum Corp., Rochester 3, N. Y.

FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.

Field Electrical Instrument Co., Manheim Blvd., New Paltz, N. Y.

GENERAL ELECTRIC CO., APPARATUS SALES DIV., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.

National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.

RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.

Reeder & Co., Charles M., 173 Victor Ave., Detroit 3, Mich.

SENSITIVE RESEARCH INSTRUMENT CORP., 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.

Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

THERMOMETERS—Resistance

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.

Bristol Co., The, Waterbury 20, Conn.

Deltron, Inc., P. O. Box 192, Glendale, Pa.

EDISON, INC., THOMAS A. INSTRUMENT DIV., 81 Lakeside Ave., West Orange, N. J. ADV. G. 392, 393.

Foxboro Co., The, Foxboro, Mass.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.

Kelk & Co., G. F., 1195 Lawrence Ave., W., North Park P. O., Canada.

LEWIS ENGINEERING CO., 52 Rubber Ave., Naugatuck, Conn. ADV. PG. 228.

MINNEAPOLIS-HONEYWELL REGULATOR CO., INDUSTRIAL DIV., Wayne & Windrim Aves., Philadelphia 44, Pa. ADV. PG. 52, 53.

Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Ruge-de Forest, Inc., 84 Massachusetts Ave., Cambridge 39, Mass.
 Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.
 Trans-Sonics, Inc., 5 Forest Ave., Bedford, Mass.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

THERMOPILES

Bristol Co., The, Waterbury 20, Conn.
 Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Eppley Lab., Inc., The, Newport, R. I.
FARRAND OPTICAL CO., INC., Bronx Blvd. at 238th St., New York 70, N. Y. ADV. PG. 460.
 General Controls Co., Glendale 1, Calif.
 Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
 Reeder & Co., Charles M., 173 Victor Ave., Detroit 3, Mich.

THERMOSTATS—Bimetal

Bristol Co., The, Waterbury 20, Conn.
 Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.
CLARK CRYSTAL CO., Farm Rd., Marlboro, Mass. ADV. PG. 581.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. Y.
EDISON, INC., THOMAS A., INSTRUMENT DIV., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 392, 393.
 Fenwal, Inc., 60 Pleasant St., Ashland, Mass.
G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. ADV. PG. 469.
 General Controls Co., Glendale 1, Calif.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
 Mechanical Industries Production Co., 217-223 Ash St., Akron 8, Ohio.
 Mercoid Corp., 4201 Belmont Ave., Chicago 41, Ill.
STEVENS MFG. CO., INC., 69 S. Walnut St., Mansfield, Ohio. ADV. PG. 317.
ULANET CO., GEORGE, 413 Market St., Newark 5, N. J. ADV. PG. 587.
 White-Rodgers Electric Co., Armament Dept., 1209 Cass Ave., St. Louis 6, Mo.
 Wilson Co., H. A., 2655 U. S. Hwy. 22, Union, N. J.

THERMOSTATS—Electronic**See also Controls, Temperature**

Bristol Co., The, Waterbury 20, Conn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
INTERELECTRONICS CORP., 2432 Grand Concourse, New York 58, N. Y. ADV. PG. 655.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
 Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
ULANET CO., GEORGE, 413 Market St., Newark 5, N. J. ADV. PG. 587.
 White-Rodgers Electric Co., Armament Dept., 1209 Cass Ave., St. Louis 6, Mo.

THYRATRONS**See TUBES****TIMERS—Automatic Cycle**

Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Automatic Electric Mfg. Co., 62 State St., Mankato, Minn.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bristol Co., The, Waterbury 20, Conn.
 Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Eagle Signal Corp., Moline, Illinois.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 498.
 Foxboro Co., The, Foxboro, Mass.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
 Industrial Timer Corp., 131 Ogden St., Newark 4, N. J.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Kurman Electric Co., Inc., 35-18 37th St., Long Island City, N. Y.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
 Pantek Co., Box 212, El Segundo, Calif.
 Paragon Electric Co., Two Rivers, Wis.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Gorrell & Gorrell, Haworth, N. J.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
 Industrial Timer Corp., 131 Ogden St., Newark 4, N. J.
 Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
 Kurman Electric Co., Inc., 35-18 37th St., Long Island City, N. Y.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.
 Pantek Co., Box 212, El Segundo, Calif.
 Paragon Electric Co., Two Rivers, Wis.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
 Robotron Corp., 21300A West Eighth Mile Rd., P. O. Box 4885, Detroit 19, Mich.
 Sessions Clock Co., Industrial Products Div., Forestville, Conn.
TELETRON INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
 Timetrol Co., 2919 Gladstone Ave., Rockford, Ill.
 Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Vocatron Mfg. Div. of Vocaline Co. of America, Inc., Old Saybrook, Conn.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Wilson & Co., G. C., 1950 Eighth Ave., Huntington, W. Va.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Automatic Interval

AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 360.
 Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Automatic Electric Mfg. Co., 62 State St., Mankato, Minn.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 Bristol Co., The, Waterbury 20, Conn.
 Bristol Motor Division, Vocaline Company of America, Inc., Old Saybrook, Conn.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 Eagle Signal Corp., Moline, Ill.
 Foxboro Co., The, Foxboro, Mass.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
 Industrial Timer Corp., 131 Ogden St., Newark 4, N. J.
 Janco Corp., 3111 Winona Ave., Burbank, Calif.
 Kurman Electric Co., Inc., 35-18 37th St., Long Island City, N. Y.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
 Pantek Co., Box 212, El Segundo, Calif.
 Paragon Electric Co., Two Rivers, Wis.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

Reliance Automatic Lighting Co., 1919 Mead St., Racine, Wis.
 Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.
 Robotron Corp., 21300A West Eighth Mile Rd., P. O. Box 4885, Detroit 19, Mich.
 Sessions Clock Co., Industrial Products Div., Forestville, Conn.
 Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Vocatron Mfg. Div. of Vocaline Co. of America, Inc., Old Saybrook, Conn.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
 Walsler Automatic Timer Corp., Graybar Bldg., New York 17, N. Y.
 Wilson & Co., G. C., 1950 Eighth Ave., Huntington, W. Va.
 X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Automatic Reset

ADAMS & WESTLAKE CO., THE, Michigan St., Eikhart, Ind. ADV. PG. 213-216.
 Amglo Corp., 2037 W. Division St., Chicago 22, Ill.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Automatic Electric Mfg. Co., 62 State St., Mankato, Minn.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 Bristol Co., The, Waterbury 20, Conn.
 Bristol Motor Division, Vocaline Company of America, Inc., Old Saybrook, Conn.
 Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
 Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Eagle Signal Corp., Moline, Illinois.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 498.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 General Controls Co., Glendale 1, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
 Industrial Timer Corp., 131 Ogden St., Newark 4, N. J.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 Pantek Co., Box 212, El Segundo, Calif.
 Paragon Electric Co., Two Rivers, Wisconsin.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Quaker City Gear Works, Red Lion & Philmont Rd., Bethayres, Pa.
 Robotron Corp., 21300A West Eighth Mile Rd., P. O. Box 4885, Detroit 19, Mich.
 Sherman Industrial Electronics Co., 505 Washington Ave., Belleville 9, N. J.
 Timetrol Co., 2919 Gladstone Ave., Rockford, Ill.
ULANET CO., GEORGE, 413 Market St., Newark 5, N. J. ADV. PG. 587.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Wilson & Co., G. C., 1950 Eighth Ave., Huntington, W. Va.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Clock Radio

ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
 Sessions Clock Co., Industrial Products Div., Forestville, Conn.
TELECHRON DEPT. OF GENERAL ELECTRIC CO., Ashland, Mass. ADV. PG. 21.

TIMERS—Cycle

CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
HAYDON CO., A. W., 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.

TIMERS—Electronic

Airmec Ltd., High Wycombe, Buckinghamshire, England.
 Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
AMERICAN CHRONOSCOPE CORP., 316 West First St., Mt. Vernon, N. Y. ADV. PG. 360.
 American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.
 Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
BRUNO NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
 Cinema-Television, Ltd., Worsley Bridge Rd., London S.E. 26, England.
 Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 Daystrom Instrument Co., Archbald, Pa.
 Veltz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 Detelectron Corp., 5420 Vineland Ave., North Hollywood, Calif.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
DUBROW DEVELOPMENT CO., 235 Penn St., Burlington, N. Y. ADV. PG. 536.
ELECTRICAL & PHYSICAL INSTRUMENT CORP., 42-19 27th St., Long Island City 1, N. Y. ADV. PG. 558.
 Electro Craft Industries, Inc., 68 Jackson St., Stamford, Conn.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 498.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
 Haledy Electronics Co., 57 William St., New York 5, N. Y.
 Industrial Electronics Co., Inc., Hanover, Mass.
 Kelk & Co., G. F., 1195 Lawrence Ave., W., North Park P. O., Canada.
 Lektra Laboratories, 154 11th Ave., New York 3, N. Y.
 Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
MENDELSONN SPEEDGUN CO., INC., Fourth Ave., Haskell, N. J. ADV. PG. 292.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Pantek Co., Box 212, El Segundo, Calif.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Photoswitch Inc., 77 Broadway, Cambridge 42, Mass.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
 Robotron Corp., 21300A West Eighth Mile Rd., P. O. Box 4885, Detroit 19, Mich.
 Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.
 Clary Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Square D Co., 4041 N. Richards St., Milwaukee 1, Wis.
 Licht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 Electronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Timetrol Co., 2919 Gladstone Ave., Rockford, Ill.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
WALKIRT CO., 145 W. Hazel St., Inglewood 3, Calif. ADV. PG. 467.
 Electronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
 Huntington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.
 Wilson & Co., G. C., 1950 Eighth Ave., Huntington, W. Va.
 Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

J-B-T INSTRUMENTS, INC., 431 Chapel St., New Haven 8, Conn. ADV. PG. 579.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
MARION ELECTRICAL INSTRUMENT CO., 402 Canal St., Manchester, N. H. ADV. PG. 390.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 Pantek Co., Box 212, El Segundo, Calif.
 Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Rhodes, Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Vocatron Mfg. Div. of Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.

TIMERS—Impulse

AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
 Bristol Co., The, Waterbury 20, Conn.
 Cinema-Television, Ltd., Worsley Bridge Rd., London SE 26, England.
 Clary Multiplier Corp., Electronic Div., San Gabriel, Calif.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
CRAMER CO. INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
 Eagle Signal Corp., Moline, Ill.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 Gates Radio Co., Quincy, Ill.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 Maurer, Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.
 Midwestern Geophysical Laboratory, 3400 S. Harvard, Tulsa, Okla.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Inertia

General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.

TIMERS—Motor Operated

Anglo Corp., 2037 W. Division St., Chicago 22, Ill.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 Bristol Co., The, Waterbury 20, Conn.
 Bristol Motor Division, Vocaline Company of America, Inc., Old Saybrook, Conn.
 Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
 Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
 Dimco-Gray Co., 207 E. Sixth St., Dayton, Ohio.
 Eagle Signal Corp., Moline, Illinois.
 Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hagen Mfg. Co., Inc., Baraboo, Wis.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
 Industrial Timer Corp., 131 Ogden St., Newark 4, N. J.
 Iron Fireman Electronics Div., 2800 S. E. Ninth Ave., Portland 2, Oregon.
 Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.
 Kurman Electric Co., Inc., 35-18 37th St., Long Island City, N. Y.
 Lektra Laboratories, 154 11th Ave., New York 11, N. Y.
 Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.

ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
 Paragon Electric Co., Two Rivers, Wisconsin.
 Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
 Price Electric Corp., Frederick, Md.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
 Sessions Clock Co., Industrial Products Div., Forestville, Conn.
STANDARD ELECTRIC TIME CO., 89 Logan St., Springfield, Mass. ADV. PG. 154.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
TELECHRON DEPT. OF GENERAL ELECTRIC CO., Ashland, Mass. ADV. PG. 21.
 Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
 Vocaline Company of America, Inc., Old Saybrook, Conn.
 Vocatron Mfg. Div. of Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Zenith Electric Co., 152 W. Walnut St., Chicago 10, Ill.

TIMERS—Multicontact

Anglo Corp., 2037 W. Division St., Chicago 22, Ill.
 Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
 Automatic Electric Mfg. Co., 62 State St., Mankato, Minn.
 Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
 Bristol Co., The, Waterbury 20, Conn.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
 Eagle Signal Corp., Moline, Illinois.
 General Devices, Inc., P. O. Box 253, Princeton, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
 Industrial Timer Corp., 131 Ogden St., Newark 4, N. J.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
 Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
 Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
 Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Walser Automatic Timer Corp., Graybar Bldg., New York 17, N. Y.

TIMERS—Percentage

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Eagle Signal Corp., Moline, Illinois.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
 Timetrol Co., 2919 Gladstone Ave., Rockford, Ill.
 Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
 Weigand Co., Edwin L., 7606 Thomas Blvd., Pittsburgh 8, Pa.
 Wilson & Co., G. C., 1950 Eighth Ave., Huntington, W. Va.

TIMERS—Photoelectric

Airmec Ltd., High Wycombe, Buckinghamshire, England.
AMERICAN CHRONOSCOPE CORP., 316 W. First St., Mt. Vernon, N. Y. ADV. PG. 360.
ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
AUTOTRON CO., P. O. Box 722-H, Danville, Ill. ADV. PG. 446.
BERKELEY DIVISION, BECKMAN INSTRUMENTS, INC., 2200 Wright Ave., Richmond, Calif. ADV. PG. 283.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
 De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Electrical Service Co., 1271 Mission St., San Francisco, Calif.
 General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., APPARATUS SALES DIV., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
 Pantek Co., Box 212, El Segundo, Calif.
 Photobell Company, 116 Nassau St., New York 38, N. Y.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.

TIMERS—Sequence

Anglo Corp., 2037 W. Division St., Chicago 22, Ill.

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.
Automatic Electric Mfg. Co., 62 State St., Mankato, Minn.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
BILL JACK SCIENTIFIC INSTRUMENT CO., P. O. Box C-3, Solana Beach, Calif. ADV. PG. 159.
Bristol Co., The, Waterbury 20, Conn.
Clary Multiplier Corp., Electronics Div., San Gabriel, Calif.
Coral Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.
CRAMER CO., INC., R. W., Box 13, Centerbrook, Conn. ADV. PG. 272.
Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.
Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
Eagle Signal Corp., Moline, Ill.
Gale Dorothea Mechanisms Inc., 81-01 Broadway, Elmhurst, N. Y.
General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Gorrell & Gorrell, Haworth, N. J.
HAYDON CO., A. W., THE, 232 N. Elm St., Waterbury, Conn. ADV. PG. 477.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
Industrial Electronics Co., Inc., Hanover, Mass.
Industrial Timer Corp., 131 Ogden St., Newark 4, N. J.
Iron Fireman, Electronics Div., 2800 S. E. Ninth Ave., Portland 2, Ore.
Kurman Electric Co., Inc., 35-18 37th St., Long Island City, N. Y.
Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.
Mallory & Co., Inc., P. R. 3029 E. Washington St., Indianapolis 6, Ind.
Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.
Maurer, Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.
Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
Pantek Co., Box 212, El Segundo, Calif.
Paragon Electric Co., Two Rivers, Wisconsin.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
Price Electric Corp., Frederick, Md.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.
Stromberg-Carlson Co., Rochester 3, N. Y.
Taller & Cooper Co., 75 Front St., Brooklyn, N. Y.
Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
Vocaline Co. of America, Inc., Old Saybrook, Conn.
Weltronic Co., 19500 West Eight Mile Rd., Detroit 19, Mich.
Wilson & Co., G. C. 1950 Eighth Ave., Huntington, W. Va.
Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

TIMERS—Thermal

BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
Cooper Co., Clark, 349 N. Market St., Palmyra, N. J.
EDISON, INC., THOMAS A., INSTRUMENT DIV., 81 Lakeside Ave., West Orange, N. J. ADV. PG. 392, 393.
G-V CONTROLS INC., 12 Hollywood Plaza, East Orange, N. J. ADV. PG. 469.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
Photobell Co., 116 Nassau St., New York 38, N. Y.
Reynolds Electric Co., 3000 River Rd., River Grove, Ill.
Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
ULANET CO., GEORGE, 413 Market St., Newark 5, N. J. ADV. PG. 587.

TIMERS—Welding, Electronic

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.
Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.
Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
FARMER ELECTRIC CO., 21 Mossfield Rd., Waban 68, Mass. ADV. PG. 498.
Federal Tool Engineering Co., 1386 Pompton Ave., Cedar Grove, N. J.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
HAYDON MFG. CO., INC., 2400 Elm St., Torrington, Conn. ADV. PG. 310, 311.
Lektra Labs, 154 11th Ave., New York 11, N. Y.
Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
Masco Products, 2119 S. Sepulveda Blvd., Los Angeles, Calif.
Photobell Co., 116 Nassau St., New York 38, N. Y.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Robotron Corp., 21300A West Eight Mile Rd., P. O. Box 4885, Detroit 19, Mich.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
Square D Co., 4041 N. Richards, Milwaukee 12, Wis.

Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
Weltronic Co., 19500 West Eight Mile Road, Detroit 19, Mich.
Wilson & Co., G. C., 1950 Eighth Ave., Huntington, W. Va.

TIMINGSee **CONTROLS—Timing****TINNING—Hot Dipped**

Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
Hopwood Retinning Co., Inc., 198 Pacific Ave., Jersey City, N. J.
Hopwood Retinning Corp., 303 Commercial St., Malden, Mass.

TITRATION APPARATUS—Electronic

Deltron, Inc., P. O. Box 192, Glenside, Pa.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.
Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W.C. 2, England.
Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
Thwing-Albert Instrument Co., 5351 Pulaski Ave., Philadelphia 44, Pa.

TOOLS—Acetylene Soldering

LINDE AIR PRODUCTS CO., DIVISION OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 502.
Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.

TOOLS—Hand or Mechanical

Note: Includes grinders, pliers, punches, screwdrivers, wrenches, etc. For further particulars, consult advertisement of manufacturer in this issue.

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
Apco Mossberg Co., Attleboro, Mass.
Burndy Engineering Co., Inc., Norwalk, Conn.
Chicago Tool & Engineering Co., 8380 S. Chicago Ave., Chicago 17, Ill.
Claus Cutlery Co., Fremont, Ohio.
Dremel Mfg. Co., 2300 18th St., Racine, Wis.
Erwood, Inc., 1782 Berteau Ave., Chicago 13, Ill.
F & M Sales, Inc., 1054 Cahuenga Blvd., Hollywood 38, Calif.
Federal Tool Engineering, Inc., 1386 Pompton Ave., Cedar Grove, N. J.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.
Ideal Industries, Inc., 5103 Park & Borden Aves., Sycamore, Ill.
Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
Klein & Sons, Mathias, 3200 Belmont Ave., Chicago 18, Ill.
Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
Millen Mfg. Co., 90 Summit Ave., Brookline, Mass.
Millers Falls Co., Greenfield, Mass.
Moody Machine Products Co., Inc., 53 Dudley St., Providence 5, R. I.
Multicore Solders, Ltd., Multicore Works, Maylands Ave., Hemel, Hempstead, Hertfordshire, England.
O'Neil-Irwin Mfg. Co., 316 Eighth Ave., Lake City, Minn.
Pioneer Tool Co., 5008 W. Jefferson Blvd., Los Angeles, Calif.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
Queens Tool Engineering & Mfg. Co., 15 Front St., Rockville Centre, N. Y.
Sargent & Co., New Haven 9, Conn.
Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill.
Stanley Works, The, 195 Lake St., New Britain, Conn.
Stevens-Walden, Inc., 475 Shrewsbury St., Worcester 4, Mass.
Sturtevant Co., P. A., Addison, Ill.
Technical Service Corp., 3116 Michigan Drive, Louisville 5, Ky.
Thomas & Betts Co., Inc., 36 Butler St., Elizabeth 1, N. J.
Vaco Products Co., 317 E. Ontario St., Chicago 11, Ill.
Wilton Tool Mfg. Co., 925 Wrightwood Ave., Chicago 14, Ill.
Xcelite, Inc., 28 Bank St., Orchard Park, N. Y.

TOOLS—Pneumatic Assembly
Delta Power Tool Div., Rockwell Mfg. Co., 400 Lexington Ave., Pittsburgh 8, Pa.

Ingersoll-Rand Co., Phillipsburg, N. J.
Keller Tool Co., Grand Haven, Mich.

TOOLS—Resistance Soldering

Cole Radio Works, 86 Westville Ave., Caldwell, N. J.
Ideal Industries, Inc., 5103 Park & Borden Aves., Sycamore, Ill.
Luma Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio.
Triton Mfg. Co., Inc., East Haddam, Conn.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
Weller Electric Corp., 808 Packer St., Easton, Pa.

TOOLS—Wire Wrapping

Delta Power Tool Div., Rockwell Mfg. Co., 400 Lexington Ave., Pittsburgh 8, Pa.
Ingersoll-Rand Co., Phillipsburg, N. J.
Keller Tool Co., Grand Haven, Mich.

TOURMALINESee **CRYSTALS****TOWER SERVICE—Installers, Erectors, Maintainers**

Alproco, Inc., Mineral Wells, Texas.
Dresser-Stagey Co., Ideco Div., 875 Michigan Ave., Columbus 8, Ohio.
Electrical Tower Service, Inc., 206 S. Washington St., Peoria, Ill.
Lehigh Structural Steel Co., 17 Battery Place, New York 4, N. Y.
Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.
Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

TRACERS—Manual, for Oscilloscopes

Benson-Lehner Corp., 2340 Sawtelle Blvd., Los Angeles 64, Calif.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.

TRACERS—SignalSee **INSTRUMENTS—Electrical Measuring****TRANSCEIVERS—Aviation**

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
Telephonics Corp., Park Ave., Huntington, N. Y.
Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.

TRANSCEIVERS—Lifeboat

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
Bludworth Marine Div., National-Simplex Bludworth, Inc., 92 Gold St., New York 38, N. Y.
Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
Hoffman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
Insuline Corp. of America, 186 Granite St., Manchester, N. H.
Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
Telephonics Corp., Park Ave., Huntington, N. Y.

TRANSCEIVERS—Portable

Acme Electronix Div., NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
Bassett, Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
Bludworth Marine Div., National-Simplex Bludworth, Inc., 92 Gold St., New York 38, N. Y.
Communications Co., Inc., 3000 Greco Ave., Coral Gables 34, Fla.
Cubic Corp., 2841 Canon St., San Diego 6, Calif.
Electro Craft Industries, Inc., 68 Jackson St., Stamford, Conn.

Electronics, Inc., 5th & Noble Sts., Philadelphia 23, Fla.
 Teler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Micrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Tman Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
 Guline Corp. of America, 186 Granite St., Manchester, N. H.
 ar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 ar, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 orola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.
 ionic Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 arce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.
 ebo Inc., 3640 Woodland St., Baltimore 15, Md.
ASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J. Buffalo 8, N. Y. ADV. PG. 529.
 io Specialty Mfg. Co., Portland 14, Ore.
YTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 ector Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.
 ewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey Parkway, Chicago 14, Ill.
 ephonics Corp., Park Ave., Huntington, N. Y.
 as Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
 ansitron, Inc., 154 Spring St., New York 12, N. Y.

RECEIVERS—uhf

ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 munications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 nnecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 ystrom Instrument Co., Archbald, Pa.
 ont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 ico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 ler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 man Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
 uline Corp. of America, 186 Granite St., Manchester, N. H.
 ar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
INGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 oe, N. Y. ADV. PG. 199.
 orola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.
DIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 ephonics Corp., Park Ave., Huntington, N. Y.
 ar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.

RECEIVERS—vhf

ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 dix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 munications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 nnecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 ic Corp., 2841 Canon St., San Diego 6, Calif.
 ystrom Instrument Co., Archbald, Pa.
 ont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 ico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 ler Engineering Co., 8026 Monticello Ave., Skokie, Ill.
 & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 set Co., 801 S. Main St., Burbank, Calif.
 icrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 man Radio Corp., 3716 S. Hill St., Los Angeles 7, Calif.
 uline Corp. of America, 186 Granite St., Manchester, N. H.
 ar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
INGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 oe, N. Y. ADV. PG. 199.
 r, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 orola, Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.
 onal Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 ionic Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 Ltd., Cambridge, England.
DIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 io Specialty Mfg. Co., 2023 S. E. 6th Ave., Portland 14, Ore.
 ttig & Co., Inc., 5005 Calvert Rd., College Park Md.
 ephonics Corp., Park Ave., Huntington, N. Y.
 nsitron, Inc., 154 Spring St., New York 12, N. Y.
 at Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 mar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.

TRANSFORMERS

CAR INSTRUMENTS, INC., 20-21 Wagaraw Rd., Fair Lawn, N. J. ADV. PG. 426.

Atlantic Research Corp., 901 N. Columbus, Alexandria, Va.
BART LABORATORIES CO., INC., 227 Main St., Belleville 9, N. J. ADV. PG. 633.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bludworth Marine Div., National-Simplex-Bludworth Inc., 92 Gold St., New York 38, N. Y.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
BRADLEY LABS., INC., 170 G. Columbus Ave., New Haven 11, Conn. ADV. PG. 218.
 Bristol Co., THE, Waterbury 20, Conn.
BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
CENTRAL LAB DIV. OF GLOBE-UNION, INC., 914 Y. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
 Colvin Labs., Inc., 364 Glenwood Ave., East Orange, N. J.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.
 Edcliff Instruments, 383 N. Foothill Blvd., Pasadena 8, Calif.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 554.
 Electronic Engineering Associates, Ltd., 1048 Brittan Ave., San Carlos, Calif.
 Endevo Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GULTON MFG. CORP., Metuchen, N. J. ADV. PG. 640.
 International Electronics Corp., 137 Hudson St., New York 13, N. Y.
 International Testing Service, 321 N. Hamilton St., Saginaw, Mich.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-
 oe, N. Y. ADV. PG. 199.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
M B MFG. CO., 1060 State St., New Haven 11, Conn. ADV. PG. 386.
 Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
POTTER INSTRUMENT CO., INC., 115 Cutter Mill Rd., Great Neck, N. Y. ADV. PG. 403.
 Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.
SERVOMECHANISMS, INC., 500 Franklin Ave., Garden City, N. Y. ADV. PG. 374.
 Sperry Products, Inc., Danbury, Conn.
 Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.
 Trans-Sonics, Inc., 5 Forest Ave., Bedford, Mass.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.

TRANSFORMERS

Audio
 1. Input, Output or Interstage
 2. Modulator
 3. Very Low Frequency
Power
 4. Current Limiting
 5. 400 Cycle
 6. Isolation
 7. Plate, Filament or Bias—Under 500 Watts
 8. Plate Filament or Bias—Over 500 Watts
 9. Saturable
 10. Variable
 11. Vibrator
 12. Voltage Regulating
 13. Welding
 14. X-Ray

A. C. Transformer Corp., 89 Madison St., Newark, N. J. 5-6-7-8-12-13. (h)
 A'G'A' Div. of Elastic Stop Nut Corp. of America, 1029 Newark Ave., Elizabeth 3, N. J. 6.
ACME ELECTRIC CORP., 21 Water St., Cuba, N. Y. 1-2-3-4-5-6-7-8-9-10-11-12-13. ADV. PG. 260. (h)
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. 1-3-4-5-6-7-8-9-10. (h)
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa. 1-11.
 Acro Transformer Mfg. Corp., 26-04 Fourth St., Long Island City 2, N. Y. 1-2-3-4-5-6-7-8-9-11. (h)
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. 1-3-5-10-12.
 Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J. 1-2-5-6-7-8-9-10-11-12-13-14.
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. 1-2-3-4-5-6-7-8-9-10-11-12. ADV. PG. 479. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. 1-2-3-4-5-6-7-8-9-11-12. ADV. PG. 65. (h)
 Allied Mfg. Corp., 605-07 61st St., West New York, N. J. 1-5-7. (h)
 Arco Transformer & Electric Co., 1602 S. Hanna St., Ft. Wayne, Ind. 1-3-4-5-6-7-10-11-12-13-14. (h)
 Atlantic Transformer Co., Groton, Conn. 1-2-3-4-5-6-7-8-9-11. (h)
 Atlas Coil, Inc., Cottage St., Derby, Conn. 4-5-6-7-8-9-14.
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. 1-3-5-6-7-8-11. ADV. PG. 230. (h)
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. 1-2-3-5-6-7-8-11. ADV. PG. 510. (h)

Barry Electronics Corp., 136 Liberty St., New York, N. Y. 6-7-8.
 Basler Electric Co., 601 Fifth St., Highland, Ill. 1-2-3-4-5-6-7-8-9-10-11-12-13-14. (h)
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y. 1-7.
 Best Mfg. Co., Inc., 1200 Grove St., Irvington 11, N. J. 1.
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif. 4-6-9-10-12-13-14.
 Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y. 10.
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. 5-10-12. ADV. PG. 323.
BRACKE-SEIB X-RAY CO., INC., 293 Third Ave., New York 10, N. Y. 14. ADV. PG. 583.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y. 1.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. 1-2-3-4-5-6-7-8-9-10-11-12-14. (h)
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. 1-2-3-4-5-6-7-9-11-14. (h)
 Carad Corp., 2850 Bay Rd., Redwood City, Calif. 1. (h)
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. 1-2-3-5-6-7-9-10. ADV. PG. 547, 549, 551.
CENTRAL TRANSFORMER CO., 909 W. Jackson Ave., Chicago, Ill. 1-2-3-4-5-6-7-8-9-10-11-13-14. ADV. PG. 567. (h)
 Chicagoo Magnetic Control Co., 1616 Damon Ave., Chicago, Ill. 1-2-3-4-5-6-7-9-11-12-13-14. (h)
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. 1-2-3-4-5-6-7-8-9-11-12. ADV. PG. 453.
 Chnaudograph Speakers, 7334 N. Clark St., Chicago 26, Ill. 1.
 Coil Company of America, Inc., 48 Perry St., Closter, N. J. 1-2-3-4-5-6-7-8-9. (h)
COLCRAFT, INC., Cary, Ill. 1-3. ADV. PG. 534.
 Comar Electric Co., 3349 W. Addison, Chicago 18, Ill. 4.
COMMUNICATION ACCESSORIES CO., Fed Bridge Rd., Hickman Hills, Mo. 9. ADV. PG. 141-144. (h)
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill. 1-2-3-4-5-6-7-8-9-10-11-12.
 Control Corp., 718 Central Ave., Minneapolis 14, Minn. 6-7.
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill. 1-2-5-6-7-8-10-11-12-13. (h)
 Crittenden Transformer Co., 1220 Nadeau St., Los Angeles, Calif. 5-6-7-8-10-13-14. (h)
 Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J. 1-2-3-4-5-6-7-8-9-10-11-13-14. (h)
DX RADIO PRODUCTS CO., INC., 2300 Armitage Ave., Chicago 47, Ill. 1-6. (h)
DANO ELECTRIC CO., Main St., Winsted, Conn. 12. ADV. PG. 394.
 Delco Radio Div., General Motors Corp., Kokomo, Ind. 1-11.
 DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill. 1.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. 1-5-6-7. ADV. PG. 480. (h)
 Dit-Mco, Inc., 729 Baltimore Ave., Kansas City 6, Mo. 1-7.
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill. 1-3-4-6-7-8-11-13-14. (h)
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. 1-5-6-8-11.
 Dresser Electric Co., 942 E. Larned St., Detroit 7, Mich. 6-9-10-12.
 Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev. 12.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J. 6-8.
 Electran Mfg. Co., 1901 N. Clybourn, Chicago, Ill. 1-3-4-5-6-7-8-9-11-13. (h)
 Electrical Facilities Inc., 4239 Holden St., Oakland 8, Calif. 5-6-8.
 Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill. 1-2-3-5-6-7-8-11. (h)
ELECTRICOIL TRANSFORMER CORP., Westerly Rd., Ossining, N. Y. 1-2-3-4-5-6-7-8. ADV. PG. 563. (h)
 Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. 1-2-3-4-5-6-7-8-9-11-12-13-14. (h)
ELECTRONIC TRANSFORMER CO., INC., 215 W. 25th St., New York, N. Y. 1-2-3-4-5-6-7-8-9. ADV. PG. 166. (h)
EMPIRE COIL CO., INC., Beachwood Ave. & Second St., New Rochelle, N. Y. 1-2-3-4-5-6-7-8-9-11. ADV. PG. 320. (h)
 Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill. 1 2.
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. 1-2-3-5-6-7-8-9-11-13-14. ADV. PG. 490. (h)
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. 1-2-3. ADV. PG. 583.
 Espy Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. 1 3-4-5-6-7-8-9-10-12. (h)
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. 1-2-5-6-7-11 ADV. PG. 182-187.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. 1-2-3-4-5-6-7-8-9-11-12. ADV. PG. 450. (h)
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. 1-2-5-6-7-8-9-11. ADV. PG. 550. (h)
FOREST ELECTRIC CO., 7216 Circle Ave., Forest Park, Ill. 1-2-4-5-6-7-8-9-11. ADV. PG. 644.
 Foster Transformer Co., 3820 Colerain Ave., Cincinnati 23, Ohio. 1-5-7-11. (h)

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. 1-2-3-4-5-6-7-8-9-11-13. ADV. PG. 227. (h)

Gates Electric Co., 65 W. Broadway, New York, N. Y. 7-8.

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. 1-2-3-4-5-6-7-8-9-12-13-14. ADV. PG. 1-20. (h)

General Controls Co., Glendale 1, Calif. 4-7.

GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. 1-2-3-10. ADV. PG. 177-180.

GENERAL TRANSFORMER CO., 18240 Harwood Ave., Homewood, Ill. 1-2-3-4-5-6-7-9-11. ADV. PG. 444. (h)

Goodmans Industries, Ltd., Axiom Works, Wembley, Middlesex, England. 1-2-3-4-7-8-11-12.

GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. 1-2-3-4-5-6-7-8-9-11-12. ADV. PG. 637.

GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 39, Ill. 1-2-3-5-6-7-8-9-10-11-12-13-14. ADV. PG. 501. (h)

Grand Transformers, Inc., Grand Haven, Mich. 1-5-6-7-8-11. (h)

Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. 1-2-3-5-6-7-8-9-11. (h)

Halldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill. 1-2-3-6-7-12.

HIGHLAND ENGINEERING CO., Westbury, N. Y. 1-2-3-4-5-6-7-8-9-10-11-12-13-14. ADV. PG. 603. (h)

Hindle Transformer Co., Inc., Woods Church Rd., Flemington, N. J. 1-4-5-6-7-8-13-14.

Holl Audio Inc., 5014 N. Encinita Ave., Temple City, Calif. 1.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa. 1-2.

Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y. 8.

Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y. 1-2-3-4-5-6-7-11. (h)

INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. 1-2-3-4-5-6-7-9-10-11-12-13-14. ADV. PG. 442, 443. (h)

ISLIP TRANSFORMER & METAL CO., INC., Beech St., Islip, N. Y. 1-2-3-4-5-6-7-8-9-11-12. ADV. PG. 485. (h)

Jack & Heintz, Inc., Cleveland 1, Ohio. 4.

James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18, Ill. 1-5-11. (h)

Jefferson Electric Co., Bellwood, Ill. 1-2-3-5-6-7-8-11-12-13-14. (h)

Jobbins Electronic Enterprises, Menlo Park, Calif. 2-4-5-6-7-8-9. (h)

K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn. 1-2-3-4-5-6-7-8-9-11. (h)

KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. 1-2-4-5-6-7-8-9-11. ADV. PG. 437. (h)

KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. 5-7-9. ADV. PG. 301.

Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. 2-5-7.

LANGVIEW MANUFACTURING CORP., 37 W. 65th St., New York 23, N. Y. 1-2-3-5-6-7-8-9-11. ADV. PG. 152, 153. (h)

Lee Electric Co., 132 Beckwith Ave., Paterson, N. J. 4-6-12. (h)

LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. 1-3. ADV. PG. 569.

Lesi, Via Bergamo 21, Milan, Italy. 1.

Lindberg Engineering Co., 2450 W. Hubbard St., Chicago, Ill. 7.

McIntosh Laboratory, Inc., 320 Water St., Binghamton, N. Y. 1.

Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif. 1-7-8.

MAGNATRAN, INC., 248 Schuyler Ave., Kearney, N. J. 2-3-6-8. ADV. PG. 668.

MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. 1-7-9. ADV. PG. 181. (h)

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. 5-6-7-8-9-12. ADV. PG. 212 (h)

Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y. 4-9.

Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa. 1-4-5-6-7-8-9-11-12. (h)

MAGNETICS, INC., P. O. Box 230-E, Butler, Pa. 9. ADV. PG. 28.

Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. 1-2-3-4-5-6-7-8-9-11-14. (h)

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. 1-2-3-4-5-6-7-8-9-11-12-13-14. (h)

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. 1-2-6-7-8-10-11-12. (h)

Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. 1-2-3-5-6-7-8-10-11. (h)

Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. 1-2-3-5-6-7-9-11. (h)

MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. 1-2-3-4-5-6-7-8-9-10-11-12-13-14. ADV. PG. 140. (h)

MODELETRIC PRODUCTS CORP., 1500 Bangs Ave., Asbury Park, N. J. 11. ADV. PG. 140.

MOLONEY ELECTRIC CO., 5590 Bircher Blvd., St. Louis 20, Mo. 2-5-6-8-12-13. ADV. PG. 356. (h)

Mt. Vernon Precision Transformer Co., 201 S. Third Ave., Mt. Vernon, N. Y. 1-3-4-5-6-7-8-9-10-11-12-14.

Mystic Transformers Inc., 63 Swanton St., Winchester, Mass. 1-4-5-6-7-8-9-11. (h)

NEW JERSEY ELECTRONICS CORP., 196 Waverly Ave., Newark, N. J. 1-7-8. ADV. PG. 478. (h)

NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. 1-2-3-5-6-7-8-11. ADV. PG. 532. (h)

Newcomb Audio Products Co., 682 Lexington Ave., Hollywood 38, Calif. 1.

North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y. 14.

Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J. 4-5-6-7-8-9-13-14.

Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind. 7-8. (h)

Omega Mfg. Co., 40 Hudson St., New York, N. Y. 10-12.

ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. 1-2-3-4-5-6-7-8-9-11-12-13-14. ADV. PG. 612. (h)

OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. 1-4-6-10-12. ADV. PG. 496.

Pacific Transducer EBG Corp., 11921 W. Pico Blvd., Los Angeles 64, Calif. 1.

Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. 1-2-3-4-5-6-7-8-12-13. (h)

Peerless Electrical Products Div. of Aitec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. 1-2-3-4-5-6-7-8-9-11. (h)

PERKIN ENGINEERING CORP., 345 Kansas St., El Segundo, Calif. 6. ADV. PG. 561.

Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill. 1.

Power Equipment Co., 5740 Nevada East, Detroit 34, Mich. 5-6-9-12. (h)

POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. 1-2-3-4-5-6-7-8-9-10-11-12-14. ADV. PG. 650.

Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J. 1-2-3-4-5-6-7-8-9-10-11-12-13-14. (h)

PRECISE MEASUREMENTS CORP., 942 Kings Highway, Brooklyn 23, N. Y. 11. ADV. PG. 650.

RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. 1-2-3. ADV. PG. Inside Back & Back Covers.

RADIO CORP., OF AMERICA, Tube Dept., Harrison, N. J. 1-2-3-4-7-8-9-10-12. ADV. PG. Inside Back & Back Covers. (h)

Radio Music Corp., 84 S. Water St., Port Chester, N. Y. 1-5-7-9. (h)

Radionic Transformer Co., 411 S. Sangamon St., Chicago 7, Ill. 4-9.

Randall, Inc., Douglas, 102 High St., Westerly, R. I. 1-2-3-4-5-6-7-8-9-10-13. (h)

Raypar, Inc., 7800 W. Addison St., Chicago, Ill. 1-2-3-4-7-10.

RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. 1-2-3-4-5-7-8-9-12. ADV. PG. 26.

Richmond Engineering Co., Inc., Concord St., South Norwalk, Conn. 1-2-3-4-5-6-7-8-9-10-14. (h)

Rola Co., Inc., 2530 Superior Ave., Cleveland 14, Ohio. 1.

Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill. 1.

S N C Mfg. Co., Inc., Box 277, Oshkosh, Wis. 1-2-3-5-6-7-8-9-11. (h)

Saratoga Industries, Inc., Saratoga Springs, N. Y. 1-2-3-4-5-6-7-8-9-11. (h)

Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill. 13.

SOLA ELECTRIC CO., 4633 W. 16th St., Chicago 50, Ill. 12. ADV. PG. 316. (h)

Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y. 1.

Sorgel Electric Co., 838 W. National Ave., Milwaukee 4, Wis. 6-7-13.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. 1-3-5-7-9. (h)

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. 1-2-3-5-6-7-8-9-11-12. (h)

Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. 1-2-5-6-7-8-9-11. (h)

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. 11-12.

Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio. 1-2-3-4-5-6-7-8-9-10-11-12. (h)

Standard Electronics Corp., 287 Emmet St., Newark 5, N. J. 6-7-10-12.

STERLING TRANSFORMER CORP., 297 N. Seventh St., Brooklyn 7, N. Y. 1-2-3-5-6-7-9-11. ADV. PG. 662. (h)

SUPERIOR ELECTRIC CO., THE, 4000 Mae Ave., Bristol, Conn. 10. ADV. PG. 336, 337.

Tartak Electronics Inc., 2979 N. Ontario St., Burbank, Calif. 1-2-3-4-5-6-7-8-9-10-11-12-13.

TELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. 1-7. ADV. PG. 538. (h)

Television Laboratories, Inc., Mill St., Wauconda, Ill. 1-7-11. (h)

Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas. 1-3-5-6-7. (h)

THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. 1-2-4-5-6-7-8-11-14. ADV. PG. 548. (h)

Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. 1-2-3-4-5-6-7-8-9-10-11-12-13-14. (h)

Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif. 4-6-7-8-9-10-12-13-14.

Todd Products, 156 Gramatan Ave., Mt. Vernon, N. Y. 1-2-3-4-5-6-7-8-9-11.

Transformer Engineers, 161 E. California, Pasadena 1, Calif. 1-2-4-5-6-7-8-9-11-12-14. (h)

TRANSFORMER SPECIALTY CO., INC., Bala Cynwyd, Pa. 1-2-3-4-5-6-7-8-11-12-13. ADV. PG. 591. (h)

TRANSFORMERS, INC., 532 North St., Endicott, N. Y. 1-3-5-6-7-8. ADV. PG. 416, 417. (h)

Transistor Components Co., 301 Oakwood Ave., East Aurora, N. Y. 1-3.

Tranconic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. 1-2-3-4-5-6-7-8-9-10-11. (h)

Transvision, Inc., 460 North Ave., New Rochelle, N. Y. 1-3-4-5-6-7-14. (h)

Trenton Transformer Corp., Box 568 B., Trenton, N. J. 1-2-3-4-5-6-7-8-9-10-11-12-13. (h)

TRESCO, 3824 Terrace St., Philadelphia 28, Pa. 1-2-3-5-6-7-8-11. ADV. PG. 534. (h)

TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. 1-2-3-5-6-7-8-11-13-14. ADV. PG. 398. (h)

Triplett & Barton, Inc., 831 N. Lake St., P. O. Box 3128, Burbank, 14.

Tronic Coil Winding Co., Inc., 161 Fairfield Ave., Waterbury, Conn. 1-7-12.

Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. 1-2-3-4-5-6-7-8-9-11-12.

UNION ELECTRIC PRODUCTS CO., 24 Edison Pl., Newark 2, N. J. 1-4-6-7-12. ADV. PG. 663.

U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. 2-3-5-6-7-8-9-11-12-13-14. ADV. PG. 493. (h)

UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. 1-2-3-4-5-6-7-8-9-10-11-12-13-14. ADV. PG. Inside Front Cover. (h)

UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. 1-2-3-4-5-6-7-10-11. ADV. PG. 654. (h)

Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif. 13.

VARI-L CO., INC., 432 Fairfield Ave., Stamford, Conn. 9. ADV. PG. 192.

Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas. 5-6-7-9-12. (h)

VIBRATION RESEARCH LABS., INC., 97 Lake Ave., Tuckahoe, N. Y. 11. ADV. PG. 602.

Webster Electric Co., 1900 Clark St., Racine, Wis. 1-4.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. 4-5-6-7-8-9. ADV. PG. 113-124. (h)

WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. 1-5-6-7-11. ADV. PG. 138.

X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis. 14.

TRANSFORMERS—Instrument

ACME ELECTRIC CORP., 21 Water St., Cuba, N. Y. ADV. PG. 260.

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)

Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65. (h)

Allis-Chalmers Mfg. Co., 935 S. 70th St., Milwaukee 1, Wis.

Annis Co., R. B., 1101 North Delaware St., Indianapolis, Ind.

Arco Transformer & Electric Co., 1602 South Hanna St., Fort Wayne, Ind. (h)

Atlas Coil, Inc., Cottage St., Derby, Conn. (h)

ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230. (h)

Basler Electric Co., 601 Fifth St., Highland, Ill. (h)

Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.

Bristol Co., The, Waterbury 20, Conn.

California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)

CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567. (h)

Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill. (h)

COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144. (h)

Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J. (h)

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill. (h)

Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.

Electran Mfg. Co., 1901 N. Clybourn, Chicago, Ill. (h)

Electrical Facilities Inc., 4239 Holden St., Oakland 8, Calif.

Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. (h)

Electro-Tech Equipment Co., 308 Canal St., New York 13, N. Y.

EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583.

Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.

Esterline-Angus, Inc., P. O. Box 596, Indianapolis, Ind.

FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)

GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)

GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)

HICKOK ELECTRICAL INSTRUMENT CO., 514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.

HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603. (h)

INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443. (h)

Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.

ISLIP TRANSFORMER & METAL CO., INC., Beech St., Islip, N. Y. ADV. PG. 485. (h)

- Person Electric Co., Bellwood, Ill. (h)
 Transformer Corp., 20 E. Franklin St., Danbury, Conn. (h)
YSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 301. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemanburg Ave., at Hobson Blvd., Easton, Pa. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
LWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
 Mastic Transformers Inc., 63 Swanton St., Winchester, Mass. (h)
 Helfer Winding Labs., 9 Albermarle Ave., Trenton 3, N. J. (h)
 Clear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind. (h)
ORTHO ENGINEERING CORP., TRANSFORMER DIV., 245 Wallace St., Orange, N. J. ADV. PG. 612. (h)
FORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 496. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
MER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)
 Saratoga Industries, Inc., Saratoga Springs, N. Y. (h)
 Terra Electronic Corp., San Carlos, Calif. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Rare Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio. (h)
ERLING TRANSFORMER CORP., 297 N. Seventh St., Brooklyn 7, N. Y. ADV. PG. 662. (h)
 Pak Electronics Inc., 2979 N. Ontario St., Burbank, Calif. (h)
ERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548. (h)
 Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417. (h)
 Ansonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
AD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. (h)
S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 654. (h)
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas (h)
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138. (h)
 Workman TV, Inc., 309 Queen Anne Road, Teaneck, N. J. (h)
- Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. (h)
ELECTRONIC TRANSFORMER CO., 207 W. 25th St., New York, N. Y. ADV. PG. 166. (h)
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490. (h)
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583. (h)
 Espey Mfg., Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187. (h)
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450. (h)
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550. (h)
FOREST ELECTRIC CO., 7216 Circle Ave., Forest Park, Ill. ADV. PG. 644. (h)
 Fortiphone Ltd., 247 Regent St., W1, London, England. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 31, Ill. ADV. PG. 501. (h)
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603. (h)
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y. (h)
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443. (h)
ISLIP TRANSFORMER & METAL CO., INC., Beech St., Islip, N. Y. ADV. PG. 485. (h)
 K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 437. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. (h)
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 152, 153. (h)
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemanburg Ave. at Hobson Blvd., Easton, Pa. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
NEW JERSEY ELECTRONICS CORP., 196 Waverly Ave., Newark, N. J. ADV. PG. 478. (h)
NEW YORK TRANSFORMER CO., INC., Third Ave., Alpha, N. J. ADV. PG. 532. (h)
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth Surrey, England. (h)
 Peerless Electrical Products, Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill. (h)
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa. (h)
POWER INDUSTRIES CO., 2511 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650. (h)
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers. (h)
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y. (h)
 Randall, Inc., Douglas, 102 High St., Westerly, R. I. (h)
 Ravnar, Inc., 7800 W. Addison St., Chicago, Ill. (h)
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26. (h)
 Richmond Engineering Co., Inc., Concord St., South Norwalk, Conn. (h)
 Rollan Electric Co., 8020 S. Park Ave., Chicago 19, Ill. (h)
 Saratoga Industries, Inc., Saratoga Springs, N. Y. (h)
 Sonotone Corp., Saw Mill River Rd., P.O. Box 200, Elmsford, N. Y. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio. (h)
 Tartak Electronics Inc., 2979 N. Ontario St., Burbank, Calif. (h)
TELEX, INC., Telex Park, St. Paul 1, Minn. ADV. PG. 449. (h)
THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Torocoil Co., 1374 Mobile Court, St. Louis, Mo. (h)
 Transformer Engineers, 161 E. California, Pasadena 1, Calif. (h)
TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 591. (h)
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417. (h)
- Transistor Components Co., 301 Oakwood Ave., East Aurora, N. Y. (h)
 Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 534. (h)
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 654. (h)
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas (h)
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138. (h)
 Workman TV, Inc., 309 Queen Anne Road, Teaneck, N. J. (h)
- TRANSFORMERS—Precision Matched**
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65. (h)
 Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind. (h)
 Atlantic Transformer Co., Groton, Conn. (h)
 Atlas Coil, Inc., Cottage St., Derby, Conn. (h)
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230. (h)
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 510. (h)
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif. (h)
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. (h)
CENTRAL TRANSFORMER CO., 908 W. Jackson Ave., Chicago, Ill. ADV. PG. 567. (h)
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill. (h)
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. (h)
 Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J. (h)
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490. (h)
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583. (h)
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)
GENERAL TRANSFORMER CO., 18240 Harwood Ave., Homewood, Ill. ADV. PG. 444. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 501. (h)
GUDEMAN CO., 340 W. Huron St., Chicago 10, Ill. ADV. PG. 241. (h)
HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603. (h)
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443. (h)
ISLIP TRANSFORMER & METAL CO., INC., Beech St., Islip, N. Y. ADV. PG. 485. (h)
 Jobbins Electronic Enterprises, Menlo Park, Calif. (h)
 K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 437. (h)
KEYSTONE PRODUCTS CO., 904-6 23rd St., Union City, N. J. ADV. PG. 301. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. (h)
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 152, 153. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 34th St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemanburg Ave. at Hobson Blvd., Easton, Pa. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
 Mystic Transformers Inc., 63 Swanton St., Winchester, Mass. (h)
ORTHO ENGINEERING CORP., TRANSFORMER DIV., 245 Wallace St., Orange, N. J. ADV. PG. 612. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth Surrey, England. (h)
 Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)

Radio Music Corp., 84 S. Water St., Port Chester, N. Y. (h)
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Saratoga Industries, Inc., Saratoga Springs, N. Y. (h)
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio. (h)
 Tartak Electronics Inc., 2979 N. Ontario St., Burbank, Calif. (h)
THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548. (h)
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h-Torocoil Co., 1374 Mobile Court, St. Louis, Mo.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417.
 Transon, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 654. (h)

TRANSFORMERS—Pulse

ACME ELECTRIC CORP., 21 Water St., Cuba, N. Y. ADV. PG. 260. (h)
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J. (h)
AIRDESIGN INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65. (h)
 Atlantic Transformer Co., Groton, Conn. (h)
 Atlas Coil, Inc., Cottage St., Derby, Conn. (h)
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230. (h)
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 510. (h)
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175. (h)
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242. (h)
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif. (h)
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
 Carad Corp., 2850 Bay Rd., Redwood City, Calif. (h)
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551. (h)
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567. (h)
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill. (h)
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453. (h)
 Codetyper Laboratories, 550 Fifth Ave., New York 19, N. Y. (h)
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill. (h)
 Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J. (h)
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. (h)
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill. (h)
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. (h)
ESC CO., 534 Bergen Blvd., Palisades Park, N. J. ADV. PG. 586. (h)
ELECTRIC COIL TRANSFORMER CORP., Westerly Rd., Ossining, N. Y. ADV. PG. 563. (h)
 Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. (h)
ELECTRONIC COMPUTER DIV., COMPONENT DEPT., UNDERWOOD CORP., 35-10 36th Ave., Long Island City 6, N. Y. ADV. PG. 192. (h)
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 166. (h)
EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490. (h)
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583. (h)
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187. (h)
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450. (h)
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)

Goodman Industries Ltd., Axiom Works, Wembley Middlesex, England. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 501. (h)
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
HEPPNER MFG. CO., P. O. Box 612, Round Lake, Ill. ADV. PG. 226. (h)
HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603. (h)
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y. (h)
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443. (h)
ISLIP TRANSFORMER & METAL CO., INC., Beech St., Islip, N. Y. ADV. PG. 485. (h)
 Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md. (h)
 Jefferson Electric Co., Bellwood, Ill. (h)
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill. (h)
 K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 437. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. (h)
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 152, 153. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa. (h)
MAGNETICS RESEARCH CO., 142 King St., Chappaqua, N. Y. ADV. PG. 651. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Marchant Research, Inc., 1475 Powell St., Emeryville, Calif. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
MOLONEY ELECTRIC CO., 5590 Bircher Blvd., St. Louis 20, Mo. ADV. PG. 356. (h)
NEW JERSEY ELECTRONICS CORP., 196 Waverly Ave., Newark, N. J. ADV. PG. 478. (h)
 Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J. (h)
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612. (h)
 Ossian Mfg. Co., Box 151A, Ossian, Ind. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill. (h)
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y. (h)
 Ram Electronics, Inc., S. Buckout St., Irvington, N. Y. (h)
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill. (h)
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26. (h)
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 334. (h)
 Richmond Engineering Co., Inc., Concord St., South Norwalk, Conn. (h)
 Saratoga Industries, Inc., Saratoga Springs, N. Y. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Sprague Electric Co., 125 Marshall St., North Adams, Mass. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. (h)
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio. (h)
STERLING TRANSFORMER CORP., 297 N. Seventh St., Brooklyn 11, N. Y. ADV. PG. 662. (h)
 Tartak Electronics Inc., 2979 N. Ontario St., Burbank, Calif. (h)
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 543. (h)
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303. (h)
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas. (h)
THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548. (h)
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif. (h)
TRANSFORMER SPECIALTY CO., Bala-Cynwyd, Pa. ADV. PG. 591. (h)
 Transon, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 534. (h)

TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
UTAH RADIO PRODUCTS, INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 654. (h)
WESTINGHOUSE ELECTRIC CORP., P. O. Box 368, Pittsburgh 30, Pa. ADV. PG. 113-124. (h)
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138. (h)

TRANSFORMERS—r-f and i-f

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496. (h)
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 Aerocoil Inc., 24 Cliff St., Jersey City, N. J. (h)
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83. (h)
 Atlas Coil, Inc., Cottage St., Derby, Conn. (h)
 Automatic Mfg. Co., 65 Gouverneur St., Newark 4, N. J. (h)
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175. (h)
 Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y. (h)
C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn. (h)
CADDELL-BURNS MFG. CO., 40 E. Second St., Minneola, N. Y. ADV. PG. 602. (h)
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif. (h)
CAMBRIDGE THERMIONIC CORP., 145 Concord Ave., Cambridge 38, Mass. ADV. PG. 240. (h)
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill. (h)
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio. (h)
COILCRAFT, INC., Cary, Ill. ADV. PG. 534. (h)
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. (h)
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. (h)
 Delco Radio Div., General Motors Corp., Kokomo, Ind. (h)
 Delta Electronics, Inc., 255 Green St., Brooklyn 22, N. Y. (h)
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480. (h)
ELECTRONIC COMPONENTS, INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380. (h)
 Essex Electronics, Berkeley Heights, N. J. (h)
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367. (h)
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 196. (h)
 Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y. (h)
HILLBURN ELECTRONIC PRODUCTS CO., 55 Nassau Ave., Brooklyn 22, N. Y. ADV. PG. 624. (h)
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641. (h)
I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa. (h)
 Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y. (h)
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443. (h)
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill. (h)
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. (h)
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
 Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio. (h)
 Magnex Corp., 90-28 Van Wyck Expressway Jamaica, N. Y. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass. (h)
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill. (h)
 National Coil Co., P. O. Box 1237, Sheridan, Wyo. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers (h)
 Rapyar, Inc., 7800 W. Addison St., Chicago, Ill. (h)
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 334. (h)
 Rollan Electric Co., 8020 S. South Park, Chicago 19, Ill. (h)
 Sickles, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. (h)
 Standard Winding Corp., 44-62 Johns St., Newburgh, N. Y. (h)
 New York Winding Company, 137 Walsh Ave., Newburgh, N. Y. (h)
 Smith Coil Co., 4 Claremont Rd., Bernardsville, N. J. (h)
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y. (h)
ELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538. (h)
 Teradio Engineering Corp., 99 Wall St., New York 5, N. Y. (h)
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Vision, Inc., 460 North Ave., New Rochelle, N. Y. (h)
 Dex Co., Dept. EBG, P.O. Box 1207, Lindsay, Calif. (h)
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. (h)
S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif. (h)
 Vt. Co., 5221 Green St., Philadelphia 44, Pa. (h)

TRANSFORMERS—Subsonic

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 Atlantic Transformer Co., Groton, Conn. (h)
DIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 510. (h)
 Erie Electric Co., 601 Fifth St., Highland, Ill. (h)
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567. (h)
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill. (h)
 Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. (h)
CO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490. (h)
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)
SLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
AMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 31, Ill. ADV. PG. 501. (h)
 Hiley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603. (h)
INDUSTRIAL TRANSFORMER CO., Goussard, Pa. ADV. PG. 442, 443. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
 Dress Electrical Products Div. of Altec Lansing Corp., 2356 Santa Monica Blvd., Beverly Hills, Calif. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)
THEON MFG. CO., EQUIPMENT SALES DIV., Valtham 54, Mass. ADV. PG. 26. (h)
 Hammond Engineering Co., Inc., Concord St., South Norwalk, Conn. (h)
 Northwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Tak Electronics Inc., 2979 N. Ontario St., Burbank, Calif. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Transformer Engineers, 161 E. California St., Pasadena 7, Calif. (h)
TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 591. (h)
 Sononic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
TRAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
UNITED TRANSFORMER CO., 150 Varick St., New York 3, N. Y. ADV. PG. Inside Front Cover. (h)

TRANSFORMERS—TV Deflection

Arco Transformer & Electric Co., 1602 South Hanna St., Fort Wayne, Ind. (h)
 Atomic Mfg. Co., 65 Gouverneur St., Newark, N. J. (h)
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
CEICO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551. (h)
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453. (h)
 Cinema-Television Ltd., Worsley Bridge Rd., London E. 26, England. (h)
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 2, Ill. (h)
 Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. (h)
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 1, Ill. (h)

Epsy Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 196. (h)
 Hallderson Co., The, 4500 Ravenswood Ave., Chicago 40, Ill. (h)
HEPPNER MFG. CO., P.O. Box 612, Round Lake, Ill. ADV. PG. 226. (h)
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)
RADIO CORP OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers. (h)
 Ram Electronics, Inc., S. Buckout St., Irvington, N. Y. (h)
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill. (h)
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Teletron Co., The, 4019 Prospect Ave., Cleveland 3, Ohio. (h)
 Teradio Engineering Corp., 99 Wall St., New York 5, N. Y. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. (h)
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif. (h)

TRANSFORMERS—TV Impedance Matching

AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479. (h)
 Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind. (h)
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
 Blonder-Tongue Labs., Inc., 526-536 North Ave., Westfield, N. J. (h)
 Erach Mfg. Corp., 200 Central Ave., Newark 4, N. J. (h)
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn. (h)
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif. (h)
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. (h)
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453. (h)
 Cinema-Television Ltd., Worsley Bridge Rd., London SE 26, England. (h)
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. (h)
COLCRAFT, INC., Cary, Ill. ADV. PG. 534. (h)
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. (h)
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill. (h)
 Dane Electronic Labs., Inc., 316 Stuart St., Boston, Mass. (h)
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill. (h)
 Epsy Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367. (h)
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57. (h)
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653. (h)
GENERAL TRANSFORMER CO., 18240 Harwood Ave., Homewood, Ill. ADV. PG. 444. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663. (h)
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421. (h)
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
 Linear Equipment Labs., Brightwater Place, Massapequa, N. Y. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa. (h)

Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
ORTHO ENGINEERING CORP., TRANSFORMER DIV., 245 Wallace St., Orange, N. J. ADV. PG. 612. (h)
OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 496. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill. (h)
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y. (h)
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill. (h)
 Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill. (h)
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass. (h)
 Square Root Mfg. Co., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. (h)
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 534. (h)
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y. (h)

TRANSFORMERS—Toroidal

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65. (h)
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230. (h)
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175. (h)
 Barry Electronics Corp., 136 Liberty St., New York, N. Y. (h)
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323. (h)
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197. (h)
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
 Carad Corp., 2850 Bay Rd., Redwood City, Calif. (h)
CEICO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551. (h)
 Chicago Magnetic Control, 1616 Damon Ave., Chicago, Ill. (h)
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453. (h)
 Coast Coil Co., 5352 W. Washington Blvd., Los Angeles 16, Calif. (h)
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144. (h)
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. (h)
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. (h)
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480. (h)
EPSCO INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583. (h)
 Epsy Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180. (h)
GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 501. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
 Harder Co., Donald C., 3338 India St., San Diego 1, Calif. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 437. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. (h)
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181. (h)

Radio Music Corp., 84 S. Water St., Port Chester, N. Y. (h)
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Saratoga Industries, Inc., Saratoga Springs, N. Y. (h)
 Southwestern Industrial Electronics Co., 2631 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio. (h)
 Tartak Electronics Inc., 2979 N. Ontario St., Burbank, Calif.
THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548. (h)
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h-Torocoil Co., 1374 Mobile Court, St. Louis, Mo.
TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417.
 Trancion, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
UTAH RADIO PRODUCTS CO., INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 654. (h)

TRANSFORMERS—Pulse

ACME ELECTRIC CORP., 21 Water St., Cuba, N. Y. ADV. PG. 260. (h)
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J. (h)
AIRDESIGN INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65. (h)
 Atlantic Transformer Co., Groton, Conn. (h)
 Atlas Coil, Inc., Cottage St., Derby, Conn. (h)
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230. (h)
AUDIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 510. (h)
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175. (h)
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
BERKSHIRE LABORATORIES, 580 Beaver Pond Rd., Lincoln, Mass. ADV. PG. 242. (h)
 Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
 Carad Corp., 2850 Bay Rd., Redwood City, Calif. (h)
CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567. (h)
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill. (h)
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453. (h)
 Codetyper Laboratories, 550 Fifth Ave., New York 19, N. Y.
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill. (h)
 Cycle Electronic Laboratories, 356 Glenwood Ave., East Orange, N. J. (h)
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. (h)
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill. (h)
 Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass. (h)
ESC CO., 534 Bergen Blvd., Palisades Park, N. J. ADV. PG. 586.
ELECTRICOIL TRANSFORMER CORP., Westerly Rd., Ossining, N. Y. ADV. PG. 563.
 Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. (h)
ELECTRONIC COMPUTER DIV., COMPONENT DEPT., UNDERWOOD CORP., 35-10 36th Ave., Long Island City 6, N. Y. ADV. PG. 192.
ELECTRONIC TRANSFORMER CO., INC., 207 W. 25th St., New York, N. Y. ADV. PG. 166. (h)
EPGO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490. (h)
EPSCO, INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450. (h)
FISHER ENGINEERING, INC., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind. ADV. PG. 550. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)

Goodman Industries Ltd., Axiom Works, Wembley Middlesex, England.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 501. (h)
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
HEPPNER MFG. CO., P. O. Box 612, Round Lake, Ill. ADV. PG. 226. (h)
HIGHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603. (h)
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y. (h)
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443. (h)
ISLIP TRANSFORMER & METAL CO., INC., Beech St., Islip, N. Y. ADV. PG. 485. (h)
 Jacobs Instrument Co., 4718 Bethesda Ave., Bethesda, Md. (h)
 Jefferson Electric Co., Bellwood, Ill.
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
 K-V Transformer Corp., 20 E. Franklin St., Danbury, Conn. (h)
KENYON TRANSFORMER CO., INC., 640 Barry St., New York 59, N. Y. ADV. PG. 437. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
LANGEVIN MFG. CORP., 37 W. 65th St., New York 23, N. Y. ADV. PG. 152, 153. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. & Hobson Blvd., Easton, Pa. (h)
MAGNETICS RESEARCH CO., 142 King St., Chappaqua, N. Y. ADV. PG. 651.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Marchant Research, Inc., 1475 Powell St., Emeryville, Calif. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
MOLONEY ELECTRIC CO., 5590 Bircher Blvd., St. Louis 20, Mo. ADV. PG. 356. (h)
NEW JERSEY ELECTRONICS CORP., 196 Waverly Ave., Newark, N. J. ADV. PG. 478.
 Nothelfer Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612. (h)
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 Peerless Electrical Products Div. of Altec Lansing Corp., 9556 Santa Monica Blvd., Beverly Hills, Calif. (h)
 Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y. (h)
 Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 334.
 Richmond Engineering Co., Inc., Concord St., South Norwalk, Conn. (h)
 Saratoga Industries, Inc., Saratoga Springs, N. Y. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Sprague Electric Co., 125 Marshall St., North Adams, Mass. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. (h)
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio. (h)
STERLING TRANSFORMER CORP., 297 N. Seventh St., Brooklyn 11, N. Y. ADV. PG. 662. (h)
 Tartak Electronics Inc., 2979 N. Ontario St., Burbank, Calif.
TECHNITROL ENGINEERING CO., 2751 N. 4th St., Philadelphia 33, Pa. ADV. PG. 543.
TELECHROME INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas. (h)
THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548. (h)
 Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif. (h)
TRANSFORMER SPECIALTY CO., Bala-Cynwyd, Pa. ADV. PG. 591.
 Trancion, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 534. (h)

TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)
UTAH RADIO PRODUCTS, INC., 1123 Franklin St., Huntington, Ind. ADV. PG. 654. (h)
WESTINGHOUSE ELECTRIC CORP., P. O. Box 368, Pittsburgh 30, Pa. ADV. PG. 113-124. (h)
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138. (h)

TRANSFORMERS—r-f and i-f

ACE COIL & ELECTRONICS CO., 912 Lincoln Highway, Metuchen, N. J. ADV. PG. 496
 Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 Aerocoil Inc., 24 Cliff St., Jersey City, N. J.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Atlas Coil, Inc., Cottage St., Derby, Conn. (h)
 Automatic Mfg. Co., 65 Gouverneur St., Newark 4, N. J.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bellaire Electronics, Inc., 50 Prince St., Brooklyn, N. Y.
C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
CADELL-BURNS MFG. CO., 40 E. Second St., Mineola, N. Y. ADV. PG. 602.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill. (h)
 Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 24, Ohio.
COLCRAFT, INC., Cary, Ill. ADV. PG. 534. (h)
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. (h)
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. (h)
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Delta Electronics, Inc., 255 Green St., Brooklyn 22, N. Y.
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480. (h)
ELECTRONIC COMPONENTS, INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 Essex Electronics, Berkeley Heights, N. J.
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 196.
 Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.
HILLBURN ELECTRONIC PRODUCTS CO., 55 Massau Ave., Brooklyn 22, N. Y. ADV. PG. 624.
HOULIHAN CO., T. J., 2508-14 W. Lawrence Ave., Chicago 25, Ill. ADV. PG. 641.
I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
 Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443. (h)
 Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Liebel-Flarsheim Co., 111 E. Amy Rd., Cincinnati 37, Ohio.
 Magnex Corp., 90-28 Van Wyck Expressway Jamaica, N. Y. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Merit Coil & Transformer Corp., 4427, N. Clark St., Chicago 40, Ill. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
 Muter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 National Coil Co., P. O. Box 1237, Sheridan, Wyo.
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers. (h)
 Rapyar, Inc., 7800 W. Addison St., Chicago, Ill.
REDMAN ELECTRONICS CORP., P. O. Box 72, Thompsonville, Conn. ADV. PG. 334.
 Rollan Electric Co., 8020 S. South Park, Chicago 19, Ill.
 Sickles, F. W., Div. General Instrument Corp., 165 Front St., Chicopee, Mass.
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Winding Corp., 44-62 Johns St., Newburgh, N. Y.
 Snwyck Winding Company, 137 Walsh Ave., Newburgh, N. Y.
 Summit Coil Co., 4 Claremont Rd., Bernardsville, N. J.
 Technical Material Corp., P. O. Box 142, Mamaroneck, N. Y.
ELECTRO INDUSTRIES CORP., 35-18 37th St., Long Island City 1, N. Y. ADV. PG. 538.
 Radio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Vision, Inc., 460 North Ave., New Rochelle, N. Y. (h)
 Dex Co., Dept. EBG, P.O. Box 1207, Lindsay, Calif.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
 Ft Co., 5221 Green St., Philadelphia 44, Pa.

TRANSFORMERS—Subsonic

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 Atlantic Transformer Co., Groton, Conn. (h)
DIO DEVELOPMENT CO., 2833 13th Ave., S., Minneapolis 7, Minn. ADV. PG. 510. (h)
 Electric Co., 601 Fifth St., Highland, Ill. (h)
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567. (h)
 Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill. (h)
 Electro Engineering Works, 6021 College Ave., Oakland 18, Calif. (h)
CO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490. (h)
RRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)
SLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
AMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 31, Ill. ADV. PG. 501. (h)
 Bley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
SHLAND ENGINEERING CO., Westbury, N. Y. ADV. PG. 603. (h)
INDUSTRIAL TRANSFORMER CO., Gouldsboro, Pa. ADV. PG. 442, 443. (h)
 Inex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
 Press Electrical Products Div. of Altec Lansing Corp., 3356 Santa Monica Blvd., Beverly Hills, Calif. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 6, Ill. ADV. PG. 650. (h)
THEOM MFG. CO., EQUIPMENT SALES DIV., Valhalla 54, Mass. ADV. PG. 26. (h)
 Hammond Engineering Co., Inc., Concord St., South Norwalk, Conn. (h)
 Northwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Tak Electronics Inc., 2979 N. Ontario St., Burbank, Calif. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Transformer Engineers, 161 E. California St., Pasadena 6, Calif. (h)
TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 591. (h)
 Insonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
AD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
ITED TRANSFORMER CO., 150 Varick St., New York 3, N. Y. ADV. PG. Inside Front Cover. (h)

TRANSFORMERS—TV Deflection

Coil Transformer & Electric Co., 1602 South Hanna St., Fort Wayne, Ind. (h)
 romatic Mfg. Co., 65 Gouverneur St., Newark, N. J.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
CO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551. (h)
CHAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453. (h)
 Cinema-Television Ltd., Worsley Bridge Rd., London E. 26, England. (h)
 Winders, Inc., 100 New York Ave., Westbury, N. Y. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 2, Ill. (h)
 Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. (h)
 Meyer Industries, 3418 N. Milwaukee Ave., Chicago 1, Ill. (h)

Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
GUTHMAN, INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 196. (h)
 Hallderson Co., The, 4500 Ravenswood Ave., Chicago 40, Ill. (h)
HEPPNER MFG. CO., P.O. Box 612, Round Lake, Ill. ADV. PG. 226. (h)
 Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa. (h)
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)
RADIO CORP OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers. (h)
 Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill. (h)
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Teletron Co., The, 4019 Prospect Ave., Cleveland 3, Ohio. (h)
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
 Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y. (h)
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif. (h)

TRANSFORMERS—TV Impedance Matching

AIRDESIGN, INC., 241 Fairfield Ave., Upper Darby, Pa. ADV. PG. 479. (h)
 Arco Transformer & Electric Co., 1602 S. Hanna St., Fort Wayne, Ind. (h)
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
 Blender-Tongue Labs., Inc., 526-536 North Ave., Westfield, N. J. (h)
 Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn. (h)
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif. (h)
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
 Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y. (h)
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453. (h)
 Cinema-Television, Ltd., Worsley Bridge Rd., London SE 26, England. (h)
 Coil Winders, Inc., 100 New York Ave., Westbury, N. Y. (h)
COILCRAFT, INC., Cary, Ill. ADV. PG. 534. (h)
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. (h)
 Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill. (h)
 Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill. (h)
 Dane Electronic Labs., Inc., 316 Stuart St., Boston, Mass. (h)
 Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 41, Ill. (h)
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
FUGLE-MILLER LABORATORIES, INC., 398 Main St., Metuchen, N. J. ADV. PG. 367. (h)
GABRIEL ELECTRONICS DIV. OF THE GABRIEL CO., Endicott St., Norwood, Mass. ADV. PG. 57. (h)
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653. (h)
GENERAL TRANSFORMER CO., 18240 Harwood Ave., Homewood, Ill. ADV. PG. 444. (h)
GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)
IMPEDANCE INC., 9 Alan Court, Farmingdale, N. Y. ADV. PG. 663. (h)
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421. (h)
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
 Linear Equipment Labs., Brightwater Place, Massapequa, N. Y. (h)
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave. at Hobson Blvd., Easton, Pa. (h)

Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill. (h)
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif. (h)
MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
ORTHO ENGINEERING CORP., TRANSFORMER DIV., 245 Wallace St., Orange, N. J. ADV. PG. 612. (h)
OXFORD ELECTRIC CORP., 3911 S. Michigan Ave., Chicago 15, Ill. ADV. PG. 496. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650. (h)
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill. (h)
 Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y. (h)
 Raypar, Inc., 7800 W. Addison St., Chicago, Ill. (h)
 Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill. (h)
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass. (h)
 Square Root Mfg. Co., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill. (h)
TECHNICAL APPLIANCE CORP., Sherburne, N. Y. ADV. PG. 516. (h)
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill. (h)
TRESCO, 3824 Terrace St., Philadelphia 28, Pa. ADV. PG. 534. (h)
TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J. (h)
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493. (h)
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y. (h)

TRANSFORMERS—Toroidal

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 Aerovox Corp., 740 Belleville Ave., New Bedford, Mass. (h)
AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65. (h)
ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230. (h)
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175. (h)
 Barry Electronics Corp., 136 Liberty St., New York, N. Y. (h)
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
BOGUE ELECTRIC MFG. CO., 56 Iowa Ave., Paterson 3, N. J. ADV. PG. 323. (h)
BURNELL & CO., 45 Warburton Ave., Yonkers 2, N. Y. ADV. PG. 197. (h)
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
 Carad Corp., 2850 Bay Rd., Redwood City, Calif. (h)
CEICO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551. (h)
 Chicago Magnetic Control, 1616 Damon Ave., Chicago, Ill. (h)
CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453. (h)
 Coast Coil Co., 5352 W. Washington Blvd., Los Angeles 16, Calif. (h)
COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144. (h)
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn. (h)
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill. (h)
DIETZ DESIGN & MFG. CO., Grandview 6, Mo. ADV. PG. 480. (h)
EPSCO INCORPORATED, 126 Massachusetts Ave., Boston 15, Mass. ADV. PG. 583. (h)
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y. (h)
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187. (h)
FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20. (h)
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180. (h)
GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 39, Ill. ADV. PG. 501. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
 Harder Co., Donald C., 3338 India St., San Diego 1, Calif. (h)
KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 437. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass. (h)
 Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif. (h)
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569. (h)
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181. (h)

MAGNETIC AMPLIFIERS, INC., 632 Tinton Ave., New York 55, N. Y. ADV. PG. 212. (h)
 MAGNETICS, INC., P. O. Box 230-E, Butler, Pa. ADV. PG. 28.
 MICO INSTRUMENT CO., 77 Trowbridge St., Cambridge 38, Mass. ADV. PG. 376.
 Mid-West Coil & Transformer Co., 1642 N. Halstead St., Chicago 14, Ill. (h)
 MILLIVAC INSTRUMENT CORP., 444 Second St., Box 997, Schenectady, N. Y. ADV. PG. 484.
 MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
 Mt. Vernon Precision Transformer Co., 201 S. Third Ave., Mt. Vernon, N. Y.
 ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
 Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
 RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Saratoga Industries, Inc., Saratoga Springs, N. Y.
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y. (h)
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Television Laboratories, Inc., Mill St., Wauconda, Ill. (h)
 THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548. (h)
 Texas Instruments Inc., 6000 Lemmon Ave., Dallas, Texas. (h)
 Torocoil Co., 1374 Mobile Court, St. Louis, Mo. (h)
 TORWICO ELECTRONICS, INC., 965 Frelinghuysen Ave., Newark 5, N. J. ADV. PG. 496. (h)
 Transformer Engineers, 161 E. California, Pasadena 1, Calif. (h)
 TRANSFORMERS, INC., 532 North St., Endicott, N. Y. ADV. PG. 416, 417. (h)
 Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
 TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
 U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover.
 VARI-L CO., INC., 432 Fairfield Ave., Stamford, Conn. ADV. PG. 192.
 VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 VICKERS ELECTRIC DIVISION, VICKERS, INC., 1825 Locust St., St. Louis 3, Mo. ADV. PG. 38.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124. (h)

TRANSFORMERS—Ultrasonic

Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif. (h)
 Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
 AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65. (h)
 Atlantic Transformer Co., Groton, Conn. (h)
 Atlas Coil, Inc., Cottage St., Derby, Conn. (h)
 ATLAS ENGINEERING CO., 3 Edgewood St., Roxbury, Mass. ADV. PG. 230. (h)
 AUDIO DEVELOPMENT CO., 2833 13th Ave., S. Minneapolis 7, Minn. ADV. PG. 510.
 Basler Electric Co., 601 Fifth St., Highland, Ill. (h)
 BRUSH ELECTRONICS CO., 3405 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 406, 407.
 California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif. (h)
 CENTRAL TRANSFORMER CO., 908 W. Jackson Blvd., Chicago, Ill. ADV. PG. 567. (h)
 CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453. (h)
 COMMUNICATION ACCESSORIES CO., Red Bridge Rd., Hickman Hills, Mo. ADV. PG. 141-144. (h)
 EPCO PRODUCTS, INC., 2500 Atlantic Ave., Brooklyn 17, N. Y. ADV. PG. 490. (h)
 FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450. (h)
 FREED TRANSFORMER CO., INC., 1736 Weirfield St., Brooklyn 27, N. Y. ADV. PG. 227. (h)
 GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
 GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 GOSLIN ELECTRIC & MFG. CO., 2921 W. Olive St., Burbank, Calif. ADV. PG. 637. (h)

GRAMER TRANSFORMER CORP., 2734 N. Pulaski Rd., Chicago 31, Ill. ADV. PG. 501. (h)
 Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif. (h)
 KENYON TRANSFORMER CO., INC., 840 Barry St., New York 59, N. Y. ADV. PG. 437. (h)
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y. (h)
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y. (h)
 MILWAUKEE TRANSFORMER CO., 5231 N. Hopkins St., Milwaukee 9, Wis. ADV. PG. 140. (h)
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England. (h)
 Peerless Electrical Products Div. of Altex Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif. (h)
 POWER INDUSTRIES CO., 2611 S. Indiana Ave., Chicago 16, Ill. ADV. PG. 650.
 RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas. (h)
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y. (h)
 Tartak Electronics Inc., 2979 N. Ontario St., Burbank, Calif.
 THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548. (h)
 Thordarson-Meisner Mfg. Divs., Mt. Carmel, Ill. (h)
 Transformer Engineers, 161 E. California, Pasadena 1, Calif.
 TRANSFORMER SPECIALTY CO., INC., Bala-Cynwyd, Pa. ADV. PG. 591. (h)
 Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif. (h)
 TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398. (h)
 Tri-Dex Co., P. O. Box 1207, Lindsay, Calif.
 UNITED TRANSFORMER CO., 150 Varick St., New York 13, N. Y. ADV. PG. Inside Front Cover. (h)

TRANSISTORS

CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.
 Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
 General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.
 Germanium Products Corp., 26 Cornelison Ave., Jersey City 4, N. J.
 HYDRO-AIRE, INC., 3000 Winona Ave., Burbank, Calif. ADV. PG. 205.
 Kemtron Electron Products, Inc., 5 Prince Place, Newbury Port, Mass.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgeway Rd., Minneapolis 13, Minn.
 National Union Radio Corp., 237 Jacksonville Rd., Hattboro, Pa.
 Philco Corp., Government & Industrial Div., 4700 Wissahickon Ave., Philadelphia 44, Pa.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 88, 89.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
 STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
 Texas Instruments Incorporated, 6000 Lemmon Ave., Dallas, Texas.
 THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548.
 Transistor Products, Inc., Snow & Union St., Brighton 35, Mass.
 Transiron Electronic Corp., 403-407 Main St., Melrose 76, Mass.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TRANSMISSION LINES

See **CABLE—Coaxial or WAVEGUIDES**

TRANSMITTERS—Aircraft

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
 AIR ASSOCIATES INC., Teterboro, N. J., ADV. PG. 83.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy, Douglaston, N. Y.
 GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.

Jarvis Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wilcox-Gay Corp., Charlotte, Mich.

TRANSMITTERS—Amateur

Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
 BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bassett, Inc., Rex, 1314 N. E. 17 Court, P.O. Box 1759, Fort Lauderdale, Fla.
 BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Communication Measurements Lab., Inc., 350 Leland Ave., Plainfield, N. J.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 DOLLAR CO., ROBERT, COMMUNICATION EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 368.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Gyro Electronic Co., 325 Canal St., New York, N. Y.
 Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Harvey-Wells Electronics, Inc., North St., Southbridge, Conn.
 HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
 Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
 JOHNSON CO., E. F., Waseca, Minn. ADV. PG. 594, 595.
 Kaar Engineering Corp., 2995 Middlefield Rd. P. O. Box 1320, Palo Alto, Calif.
 Lettine Radio Mfg. Co., 62 Berkeley St., Valley Stream, N. Y.
 Meisner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Millen Mfg., Co., James, 150 Exchange St., Malden, Mass.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
 Pye Ltd., Cambridge, England.
 Sorensen Industrial Electronics Co., 87 N. Day St., Orange, N. J.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
 Valley Engineering Co., P.O. Box 2, Los Alamos, N. M.
 World Radio Laboratories, 3415 W. Broadway, Council Bluffs, Iowa.

TRANSMITTERS—Broadcast

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Continental Electronics Mfg., Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
 Gates Radio Co., Quincy, Ill.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Parisier & Co., Maurice I., 1475 Broadway, New York 36, N. Y.
 RADIO CORP., OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 WESTINGHOUSE ELECTRIC CORP., P.O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

TRANSMITTERS—Color Television

Dumont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
ELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
EL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
 Vicks Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.

TRANSMITTERS—Direction Finding

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

TRANSMITTERS—f-m

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Dumont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 Pye Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City, N. Y.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.
 Telemetering Associates, 494C Pine Forest Drive, Marietta, Ga.
 Transmitter Equipment Mfg. Co., Inc., 345 Hudson St., New York 14, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TRANSMITTERS—Facsimile

Comme Electronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
ARDWELL ELECTRONICS PRODUCTIONS CORP., ALLEN D., 97 Whiting St., Plainville, Conn. ADV. PG. 394.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.
 Huirhead & Co., Ltd., Beckenham, Kent, England.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
TIMES FACSIMILE CORP., 540 W. 58th St., New York 19, N. Y. ADV. PG. 662.

TRANSMITTERS—Fixed Frequency

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
 Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
 Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bassett Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
DOLLAR CO., ROBERT COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 368.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Gates Radio Co., Quincy, Ill.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Gyro Electronics Co., 325 Canal St., New York, N. Y.
 Hallicrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Heintz & Kaufman Equipment, Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftsbury Ave., London, W.C. 2, England.
 National Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
 Pye Ltd., Cambridge, England.
 Radio Engineering Laboratories, Inc., 36-40 37th St., Long Island City 1, N. Y.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 670.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

TRANSMITTERS—Fixed Station Communication

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
 Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
 Bassett Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Md.
 Bristol Co., The, Waterbury 20, Conn.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
DOLLAR CO., ROBERT COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 368.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Craft Industries Inc., 68 Jackson St., Stamford, Conn.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
 Gates Radio Co., Quincy, Ill.
 Gonset Co., 801 S. Main St., Burbank, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Kahn Research Labs., Elizabeth Bldg., 22 Pine St., Freeport, N. Y.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.
MAGNAVOX CO., COMPONENT SALES, INDUSTRIAL & DEFENSE PRODUCTS, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.

Mullard Overseas Ltd., Equipment Div., Century House, Shaftsbury Ave., London, W.C. 2, England.
 National Aeronautical Corp., 180 Main St., Ambler, Pa.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 Parisier & Co., Maurice I., 1475 Broadway, New York 36, N. Y.
 Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.
PRESS WIRELESS LABORATORIES, INC., 25 Prospect Place, West Newton 65, Mass. ADV. PG. 92.
 Pye Ltd., Cambridge, England.
 Radio Specialty Mfg. Co., 2023 S.E. Sixth Ave., Portland 14, Ore.
SERVO CORP. OF AMERICA, 20-20 Jericho Turnpike, New Hyde Park, N. Y. ADV. PG. 69-72.
 Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 670.
 Technical Materiel Corp., P. O. Box 142, Mamaroneck, N. Y.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

TRANSMITTERS—Loran

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.

TRANSMITTERS—Marine

Aero Marine Radio Corp., 135 W. 16th St., New York 11, N. Y.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
 Bassett, Inc., Rex, 1314 N.E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Gates Radio Co., Quincy, Ill.
 Gray Radio Co., 501 Forest Hill Blvd., West Palm Beach, Fla.
 Hudson American Corp., 25 W. 43rd St., New York 36, N. Y.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
 Transatron, Inc., 154 Spring St., New York 12, N. Y.
 Wilcox-Gay Corp., Charlotte, Mich.

TRANSMITTERS—Microwave

See MICROWAVE ACCESSORIES

TRANSMITTERS—Portable and Mobile Radio-telephone

Aero Marine Radio Corp., 135 W. 16th St., New York 11, N. Y.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
 Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.
 Bassett, Inc., Rex, 1314 N. E. 17 Court, P. O. Box 1759, Fort Lauderdale, Fla.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.
DOLLAR CO., ROBERT COMMUNICATIONS EQUIPMENT DIV., 50 Drumm St., San Francisco 11, Calif. ADV. PG. 368.
 Dumont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Craft Industries, Inc., 68 Jackson St., Stamford, Conn.
 El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Gosset Co., 801 S. Main St., Burbank, Calif.
 Hallcrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.
 Industrial Radio Corp., 428 N. Parkside Ave., Chicago 44, Ill.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Lettine Radio Mfg. Co., 62 Berkeley St., Valley Stream, N. Y.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Measurement Engineering Ltd., Arnprior, Ontario, Canada.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London, W. C. 2, England.
 National Electronics Laboratories, Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
 Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.
PLASTICS & ELECTRONICS CO., INC., P. O. Box 38, Station J, Buffalo 8, N. Y. ADV. PG. 529.
 Pye Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
 Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

TRANSMITTERS—Pulse Time Modulation

APPLIED SCIENCE CORP. OF PRINCETON, P. O. Box 44, Princeton, N. J. ADV. PG. 618.
 Bristol Co., The, Waterbury 20, Conn.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Vapor Recovery Systems Co., 2820 N. Alameda, P. O. Box 231, Compton, Calif.
VARIAN ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.

TRANSMITTERS—Radar

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Bludworth Marine Div., National-Simplex Bludworth, Inc., 92 Gold St., New York 38, N. Y.
 Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 54, Calif.
 Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 Daystrom Instrument Co., Archbald, Pa.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
MAGNAVOX CO., COMPONENT SALES, INDUSTRIAL & DEFENSE PRODUCTS, Fort Wayne 4, Ind. ADV. PG. 181.
MANSON LABORATORIES, 207 Greenwich Ave., Stamford, Conn. ADV. PG. 647.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 National Aeronautical Corp., 180 Main St., Amherst, Pa.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 Phebo Inc., 3640 Woodland St., Baltimore 15, Md.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.
REEVES INSTRUMENT CORP., 215 E. 91st St., New York, N. Y. ADV. PG. 597.
 United Optical Mfg. Corp., 202-4 E. 19th St., New York, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TRANSMITTERS—Radio Range

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

COLLINS RADIO CO., Cedar Rapids, Iowa. ADV. PG. 148, 149.
 Eidico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Gates Radio Co., Quincy, Ill.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Maryland Electronic Mfg. Corp., College Park, Md.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Wilcox-Gay Corp., Charlotte, Mich.

TRANSMITTERS—Railroad

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Eidico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Pye Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Railway Communications, Inc., Smith Rd. & Glenwood, Raytown, Mo.
STELMA, INC., 389 Ludlow St., Stamford, Conn. ADV. PG. 670.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TRANSMITTERS—Television

Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
 Gates Radio Co., Quincy, Ill.
 General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Pye Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
 Willys Electronics Div. of Willys Motors, Inc., Toledo, Ohio.

TRANSMITTERS—uhf

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Communications Co., Inc., 300 Greco Ave., Coral Gables, Fla.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Eidico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Gates Radio Co., Quincy, Ill.
 Gyro Electronics Co., 325 Canal St., New York, N. Y.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
MAGNAVOX CO., COMPONENT SALES, INDUSTRIAL & DEFENSE PRODUCTS, Fort Wayne 4, Ind. ADV. PG. 181.
 Maryland Electronic Mfg. Corp., College Park, Md.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 Wilcox-Gay Corp., Charlotte, Mich.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

TRANSMITTERS—vhf

Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.

Aeronautical Electronics, Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Communications Co., 300 Greco Ave., Coral Gables 34, Fla.
 Cossor (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.
 DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.
 Eidico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
 Electro Craft Industries, Inc., 68 Jackson St., Stamford, Conn.
 Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.
 Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
 Gates Radio Co., Quincy, Ill.
 Gosset Co., 801 S. Main St., Burbank, Calif.
 Hallcrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
 Heintz & Kaufman Equipment Div. of the Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
 Insuline Corp. of America, 186 Granite St., Manchester, N. H.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tuckahoe, N. Y. ADV. PG. 199.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
MAGNAVOX CO., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind. ADV. PG. 181.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Maryland Electronic Mfg. Corp., College Park, Md.
MAXSON CORP., W. L., 460 W. 34th St., New York 1, N. Y. ADV. PG. 250.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 National Aeronautical Corp., 180 S. Main St., Amherst, Pa.
 National Electronics Laboratories, Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 Pye Ltd., Cambridge, England.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
 Radio Specialty Mfg. Co., 2023 S. E. Sixth Ave., Portland 14, Ore.
 Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
 Schuttig & Co., Inc., 5005 Calvert Rd., College Park, Md.
 Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.
 Telemetering Associates, 494C Pine Forest Drive, Marietta, Ga.
TEL-INSTRUMENT CO., 728 Garden St., Carlstadt, N. J. ADV. PG. 540.
 West Coast Electronics Co., 587 W. Jefferson Blvd., Los Angeles 16, Calif.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Missouri.
 Wilcox-Gay Corp., Charlotte, Mich.
 Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

TRANSMITTERS—vhf Omni Range

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
 Kaar Engineering Corp., 2995 Middlefield Rd., P. O. Box 1320, Palo Alto, Calif.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Maryland Electronics Mfg. Corp., College Park, Md.
 Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

TRAPS—Wave

BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BRUNO-NEW YORK INDUSTRIES CORP., 460 W. 34th St., New York 1, N. Y. ADV. PG. 201.
 Calbest Engineering & Electronics, 828 N. Highland Ave., Hollywood 38, Calif.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.
GENERAL COIL PRODUCTS CORP., 43 Roselle St., Mineola, N. Y. ADV. PG. 653.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 McMillan Industrial Corp., Brownville Avenue Plant, Ipswich, Mass.
 Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
ORTHO FILTER CORP., 198 Albion Ave., Paterson 2, N. J. ADV. PG. 312.
PHOTOCIRCUITS CORP., Glen Cove, N. Y. ADV. PG. 471.
 Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
 Pye Ltd., Cambridge, England.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.
 Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.
 Thordarson-Melssner Mfg. Divs., Mt. Carmel, Ill.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
 Vidair Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.

TREATING—Fungus & Moisture Proof

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
 Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.
CAMBRIDGE THERMIONIC CORP., 445 Concord Ave., Cambridge 38, Mass. ADV. PG. 240.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
INDUSTRIAL HARDWARE MFG. CO., INC., 109 Prince St., New York, N. Y. ADV. PG. 457.
 Stevenson Bro. & Co., 110 Race St., Philadelphia 6, Pa.
THERMADOR ELECTRIC MFG. CO., 2000 S. Camfield Ave., Los Angeles 22, Calif. ADV. PG. 548.

RIMMERS—Capacitors See CAPACITORS

TUBE PARTS

Anodes, Carbon

NATIONAL CARBON CO., DIVISION OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 304.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
TACKPOLE CARBON CO., St. Mary's Pa. ADV. PG. 202, 203.

Anodes, Gold

Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
ANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
 Sinclair Mfg. Co., Chartley, Mass.
 Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
VOLKERT METAL STAMPINGS, INC., JOHN 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros., Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

Anodes, Graphite

NATIONAL CARBON CO., DIVISION OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 304.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
TACKPOLE CARBON CO., St. Marys, Pa. ADV. PG. 202, 203.

Anodes, Metal

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
ANTON MACHINE WORKS, 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 620.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Insteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.
 Lewis & Kaufman, Ltd., P. O. Box 337, Los Gatos, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y. ADV. PG. 300.
 Sinclair Mfg. Co., Chartley, Mass.

STAVAR CO., INC., Box 431, Bay Shore, N. Y. ADV. PG. 282.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 66, 67.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.

Anodes, Metallized Graphite

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Anodes, Silver

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 108-109 W. Brooklyn St., Boston 18, Mass.
 Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.
HANDY & HARMAN, 82 Fulton St., New York 38, N. Y. ADV. PG. 239.
 Sinclair Mfg. Co., Chartley, Mass.
 Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
 Wildberg Bros., Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

Base Pins

American Brass Co., 414 Meadow St., Waterbury 20, Conn.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
BEAD CHAIN MFG. CO., 110 Mountain Grove St., Bridgeport 5, Conn. ADV. PG. 524.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
 Hoffman Needle Works, Inc., 635 59th St., West New York, N. J.
 Javex, P. O. Box 646, Redlands, Calif.
 Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Sinclair Mfg. Co., Chartley, Mass.
 Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Bases

AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
 Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CENTRALAB DIV. OF GLOBE-UNION, INC., 914 E. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.
CONSTANTIN & CO., L. L., Route 6 at Lodi Circle, Lodi, N. J. ADV. PG. 167.
 Electronic Mfg. Co., 20 Orange St., Newark, N. J.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
 Isolantite Manufacturing Corp., Stirling, N. J.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Owens-Illinois Closure & Plastics Div., P. O. Box 1035, Toledo 1, Ohio.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

Bulbs & Envelopes

Corning Glass Works, Corning, N. Y.
 Lancaster Lens Co., Lancaster, Ohio.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 Zenith Optical Co., Div. of Polan Industries, Huntington 19, W. Va.

Button Stems

DURO SPECIALTY CO., INC., 8 Bennett St., Lynn, Mass. ADV. PG. 371.
 Quality Products Co., 387 Charles St., Providence 4, R. I.

SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 587.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Caps

ALDEN PRODUCTS CO., 112 N. Main St., Brockton 64, Mass. ADV. PG. 440.
AMERICAN PHENOLIC CORP., 1830 S. 54th Ave., Chicago 50, Ill. ADV. PG. 80.
 Electronic Mfg. Co., 20 Orange St., Newark, N. J.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
PIX MFG. CO., INC., 24 Bedford St., Newark N. J. ADV. PG. 598.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.
 Warren Plastics Corp., Warren, Pa.

Cathode Ray Tube Powders

North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
U. S. RADIUM CORP., 535 Pearl St., New York 7, N. Y. ADV. PG. 476.
VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

Cathode Ray Tube Side Contacts

VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

Cathodes, Sleeves, Discs and Tubes

Fansteel Metallurgical Corp., 2200 Sheridan Road, North Chicago, Ill.
 Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y. ADV. PG. 300.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 66, 67.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Conductive Paints

See PAINTS—Conductive

Filament Wire

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
 Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 Bigelow Mfg. Corp., 225 W. Bigelow St., Newark 8, N. J.
 Birnback Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
ELECTRONIC PARTS MFG. CO., INC., 508-10 25th St., Union City, N. J. ADV. PG. 671.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y. ADV. PG. 300.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Techalloy Co., Inc., Rahns, Pa.

Getters

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
 Kemet Co., a Division of Union Carbide & Carbon Corp., Madison Ave. & W. 117th St., Cleveland 1, Ohio.
 King Laboratories Inc., 127 Solar St., Syracuse 4, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Grids and Supports

ANTON MACHINE WORKS, 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 620.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
 Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.
 Lewis & Kaufman, Ltd., P. O. Box 337, Los Gatos, Calif.
NATIONAL CARBON CO., DIVISION OF UNION CARBIDE & CARBON CORP., 30 E. 42nd St., New York 17, N. Y. ADV. PG. 304.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 STAVER CO., INC., THE, Box 431, Bay Shore, N. Y. ADV. PG. 282.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Techalloy Co., Inc., Rahns, Pa.
 VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

Grid Wire

Birnback Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
 EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
 Kemet Co., A Div. of Union Carbide & Carbon Corp., Madison Ave., & W. 117th St., Cleveland 1, Ohio.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
 PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y. ADV. PG. 300.
 SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Techalloy Co., Inc., Rahns, Pa.

Heat Radiators

ANTON MACHINE WORKS, 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 620.
 EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Metal Supports

ABALON PRECISION MFG. CORP., 540 Cassanova St., Bronx 59, N. Y. ADV. PG. 490.
 ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
 Bigelow Mfg. Corp., 225 W. Bigelow St., Newark 8, N. J.
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
 Johnson & Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
 PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 STAVER CO., INC., THE, Box 431, Bay Shore, N. Y. ADV. PG. 282.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Techalloy Co., Inc., Rahns, Pa.
 VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

Mica Supports

Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
 Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micacraft Products Inc., 703 McCarter Highway, Newark 5, N. J.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 RELIANCE MICA CO., INC., 341 39th St., Brooklyn 32, N. Y. ADV. PG. 460.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

Tube Seal Leads

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
 Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 Bigelow Mfg. Corp., 225 W. Bigelow St., Newark 8, N. J.
 ELECTRONIC PARTS MFG. CO., INC., 508 25th St., Union City, N. Y. ADV. PG. 671.
 HERMETIC SEAL PRODUCTS CO., 29-37 South 6th St., Newark 7, N. J. ADV. PG. 223.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
 PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 587.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Water Jackets

ANTON MACHINE WORKS, 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 333.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.

Wire Parts

ANTON MACHINE WORKS, 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 620.
 ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
 Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 Bigelow Mfg. Corp., 225 W. Bigelow St., Newark 8, N. J.
 Electronics Mfg. Co., 20 Orange St., Newark, N. J.
 ELECTRONIC PARTS MFG. CO., INC., 508 25th St., Union City, N. J. ADV. PG. 671.
 Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
 King Laboratories, Inc., 127 Solar St., Syracuse 4, N. Y.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
 PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 Sinclair Mfg. Co., Chartley, Mass.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Techalloy Co., Inc., Rahns, Pa.
 VOLKERT METAL STAMPINGS, INC., JOHN, 222-34 96th Ave., Queens Village 8, N. Y. ADV. PG. 511.

TUBE RECTIFIERS
See RECTIFIERS**TUBES—Ballast**

CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
 Electronic Enterprises, Inc., 65 7th Ave., Newark 3, N. J.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.
 Signalite Inc., 37-41 Neptune Highway, Neptune, N. J.
 Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 385.
 VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

TUBES—Battery Charger

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
 ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. ADV. PG. 651.
 GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio
 SHELDON ELECTRIC CO., DIV. OF ALLIED ELECTRIC PRODUCTS, INC., 76 Coit St., Irvington 11, N. J. ADV. PG. 125.

TUBES—Bolometer

Standard Teleph. & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
 VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

TUBES—Cathode Ray, Instrument Use

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 General Electronics Div., Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Twentieth Century Electronics, Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 WATERMAN PRODUCTS CO., INC., 2445-63 Emerald St., Philadelphia 25, Pa. ADV. PG. 90, 91.

TUBES—Cathode Ray, Multiple Gun

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.
 DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.
 DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
 ELECTRONIC TUBE CORP., 1200 E. Mermaid Ave., Philadelphia 18, Pa. ADV. PG. 426.
 ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.

GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 General Electronics Div., Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
 Twentieth Century Electronics, Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

TUBES—Cathode Ray, Studio or Theatre

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Twentieth Century Electronics Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.

TUBES—Cathode Ray, Television Picture

Avco Mfg. Corp., 1329 Arlington St., Cincinnati 25, Ohio
 CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.
 Calvideo Tube Corp., 5232 W. 104th St., Los Angeles 45, Calif.
 Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
 Claremont Tube Corp., New York Ave. & Main St., Westbury, N. Y.
 DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.
 EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.
 ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
 Eureka Television & Tube Corp., 69 Fifth Ave., Hawthorne, N. J.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 General Electronics, Div. Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
 Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
 National Video Corp., 4300 W. 47th St., Chicago, Ill.
 Orsyd Co., 2421 Smith, Homtromch 11, Mich.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pioneer Electronics Corp., Santa Monica, Calif.
 Pye Ltd., Cambridge, England.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
 Rauland Corp., The, 4245 N. Knox Ave., Chicago 41, Ill.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
 SHELDON ELECTRIC CO., DIV. OF ALLIED ELECTRIC PRODUCTS, INC., 76 Coit St., Irvington 11, N. J. ADV. PG. 125.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Tel-O-Tube Corp. of America, 180 Van Riper Ave., East Paterson, N. J.
 Thomas Electronics, Inc., 118 Ninth St., Passaic, N. J.
 TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 385.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside Calif.
 Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
 WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—Electrometer

GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Pioneer Electronics Corp., Santa Monica, Calif.
 Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
 VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

TUBES—Glow or Discharge

Anglo Corp., 2037 W. Division St., Chicago 22, Ill.
 ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 333.
 ATOMIC INSTRUMENT CO., 84 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 481.
 CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
 Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.
 Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.
 ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. ADV. PG. 651.
 GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 KemiLabs, 1819 W. Grand Ave., Chicago 22, Ill.
 MacKay Laboratories, 1946 North Kedzie, Chicago, Ill.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.
 RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.

ED BANK DIV. BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
Ignalite Inc., 37-41 Neptune Highway, Neptune, N. J.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Twentieth Century Electronics Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.
WALKIRT CO., 145 W. Hazel St., Inglewood, Calif. ADV. PG. 467.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
WHITE ELECTRON DEVICES, INC., ROGER, 12 W. Island Rd., Ramsey, N. J. ADV. PG. 646.

TUBES—Hearing Aid

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
SONOTONE CORP., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 385.

TUBES—Ignitron

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
NATIONAL ELECTRONICS, INC., Geneva, Ill. ADV. PG. 376.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—Ionization

Consolidated Vacuum Corp., Rochester 3, N. Y.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Ignite Labs, 1819 W. Grand Ave., Chicago 22, Ill.
Ryan Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.
Conconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.

TUBES—Klystron

EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
MARCONI INSTRUMENTS LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.
Conconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
UNION ASSOCIATES, 611 Hansen Way, Palo Alto, Calif. ADV. PG. 163.

TUBES—Magnetron

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
UNION INDUSTRIES, 1025 Brittan Ave., San Carlos, Calif. ADV. PG. 327.
MacKay Laboratories, 1946 North Kedzie, Chicago, Ill.
Conconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston 15, Mass. ADV. PG. 613.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.

TUBES—Microwave

See MICROWAVE ACCESSORIES

TUBES—Miniature

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
Continental Electric Co., Geneva, Ill.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
National Union Radio Corp., 237 Jacksonville Rd., Hatboro, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
Sonotone Corp., Saw Mill River Rd., P. O. Box 200, Elmsford, N. Y.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 385.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—Subminiature

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
National Union Radio Corp., 237 Jacksonville Rd., Hatboro, Pa.
Philco Corp., Accessory Div., 9 & Allegheny Ave., Philadelphia 34, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 385.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

TUBES—Television

See TUBES—Cathode Ray, Television Picture

TUBES—Phototubes

ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 333.
Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Continental Electric Co., Geneva, Ill.
DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.
Electrical Service Co., 1271 Mission St., San Francisco, Calif.
Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
MacKay Laboratories, 1946 N. Kedzie, Chicago, Ill.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—Phototubes, Multiplier

ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 333.
Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Diamond Power Specialty Corp., Electronics Dept., Lancaster, Ohio.
Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
MacKay Laboratories, 1946 N. Kedzie, Chicago, Ill.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Cover.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
STANDARD PIEZO CO., 127 Cedar St., Carlisle, Pa. ADV. PG. 382.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 385.

TUBES—Photovoltaic

See CELLS—Photovoltaic

TUBES—Pirani

Central Sales & Mfg. Co., 2 Richwood Place, Denville, N. J.
Consolidated Vacuum Corp., Rochester 3, N. Y.
Continental Electric Co., Geneva, Ill.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
MAER CORP., 2301 S. Purdue Ave., West Los Angeles 64, Calif. ADV. PG. 585.
Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
RED BANK DIVISION, BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

TUBES—Power Amplifier

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.
Central Sales & Mfg. Co., 2 Richwood Place, Denville, N. J.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.
Electronic Enterprises, Inc., 45 7th Ave., Newark 4, N. J.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
General Electronics Div., Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
Lewis & Kaufman, Ltd., P. O. Box 337, Los Gatos, Calif.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 429.
Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
Taylor Tubes, Inc., 2312 W. Wabansia Ave., Chicago 47, Ill.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 5, N. J. ADV. PG. 385.
United Electronics Co., 42 Spring St., Newark 4, N. J.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.

TUBES—Receiving

CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Haydu Brothers, P. O. Box 1226, Plainfield, N. J.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
National Union Radio Corp., 237 Jacksonville Rd., Hatboro, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
SHELDON ELECTRIC CO., DIV. OF ALLIED ELECTRIC PRODUCTS, INC., 76 Coit St., Irvington 11, N. J. ADV. PG. 125.
Sonotone Corp., P. O. Box 200, Saw Mill River Rd., Elmsford, N. Y.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 385.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—Rectifying, Gas Filled Type

Aerolux Light Corp., 653 Eleventh Ave., New York 36, N. Y.
AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
Continental Electric Co., Geneva, Ill.

EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.
ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. ADV. PG. 651.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

General Electronics Div., Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 429.

NATIONAL ELECTRONICS, INC., Geneva, Ill. ADV. PG. 376.
Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.

Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.

Rauland Corp., The, 4245 N. Knox Ave., Chicago 41, Ill.
RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.

Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.

Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
United Electronics Co., 42 Spring St., Newark 2, N. J.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—Rectifying, Vacuum Type

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.

Central Sales & Mfg. Co., 2 Richwood Place, Denville, N. J.
CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.

Continental Electric Co., Geneva, Ill.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.

FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

General Electronics Div., Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
Lewis & Kaufman, Ltd., P. O. Box 337, Los Gatos, Calif.

MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 429.
Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.

National Union Radio Corp., 237 Jacksonville Rd., Hatboro, Pa.
North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.

Pioneer Electronics Corp., Santa Monica, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.

RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.
Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.

RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W.C. 2, England.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
Taylor Tubes, Inc., 2312 W. Wabansia Ave., Chicago 47, Ill.

TUNG-SOL ELECTRIC INC., 95 Eighth Ave., Newark 4, N. J. ADV. PG. 385.
United Electronics Co., 42 Spring St., Newark 2, N. J.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—Television Camera Pickup

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.
Diamond Power Specialty Corp., Electronics Dept., Lancaster, Ohio.

GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
Pye Ltd., Cambridge, England.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.

TUBES—Television Projection (for Home Entertainment)

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
National Union Radio Corp., 237 Jacksonville Rd., Hatboro, Pa.

Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.

TUBES—Thyratron

Aerolux Light Corp., 653 Eleventh Ave., New York 36, N. Y.
AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.

ANTON ELECTRONIC LABS., INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 333.
BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 96, 97.

CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
Continental Electric Co., Geneva, Ill.
EITEL-McCULLOUGH, INC., San Bruno, Calif. ADV. PG. 270, 271.

Electronic Enterprises Inc., 65 7th Ave., Newark 4, N. J.
ELECTRONS, INC., 127 Sussex Ave., Newark 4, N. J. ADV. PG. 651.

ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

General Electronics Div., Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. J.

MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 429.
MacKay Laboratories, 1946 N. Kedzie, Chicago, Ill.

Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
NATIONAL ELECTRONICS, INC., Geneva, Ill. ADV. PG. 376.

Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.

Rauland Corp., 4245 N. Knox Ave., Chicago 41, Ill.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.
United Electronics Co., 42 Spring St., Newark 4, N. J.
Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.

Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—TR, P, TR & Anti TR

BOMAC LABORATORIES, INC., Salem Rd., Beverly, Mass. ADV. PG. 96, 97.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

General Electronics Div., Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
MICROWAVE ASSOCIATES INC., 22 Cummington St., Boston, Mass. ADV. PG. 613.

RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—Traveling Wave (Amplifying Type)

Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.
HUGGINS LABORATORIES, 734 Hamilton Ave., Menlo Park, Calif. ADV. PG. 625.

Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
RAYTHEON MFG. CO., MICROWAVE & POWER TUBE OPERATIONS, Waltham 54, Mass. ADV. PG. 27.

SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Stewart-Speller Associates, Soquel, Calif.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
WHITE ELECTRON DEVICES, INC., ROGER, 12 W. Island Rd., Ramsey, N. J. ADV. PG. 646.

TUBES—Voltage Reference or Regulating

Aerolux Light Corp., 653 Eleventh Ave., New York 36, N. Y.
AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.

ANTON ELECTRONIC LABORATORIES, INC., 1226 Flushing Ave., Brooklyn 37, N. Y. ADV. PG. 333.
British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.

CHATHAM ELECTRONICS CORP., Livingston, N. J. ADV. PG. 132, 133.
Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J.

Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.
GENERAL ELECTRIC CO., Tube Dept., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.

General Electronics Div., Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.
Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.

Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.
RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. Inside Back & Back Covers.

Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
RED BANK DIV., BENDIX AVIATION CORP., Eatontown, N. J. ADV. PG. 110.

Signalite Inc., 37-41 Neptune Highway, Neptune, N. J.
Standard Telephones & Cables, Ltd., Connaught House, Aldwych, London, W. C. 2, England.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.

Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.
WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

TUBES—X-Ray

AMPEREX ELECTRONIC CORP., 230 Duffy Ave., Hicksville, N. Y. ADV. PG. 309.
ENGINEERING CO., 27 Wright St., Newark, N. J. ADV. PG. 596.

High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
MACHLETT LABORATORIES, INC., Springdale, Conn. ADV. PG. 429.

North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.
Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.
Twentieth Century Electronics, Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.

X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

TUBING—Aluminum

American Brass Co., 414 Meadow St., Waterbury 20, Conn.
Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.

Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.
Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.

Kaiser Aluminum & Chemical Sales Inc., 1924 Broadway, Oakland 12, Calif.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.

Precision Tube Co., Inc., North Wales, Pa.
Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.

Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.

Uniform Tubes, Level Rd., Collegeville 2, Pa.

TUBING—Brass or Copper
American Brass Co., 414 Meadow St., Waterbury 20, Conn.

Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

Cook-Dunbar Smith Co., 85 Sprague St., Providence 7, R. I.
Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.

Ilco Copper Tube & Products, Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio.
Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.

MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
Precision Tube Co., Inc., North Wales, Pa.

Revere Copper & Brass, Inc., 230 Park Ave., New York 17, N. Y.
Schutter Co., Carl W. 80 E. Montauk Pkwy., Lindenhurst, N. Y.

Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
Uniform Tubes, Level Rd., Collegeville 2, Pa.
Wells & Co., Inc., A. H., 181 E. Aurora St., Waterbury, Conn.

TUBING—Ceramic
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.

Bristol Co., The, Waterbury 20, Conn.
CENTRALAB DIV. GLOBE-UNION, INC., 914 Y. Keefe Ave., Milwaukee 1, Wis. ADV. PG. 252, 342, 574, 607, 659.

Colonial Insulator Co., 907 Grant St., Akron 11, Ohio.
 Du-Co Ceramics Co., Box 587, Butler 8, Pa.
 Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.
FRENCHTOWN PORCELAIN CO., Trenton 9, N. J. ADV. PG. 559.
GENERAL CERAMICS & STEATITE CORP., Keasbey, N. J. ADV. PG. 59, 61.
 Solantite Manufacturing Corp., Stirling, N. J.
APP INSULATOR CO., INC., Radio Specialties Div., 31 Gilbert St., Le Roy, N. Y. ADV. PG. 414, 415.
 Southan Mfg. Co., East Liverpool, Ohio.
 Maryland Lava Co., Bel Air, Md.
NYCALEX CORPORATION OF AMERICA, 125 Clifton Blvd., Clifton, N. J. ADV. PG. 136, 137.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Richards Co., Inc., Arklay S., 38 Winchester St., Newton Highlands 61, Mass.
 Saxonyburg Ceramics, Saxonyburg, Pa.
 Porcelain Co., 61 Muirhead Ave., Trenton 9, N. J.
TUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
 Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.

TUBING—Fabric

BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
MARKEL & SONS, L. FRANK, School House Lane, Norristown, Pa. ADV. PG. 553.
 Mitchell-Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 Williams St., New York 38, N. Y.
ATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.

TUBING—Fibre

AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
BUCKEYE BOBBIN CO., THE, 12200 Sprecher Ave., Cleveland 11, Ohio. ADV. PG. 479.
CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 249.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Mitchell-Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 193.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Caulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

TUBING—Flexible Metal

Beeze Corps., Inc., 41 S. Sixth St., Newark 7, N. J.
 Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
 Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.

TUBING—Fused Quartz

American Fused Quartz Co., Inc., 18-20 Salem St., Dover, N. J.
 General Electric Co., Lamp Div., Nela Park, Cleveland 12, Ohio.
 Pyramac, Inc., 5303 Adeline St., Oakland 10, Calif.
 Thermal Syndicate, Ltd., The, 14 Bixley Heath, Lynbrook, N. Y.
 Wilmad Glass Co., Inc., Landisville, N. J.

TUBING—Glass, Precision

Boche & Co., Semon, 636 Greenwich St., New York 14, N. Y.
 Corning Glass Works, Corning, N. Y.
 Fischer & Porter Co., 476 Warminster Rd., Hatboro, Pa.
 Pyramac, Inc., 5303 Adeline St., Oakland 10, Calif.
 Mica Insulator Co., Schenectady 1, N. Y.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
SCIENTIFIC ELECTRONIC LABS., INC., 866 Bergen St., Newark 8, N. J. ADV. PG. 587.
 Wilmad Glass Co., Inc., Landisville, N. J.

TUBING—Glass Fibre Insulation

ACCURATE PAPER TUBE CO., 801 N. Peoria St., Chicago 22, Ill. ADV. PG. 629.

B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
BENTLEY-HARRIS MFG. CO., Conshohocken, Pa. ADV. PG. 364.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 McMillan Industrial Corp., Brownville Avenue Plant, Ipswich, Mass.
MARKEL & SONS, L. FRANK, School House Lane, Norristown, Pa. ADV. PG. 553.
 Mitchell-Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
 National Electric Coil Co., Columbus 16, Ohio.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
PANELYTE DIV., ST. REGIS PAPER CO., 230 Park Ave., New York 17, N. Y. ADV. PG. 261.
VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 237.

TUBING—Knitted Wire

METAL TEXTILE CORP., 647 E. First Ave., Roselle, N. J. ADV. PG. 653.
 Titeflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 Vulcanized Rubber Products Co., Morrisville, Pa.

TUBING—Metal and Alloy

Alloy Tube Div. of The Carpenter Steel Co., Union, N. J.
 Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
 Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
 Bishop & Co., J., Platinum Works, Malvern, Pa.
 Breeze Corps., Inc., 41 S. Sixth St., Newark 7, N. J.
 Bridgeport Brass Co., 30 Grant St., Bridgeport, Conn.
 Carpenter Steel Co., 142 W. Bern St., Reading, Pa.
 Chase Brass & Copper Co., Inc., 236 Grand St., Watertown 20, Conn.
 Cook-Dunbar Smith Co., 85 Sprague St., Providence 7, R. I.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
 Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
 Haynes Stellite Co., Division of Union Carbide & Carbon Corp., 725 S. Lindsay St., Kokomo, Indiana.
 International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
 Johnson Engineering Co., Inc., Walton V., 95 Summit Ave., Summit, N. J.
 Precision Tube Co., Inc., North Wales, Pa.
 Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
 Reynolds Metals Co., 2000 S. 9th St., Louisville, Ky.
 Revere Cooper & Brass, Inc., 230 Park Avenue, New York 17, N. Y.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 66, 67.
 Timken Roller Bearing Co., Canton 6, Ohio.

TUBING—Mica

American Mica Insulation Co., Manasquan, N. J.
 Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 Mica Insulator Co., Schenectady, N. Y.
 Micacraft Products, Inc., 703 McCarter Highway, Newark 5, N. J.
 Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.

TUBING—Molybdenum

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

TUBING—Nickel

Bishop & Co., Platinum Works, Malvern, Pa.
 International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
 Johnson Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.
 Precision Tube Co., Inc., North Wales, Pa.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 66, 67.
 Uniform Tubes, Level Rd., Collegeville 2, Pa.

TUBING—Paper

ACCURATE PAPER TUBE CO., 801 N. Peoria St., Chicago 22, Ill. ADV. PG. 629.
 American Mica Insulation Co., Manasquan, N. J.
BUCKEYE BOBBIN CO., THE, 12200 Sprecher Ave., Cleveland 11, Ohio. ADV. PG. 479.
CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 249.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Mica Insulator Co., Schenectady 1, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
NIEMAND BROS., INC., 37-03 35th Ave., Long Island City 1, N. Y. ADV. PG. 418.
PARAMOUNT PAPER TUBE CORP., 614 Lafayette St., Fort Wayne, Ind. ADV. PG. 550.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 503.
 Resinite Corp., Sub. of Precision Paper Tube Co., 2035 W. Charleston St., Chicago 47, Ill.
 Stone Paper Tube Co., Inc., 900 Franklin St., N.E., Washington 17, D. C.

TUBING—Plastic

Ace Plastic Co., 91-54 Van Wyck Expressway, Jamaica 35, N. Y.
 Actioncraft Products, 8 Sagamore Hill Dr., Port Washington, N. Y.
 Aero Specialties, 85 Prescott St., Worcester, Mass.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
 American Mica Insulation Co., Manasquan, N. J.
 Anchor Plastics Co., Inc., 36-36 36th St., Long Island City 6, N. Y.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
 British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.
CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 249.
 Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
 Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Electronic Mechanics, Inc., 101 Clifton Bldg., Clifton, N. J.
 Extruders, Inc., 3232 W. El Segundo Blvd., Hawthorne, Calif.
 Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
 General Tire & Rubber Co., The, Akron, Ohio.
 Gering Products, Inc., N. 7th St. at Monroe Ave., Kenilworth, N. J.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.
 Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
 Keller Products Co., 41 Union St., Manchester, N. H.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
 McMillan Industrial Corp., Brownville Avenue Plant, Ipswich, Mass.
MARKEL & SONS, L. FRANK, School House Lane, Norristown, Pa. ADV. PG. 553.
 Mica Insulator Co., Schenectady 1, N. Y.
 Mitchell-Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
NATIONAL VULCANIZED FIBRE CO., Wilmington, Del. ADV. PG. 193.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
PANELYTE DIV., ST. REGIS PAPER CO., 230 Park Ave., New York, N. Y. ADV. PG. 261.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 503.
 Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
 Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
RESIN INDUSTRIES, INC., Santa Barbara, Calif. ADV. PG. 154.
 Resinite Corp., Sub. of Precision Paper Tube Co., 2035 W. Charleston St., Chicago 47, Ill.

RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 518.
REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.
RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
Synthane Corp., Oaks, Pa.
TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.
Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S.E. 10, England.
TRI-POINT MFG. & DEVELOPMENT CO., 401 Grand St., Brooklyn 11, N. Y. ADV. PG. 655.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
U. S. Plywood Corp., Electrical Structures Dept., 55 W. 44th St., New York 17, N. Y.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
U. S. Stoneware Co., The, P. O. Box 350, Arkon 9, Ohio.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 237.

TUBING—Precious Metal

Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 663.
Baker Co., Inc., 113 Astor St., Newark 5, N. J.
Bishop & Co., J., Platinum Works, Malvern, Pa.
Cook-Dunbar Smith Co., 85 Sprague St., Providence 7, R. I.
Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
METZ REFINING CO., 369 Mulberry St., Newark 2, N. J. ADV. PG. 672.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
SECOND METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.

TUBING—Steel

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
Avon Tube Div., Higbie Mfg. Co., Rochester, Mich.
Bishop & Co., J., Platinum Works, Malvern, Pa.
Carpenter Steel Co., 142 W. Bern St., Reading, Pa.
Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
Flexicons Corp., 1315 S. Third Ave., Maywood, Ill.
National Electric Products Co., 140 Stanwix St., Pittsburgh 22, Pa.
Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
Revere Copper & Brass, Inc., 230 Park Avenue, New York 17, N. Y.
Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 66, 67.
Tlmenk Roller Bearing Co., Canton 6, Ohio.
Trent Tube Co., East Troy, Wis.
Uniform Tubes, Level Rd., Colledgeville 2, Pa.

TUBING—Synthetic Resin

American Mica Insulation Co., Manasquan, N. J.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.
Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
MARKEL & SONS, L. FRANK, School House Lane, Norristown, Pa. ADV. PG. 553.
Mitchell-Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
Moore Co., Howard J., 266 William St., New York 38, N. Y.
Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
New Jersey Wood Finishing Co., Amboy Ave., Woodbridge, N. J.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 503.
RESIN INDUSTRIES, INC., Santa Barbara, Calif. ADV. PG. 154.
RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

TUBING—Tantalum

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

TUBING—Varnished or Lacquered

B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.
BENTLEY-HARRIS MFG. CO., Conshohocken, Pa. ADV. PG. 364.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
Clear Beam Antenna Corp., 100 Prospect Ave., Burbank, Calif.
CLEVELAND CONTAINER CO., THE, 6201 Barberton Ave., Cleveland 2, Ohio. ADV. PG. 249.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
FEDERAL SCREW PRODUCTS, INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
MARKEL & SONS, L. FRANK, School House Lane, Norristown, Pa. ADV. PG. 553.
Mitchell-Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
Moore Co., Howard J., 266 William St., New York 38, N. Y.
National Electric Coil Co., Columbus 16, Ohio.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
NIEMAND BROS., INC., 37-03 35th Ave., Long Island City 1, N. Y. ADV. PG. 418.
PARAMOUNT PAPER TUBE CORP., 614 Lafayette St., Fort Wayne, Ind. ADV. PG. 550.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 503.
Resinite Corp., Sub. of Precision Paper Tube Co., 2035 W. Charleston St., Chicago 47, Ill.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London S. E. 10, England.
VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 237.

TUBING—Varnished Cambric Insulation

BENTLEY-HARRIS MFG. CO., Conshohocken, Pa. ADV. PG. 364.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
IRVINGTON VARNISH & INSULATOR DIV. OF MINNESOTA MINING & MFG. CO., 6 Argyle Terrace, Irvington 11, N. J. ADV. PG. 246.
MARKEL & SONS, L. FRANK, School House Lane, Norristown, Pa. ADV. PG. 553.
Mitchell-Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.
Moore Co., Howard J., 266 William St., New York 38, N. Y.
NATVAR CORP., 211 Randolph Ave., Woodbridge, N. J. ADV. PG. 564.
Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
VARFLEX CORP., 308 N. Jay St., Rome, N. Y. ADV. PG. 237.

TUBING—Waveguide

AIRFLYTE ELECTRONICS CO., 21 Cottage St., Bayonne, N. J. ADV. PG. 614.
Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.
DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
KENT CO., F. C., 64 Howard St., Irvington, N. J. ADV. PG. 578.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
SUPERIOR TUBE CO., 2504 Germantown Pike, Norristown, Pa. ADV. PG. 66, 67.
TECHNICRAFT LABORATORIES, INC., Thomaston-Waterbury Rd., Thomaston, Conn. ADV. PG. 461.
WAVELINE, INC., Box 470, Caldwell, N. J. ADV. PG. 370.

TUNERS—a-m

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
Collins Audio Products Co., P. O. Box 368, Westfield, N. J.

Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.
Delco Radio Div., General Motors Corp., Kokomo, Ind.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
Gonset Co., 801 S. Main St., Burbank, Calif.
I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
Miller Co., J. W., 5917 S. Main St., Los Angeles 3, Calif.
Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
Sargent-Raymont Co., The, 1401 Middle Harbor Rd., Oakland 20, Calif.
Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
Wilcox-Gay Corp., Charlotte, Mich.

TUNERS—f-m

Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
ALCO ELECTRONICS MFG. CO., 3 Wolcott Ave., Lawrence, Mass. ADV. PG. 367.
Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
Atlas Coil, Inc., Cottage St., Derby, Conn.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
Gonset Co., 801 S. Main St., Burbank, Calif.
HEATH CO., Benton Harbor, Mich. ADV. PG. 73-76.
I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.
Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
Pentron Corp., The, 221 E. Cullerton St., Chicago 16, Ill.
Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
Radio Craftsmen, Inc., The, 4401 N. Ravenswood Ave., Chicago 40, Ill.
Radio Engineering Labs., Inc., 36-40 37th St., Long Island City 1, N. Y.
Sargent-Raymont Co., 1401 Middle Harbor Rd., Oakland 20, Calif.
Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
Wilcox-Gay Corp., Charlotte, Mich.

TUNERS—f-m/a-m

Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
Anslay Mfg. Co., Arthur, Doylestown, Pa.
Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.
Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.
BROWNING LABORATORIES, INC., Main St., Winchester, Mass. ADV. PG. 522.
Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.
Freed Electronics & Controls Corp., 200 Hudson St., New York 13, N. Y.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
Hallcrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.
Jowil Electronics, Inc., 7945 Germantown Ave., Philadelphia 18, Pa.
Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.
 Newcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
 Radio Craftsmen, Inc., 4401 N. Ravenswood Ave., Chicago 40, Ill.
 Sargent-Raymont Co., The, 1401 Middle Harbor Rd., Oakland 20, Calif.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Stromberg-Carlson Co., Rochester 3, N. Y.
 Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.
 Weingarten Electronics Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.
 Wilcox-Gay Corp., Charlotte, Mich.

TUNERS—Klystron

DeMornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.
DOUGLAS MICROWAVE CO., INC., 11 Beechwood Ave., New Rochelle, N. Y. ADV. PG. 601.
F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.
FEDERAL MFG. & ENGINEERING CORP., 211 Steuben St., Brooklyn 5, N. Y. ADV. PG. 642.
 Resdel Engineering Corporation, 2351 Riverside Drive, Los Angeles 39, Calif.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y., ADV. PG. 331, 332.
UNIVERSAL MICROWAVE CORP., 380 Hillside Ave., Hillside, N. J. ADV. PG. 553.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Wheeler Laboratories, Inc., Great Neck, N. Y.

TUNERS—Microwave

See **MICROWAVE ACCESSORIES**

TUNERS—Permeability

Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
 Collins Audio Products Co., P. O. Box 368, Westfield, N. J.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Radio Condenser Co., Camden, N. J.
 Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.

TUNERS—Television

Anchor Radio Co., 2215 S. St. Louis Ave., Chicago 23, Ill.
 Automatic Mfg. Co., 65 Gouverneur St., Newark, N. J.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
GAROD RADIO CORP., 79 Washington St., Brooklyn 1, N. Y. ADV. PG. 371.
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. ADV. PG. 287.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Radio Condenser Co., Camden, N. J.
 Sarkes Tarzian Inc., Tuner Div., Bloomington, Ind.
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.
 Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.
 Wilcox-Gay Corp., Charlotte, Mich.

TUNERS—Television rf

Anchor Radio Co., 2215 S. St. Louis Ave., Chicago 23, Ill.
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. ADV. PG. 287.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
 Radio Condenser Co., Camden, N. J.
 Sarkes Tarzian Inc., Tuner Div., Bloomington, Ind.
 Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

TUNERS—uhf

Anchor Radio Co., 2215 S. St. Louis Ave., Chicago 23, Ill.
 B-T Mfg. Corp., 38 N. Second Ave., Mount Vernon, N. Y.
 Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.
 Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Calbest Engineering & Electronics Co., 828 N. Highland Ave., Hollywood 38, Calif.
DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. ADV. PG. 287.
 Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.
KINGS ELECTRONICS CO., 40 Marbledale Rd., Tucka-hoe, N. Y. ADV. PG. 199.
LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thirty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Mattison Television & Radio Corp., 10 W. 181st St., New York 53, N. Y.
MICROLAB, 71 Okner Parkway, Livingston, N. J. ADV. PG. 670.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
POLYTECHNIC RESEARCH & DEVELOPMENT CO., INC., 202 Tillary St., Brooklyn 1, N. Y. ADV. PG. 244, 245.
 Radio Condenser Co., Camden, N. J.
 Sarkes Tarzian Inc., Tuner Div., Bloomington, Ind.
 Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
 Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y.
VECTRON, INC., 404 Main St., Waltham 54, Mass. ADV. PG. 474, 475.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.

TUNING DEVICES—Receiver Mechanical

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
BOWMAR INSTRUMENT CORP., 2415 Pennsylvania Ave., Fort Wayne, Ind. ADV. PG. 657.
 Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Delco Radio Div., General Motors Corp., Kokomo, Ind.
 Elm Laboratories, 18 S. Broadway, Dobbs Ferry, N. Y.
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. ADV. PG. 287.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Resdel Engineering Corporation, 2351 Riverside Drive, Los Angeles 39, Calif.
 Sierra Electronic Corp., San Carlos, Calif.
 Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.
 Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.
UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 391, 552.

TUNING DEVICES—Transmitter Mechanical

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
 Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.
BARKER & WILLIAMSON, 235 Fairfield Ave., Upper Darby, Pa. ADV. PG. 174, 175.
BOWMAR INSTRUMENT CORP., 2415 Pennsylvania Ave., Fort Wayne, Ind. ADV. PG. 657.
 Colortone Electronics, Inc., 238 William St., New York 38, N. Y.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meridan, Conn.
 Erco Radio Labs., Inc., E. Stewart Ave., Garden City, N. Y.
GENERAL INSTRUMENT CORP., 829 Newark Ave., Elizabeth 3, N. J. ADV. PG. 287.
 Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.
INSULATED CIRCUITS, INC., 115 Roosevelt Ave., Belleville, N. J. ADV. PG. 279.
LAVOIE LABORATORIES, Morganville, N. J. ADV. PG. 433.
NATIONAL CO., INC., 61 Sherman St., Malden 48, Mass. ADV. PG. 395.
 Resdel Engineering Corporation, 2351 Riverside Drive, Los Angeles 39, Calif.

UNIVERSAL MFG. CO., INC., 410 Hillside Ave., Hillside, N. J. ADV. PG. 391, 552.

TURNABLES—Recording and Transcription

Califone Corp., 1041 N. Sycamore Ave., Hollywood 38, Calif.
 D & R, Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.
 Fairchild Recording Equipment Co., 154th St. & 7th Ave., Whitestone, N. Y.
 Garrard Sales Corp., 164 Duane St., New York 13, N. Y.
 Gates Radio Co., Quincy, Ill.
 Lesa, Via Bergamo 21, Milan, Italy.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
PRESTO RECORDING CORP., Paramus, N. J. ADV. PG. 139.
 Q. R. K. Electronic Products, 445 N. Circle Drive, Fresno 4, Calif.
RADIO CORP. OF AMERICA, Engineering Products Div., Camden, N. J. ADV. PG. Inside Back & Back Covers.
 Radio Music Corp., 84 S. Water St., Port Chester, N. Y.
 Rek-O-Kut Co., Inc., 38-03 Queens Blvd., Long Island City, N. Y.
 Wurlitzer Co., Rudolph, North Tonawanda, N. Y.

TWEETERS

See **SPEAKERS**

TWISTS

See **MICROWAVE ACCESSORIES**

BENDS—Microwave

ULTRASONIC EQUIPMENT

Refer to any of the following:

AMPLIFIERS—Ultrasonic
ANALYZERS—Ultrasonic
CONTROLS—Ultrasonic
GAGES—Ultrasonic Thickness
GENERATORS—Ultrasonic
INSTRUMENTS—Ultrasonic
VIBRATORS—Ultrasonic

VACUUM GAGES

See **GAGES—Vacuum or Pirani**

VACUUM INDICATING, RECORDING AND CONTROL EQUIPMENT

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
BOURNS LABORATORIES, 6135 Magnolia Ave., Riverside, Calif. ADV. PG. 369.
 Bristol Co., The, Waterbury 20, Conn.
 Central Sales & Mfg. Co., 2 Richmond Place, Denville, N. J.
 Consolidated Vacuum Corp., Rochester 3, N. Y.
 Esterline-Angus Co., Inc., P. O. Box 596, Indianapolis, Ind.
 Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.
GENERAL ELECTRIC CO., Apparatus Sales Div. 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hastings Instrument Co., Hampton 9, Va.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
 Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
 Research Electronics Laboratory, Roslyn, Pa.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
 Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
 Vacuum Tube Products, 506 S. Cleveland St., Oceanside, Calif.
 Wallace & Tiernan Products, Inc., Belleville 9, N. J.
WESTON ELECTRICAL INSTRUMENT CORP., 614 Freelinghuysen Ave., Newark 5, N. J. ADV. PG. 530.
 Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.
 Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

VACUUM PUMPS

Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 Beach-Russ Co., 50 Church St., New York 7, N. Y.
 Central Scientific Co., 1700 Irving Park Road, Chicago 13, Ill.
 Consolidated Vacuum Corp., Rochester 3, N. Y.
 Eisler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.
EITEL-MCCULLOUGH INC., San Bruno, Calif. ADV. PG. 270, 271.
 High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.
INTERNATIONAL PUMP & MACHINE WORKS, 11-13 Governor St., Newark 2, N. J. ADV. PG. 154.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
KINNEY MFG. CO., 3529 Washington St., Boston, Mass. ADV. PG. 262.
 Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.
 Litten Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.

National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Nelson Vacuum Pump Co., Geo. F., 2133 Fourth St., Berkeley 10, Calif.
 Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.

VACUUM TUBE VOLTMETERS
 See **VOLTMETERS—Electronic**

VACUUM UNITS

Associated Engineering & Mfg Corp., Glen Ridge, N. J.
 Beach-Russ Co., 50 Church St., New York 7, N. Y.
 Consolidated Vacuum Corp., Rochester 3, N. Y.
INTERNATIONAL PUMP & MACHINE WORKS, 11-13 Governor St., Newark 2, N. J. ADV. PG. 154.
KAHLE ENGINEERING CO., 1307 Seventh St., North Bergen, N. J. ADV. PG. 439.
MURPHY & MILLER, INC., 1322 S. Michigan Ave., Chicago 5, Ill. ADV. PG. 334.
 National Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Stewart-Speller Associates, Soquel, Calif.
 Stokes Machine Co., F. J., 5850 Tabor Rd., Olney P. O., Philadelphia 20, Pa.
TENNEY ENGINEERING, INC., 1090 Springfield Rd., Union, N. J. ADV. PG. 487.
 Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.

VALVES—Solenoid

Adel Div. of General Metals Corp., 10777 Van Owen St., Burbank, Calif.
AUTOMATIC SWITCH CO., 391 Lakeside Ave., Orange, N. J. ADV. PG. 664.
 Caltron Co., 1406 S. Hobart Blvd., Los Angeles 6, Calif.
 Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.
 Cooper Co., Clark, 379 N. Market St., Palmyra, N. J.
 Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.
 DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.
 General Controls Co., Glendale, Calif.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
 Hays Mfg. Co., 818 W. 12th St., Erie, Pa.
 Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.
 McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., S., Minneapolis, Minn.
 Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y.
ORTHO ENGINEERING CORP., Transformer Div., 245 Wallace St., Orange, N. J. ADV. PG. 612.
SANDERS ASSOCIATES, Nashua, N. H. ADV. PG. 622.
 Skinner Electric Valve Div., The Skinner Chuck Co., Edgewood Ave., New Britain, Conn.
 Vacuum-Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.

VARISTORS
 See also **CRYSTAL MOUNTS & MIXERS**

BRADLEY LABS., INC., 170 G, Columbus Ave., New Haven 11, Conn. ADV. PG. 218.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
INTERNATIONAL RESISTANCE CO., 401 N. Broad St., Philadelphia 8, Pa. ADV. PG. 233-236.
 Kemtron Electron Products, Inc., 5 Prince Place, Newbury Port, Mass.
RADIO RECEPTOR CO., 251 W. 19th St., New York 11, N. Y. ADV. PG. 88, 89.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Union Switch & Signal Div. of Westinghouse Air Brake Co., General Apparatus Sales, Pittsburgh 18, Pa.
VICTORY ENGINEERING CORP., Springfield Rd., Union, N. J. ADV. PG. 466.

VARNISH—Cambric Coatings
VARNISH—Insulating
 See **INSULATING COMPOUNDS**

VIBRATION ANALYSIS EQUIPMENT

Advanced Electronics, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
 Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.
 Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.
 Benson-Lehner Corp., 2340 Sawtelle Blvd., Los Angeles 64, Calif.

Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.
 C. G. S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.
 Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa 3, Okla.
CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.
 Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 6, Calif.
DAVIES LABORATORIES, INC., THE, 4705 Queensbury Rd., Riverdale, Md. ADV. PG. 658.
ELECTRO PRODUCTS LABS., 4501 N. Ravenswood Ave., Chicago 40, Ill. ADV. PG. 554.
 Endevo Corp., 689 S. Fair Oaks Ave., Pasadena 2, Calif.
 Erwood, Inc., 1782 Berteau Ave., Chicago 13, Ill.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
GENERAL RADIO CO., 275 Massachusetts Ave., Cambridge 39, Mass. ADV. PG. 177-180.
 Goodmans Industries, Ltd., Axiom Works, Wembly, Middlesex, England.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
KAY ELECTRIC CO., 25 Maple Ave., Pine Brook, N. J. ADV. PG. 420, 421.
 Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.
 L. A. B. Corp., Skaneateles, N. Y.
M B MFG CO., 1060 State St., New Haven 11, Conn. ADV. PG. 386.
 Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
 Miller Instruments Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.
PANORAMIC RADIO PRODUCTS, INC., 10 South Second Ave., Mt. Vernon, N. Y. ADV. PG. 660.
 Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
 Resdel Engineering Corporation, 2351 Riverside Drive, Los Angeles 39, Calif.
 Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.
 Scott Inc., Herman Hosmer, 385 Putnam Ave., Cambridge 39, Mass.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.
 Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
 Televiso Corp., 7466 W. Irving Park Rd., Chicago 34, Ill.
VIBRATION ANALYSIS EQUIPMENT—Electronic Balancing
 Franklin Electronic, Inc., 415 W. Pike St., Philadelphia 40, Pa.
 Gisholt Machine Co., 1245 E. Washington Ave., Madison 3, Wis.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Resdel Engineering Corporation, 2351 Riverside Drive, Los Angeles 39, Calif.
SPERRY GYROSCOPE CO., DIV. OF THE SPERRY CORP., Great Neck, N. Y. ADV. PG. 331, 332.
 Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
VIBRATION ANALYSIS EQUIPMENT—High Temperature Fatigue
 Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
VIBRATION ANALYSIS EQUIPMENT—Vibration Fatigue
 Endevo Corp., 689 S. Fair Oaks Ave., Pasadena 2, Calif.
 Erwood, Inc., 1782 Berteau Ave., Chicago 13, Ill.
 Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.
 Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.
VIBRATION EXCITING EQUIPMENT
 Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.
CALIDYNE CO., THE, P. O. Box 72, Winchester, Mass. ADV. PG. 509.
 Endevo Corp., 689 S. Fair Oaks Ave., Pasadena 2, Calif.
M B MFG CO., 1060 State St., New Haven 11, Conn. ADV. PG. 386.
 Massa Laboratories, Inc., Fottler Rd., Hingham, Mass.
RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
 Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.
 Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.
 Telephonics Corp., Park Ave., Huntington, N. Y.

VIBRATORS

AIRPAX PRODUCTS CO., Middle River, Baltimore 20, Md. ADV. PG. 65.

AMERICAN TELEVISION & RADIO CO., 300 E. Fourth St., St. Paul 1, Minn. ADV. PG. 198.
 Collins Manufacturing Co., Inc., 726 N. Kresson St., Baltimore 5, Md.
 Cornell-Dubilier Electric Corp., South Plainfield, N. J.
 Endevo Corp., 689 S. Fair Oaks Ave., Pasadena 2, Calif.
INTERNATIONAL PUMP & MACHINE WORKS, 11-13 Governor St., Newark 2, N. J. ADV. PG. 154.
 James Vibrapowr Co., 4036 N. Rockwell St., Chicago 18, Ill.
 Kurman Electric Co., Inc., 35-18 37th St., Long Island City, N. Y.
 Oak Mfg. Co., 1260 Clybourn Ave., Chicago 10, Ill.
 Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
VIBRATION RESEARCH LABS., INC., 97 Lake Ave., Tuckaheo, N. Y. ADV. PG. 602.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.

VIBRATORS—Multivibrators

AIR ASSOCIATES, INC., Teterboro, N. J. ADV. PG. 83.
BURROUGHS CORP., ELECTRONIC INSTRUMENTS DIV., 1209 Vine St., Philadelphia Pa. ADV. PG. 495.
 Codetypor Laboratories, 550 Fifth Ave., New York 19, N. Y.
GENERAL ELECTRIC CO., Electronics Div., Electronics Park, Syracuse, N. Y. ADV. PG. 1-20.
 Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.
LEE LABORATORIES, INC., Genesee, Pa. ADV. PG. 639.
VICTOREEN INSTRUMENT CO., Component Div., 3800 Perkins Ave., Cleveland 14, Ohio. ADV. PG. 81.
WALKIRT CO., 145 W. Hazel St., Inglewood, Calif. ADV. PG. 467.

VIBRATORS—Ultrasonic

BRANSON INSTRUMENTS, INC., 438 Fairfield Ave., Stamford, Conn. ADV. PG. 557.
 Endevo Corp., 689 S. Fair Oaks Ave., Pasadena 2, Calif.
RADIO SONIC CORP., 111 Bleeker St., New York 12, N. Y. ADV. PG. 631.
RAYTHEON MFG. CO., Equipment Sales Div., Waltham 54, Mass. ADV. PG. 26.
 Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.
 Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill.

VISCOSIMETERS WITH ELECTRONIC RECORDERS

Bendix Aviation Corp., Cincinnati Div., 203 W. Third St., Cincinnati 2, Ohio.
 Bristol Co., The, Waterbury 20, Conn.
DOELCAM CORP., 56 Elmwood St., Newton 58, Mass. ADV. PG. 85.
 Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.
FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
 Foxboro Co., The, Foxboro, Mass.
 Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill.

VOLTAGE REGULATING

See **CONTROLS**

VOLTAGE REGULATORS & STABILIZERS

See **REGULATORS—Voltage Regulators & Stabilizers**

VOLTAGE SUPPLIES—Decade

CLEGG LABORATORIES, INC., 142 S. Livingston Ave., Livingston, N. J. ADV. PG. 572.
 Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.
 Dresen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
KAY-LAB, INC., 1090 Morena Blvd., San Diego 10, Calif. ADV. PG. 231.
KEPCO LABS., 131-38 Sanford Ave., Flushing 55, N. Y. ADV. PG. 23-25.
 Mercury Electronic Co., Box 450, Red Bank, N. J.
PRECISE MEASUREMENTS CO., 942 Kings Highway, Brooklyn 23, N. Y. ADV. PG. 650.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
 Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

VOLTMETERS

VOLTMETERS—Crystal

VOLTMETERS—Electronic

See **INSTRUMENTS—Electrical Measuring**

VOLTMETERS—Electrostatic

Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.
 Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

FERRANTI ELECTRIC, INC., 30 Rockefeller Plaza, New York 20, N. Y. ADV. PG. 450.
GENERAL ELECTRIC CO., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y. ADV. PG. 1-20.
HICKOK ELECTRICAL INSTRUMENT CO., 10514 Dupont Ave., Cleveland 8, Ohio. ADV. PG. 459.
 Pye Ltd., Cambridge, England.
RAWSON ELECTRICAL INSTRUMENT CO., 111 Potter St., Cambridge 42, Mass. ADV. PG. 436.
SCIENTIFIC SPECIALTIES CORP., Snow & Union Sts., Brighton 35, Mass. ADV. PG. 598.
SENSITIVE RESEARCH INSTRUMENT CORPORATION, 9 Elm Ave., Mt. Vernon, N. Y. ADV. PG. 617.
 Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.
Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.

VOLTMETERS—Slideback

CAL-TRONICS CORP., 11307 Hindry Ave., Los Angeles 45, Calif. ADV. PG. 340.

VOLT-OHM-MILLIAMMETERS

See **INSTRUMENTS—Electrical Measuring**

WASHERS—Insulating

Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
AEROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALLMETAL SCREW PRODUCTS CO., INC., 821 Stewart Ave., E. Garden City, N. Y. ADV. PG. 457.
AMERICAN LAVA CORP., Chattanooga 5, Tenn. ADV. PG. 43.
 American Mica Insulation Co., Manasquan, N. J.
 American Radio Hardware Co., Inc., 152 MacQuesten Pkwy., Mt. Vernon, N. Y.
 Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.
BAER CO., N. S., 9 Montgomery St., Hillside, N. J. ADV. PG. 232.
CITATION PRODUCTS CO., 233 E. 146th St., New York 51, N. Y. ADV. PG. 616.
CONTINENTAL-DIAMOND FIBRE CO., Newark 100, Del. ADV. PG. 399-402.
 Cortland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.
ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.
 Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.
EMELOID CO., INC., 1239 Central Ave., Hillside 5, N. J. ADV. PG. 367.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.
 Felt Products Mfg. Co., 1504 West Carroll Ave., Chicago 7, Ill.
 Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.
GARDE MFG. CO., 588 Eddy St., Providence 3, R. I. ADV. PG. 492.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.
 Halogen Insulator & Steel Corp., 10121 Franklin Ave., Franklin Park, Ill.
 Hayden Mfg. Co., 173 N. Peoria St., Chicago 7, Ill.
 I. E. Manufacturing, 321 N. Hoynes Ave., Chicago 12, Ill.
 Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.
 Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.
 Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
 Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.
 Laconia Corp., 37 S. 6th St., Newark 7, N. J.
 Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.
MANSOL CERAMICS, 140 Little St., Belleville, N. J. ADV. PG. 427.
 Maryland Lava Co., Bel Air, Md.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micacraft Products, Inc., 703 McCarter Highway, Newark 5, N. J.
 Minnesota Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
NATIONAL CERAMIC CO., 400 Southard St., Trenton 2, N. J. ADV. PG. 621.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
POLYMER CORP., THE, Reading, Pa. ADV. PG. 412.
PRECISION PAPER TUBE CO., 2033 W. Charleston St., Chicago 47, Ill. ADV. PG. 503.
PRINTLOID, INC., 93 Mercer St., New York 1, N. Y. ADV. PG. 198.
RESISTOFLEX CORP., 39 Plansoen St., Belleville 9, N. J. ADV. PG. 518.
RICHARDSON CO., THE, 27th Ave. & Lake St., Melrose Park, Ill. ADV. PG. 546.

Rogers Corporation, Goodyear, Conn.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.
Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.
Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.
Stevens Products, Inc., 86-88 Main St., East Orange, N. J.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
STUPAKOFF CERAMIC & MFG. CO., Latrobe, Pa. ADV. PG. 293-296.
SYNCRON PRODUCTS CO., Malden, Mass. ADV. PG. 467.
TAYLOR FIBRE CO., Norristown, Pa. ADV. PG. 207.
THOR CERAMICS INC., 225 Belleville Ave., Bloomfield, N. J. ADV. PG. 424.
TRI-POINT MFG. & DEVELOPMENT CO., 401 Grand St., Brooklyn 11, N. Y. ADV. PG. 655.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
U. S. ELECTRONICS CORP., 276 Warren St., Lyndhurst, N. J. ADV. PG. 493.
U. S. GASKET CO., P. O. Box 93, Camden, N. J. ADV. PG. 604, 605.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.
 Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

WASHERS—Lock

ALLMETAL SCREW PRODUCTS CO., INC., 821 Stewart Ave., E. Garden City, N. Y. ADV. PG. 457.
Autoscrew Co., 216-222 W. 18th St., New York, N. Y.
Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
Eaton Mfg. Co., Reliance Div., Massillon, Ohio.
FEDERAL SCREW PRODUCTS INC., 224 W. Huron St., Chicago 10, Ill. ADV. PG. 467.
Garrett Co., Inc., George K., D & Tioga Sts., Philadelphia 34, Pa.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.
I. E. Manufacturing, 321 N. Hoynes Ave., Chicago 12, Ill.
JAN HARDWARE MFG. CO., INC., 75 N. 11th St., Brooklyn 11, N. Y. ADV. PG. 586.
KEYSTONE BOLT & NUT CORP., 127 Church St., New York 7, N. Y. ADV. PG. 603.
Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.
National Lock Washer Co., 40 Hermon St., Newark 5, N. J.
Philadelphia Steel & Wire Corp., Penn St. & Belfield Ave., Philadelphia, Pa.
Positive Lock Washer Co., 181 Miller St., Newark 5, N. J.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
 Shakeproof, Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.
Standard Locknut & Lockwasher, Inc., 510 N. Capitol Ave., Indianapolis, Ind.
Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.
 Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Bedford St., Bedford, Ind.
Stronghold Screw Products, Inc., 1801 W. Winnemac St., Chicago 40, Ill.
THOMPSON-BREMER & CO., 1644 W. Hubbard St., Chicago 22, Ill. ADV. PG. 93.
Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.
 Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

WATTMETERS

See **INSTRUMENTS—Electrical Measuring**

WAVEGUIDE TEST EQUIPMENT

WAVEGUIDES—Combination, Flexible & Rigid
 See **MICROWAVE ACCESSORIES**

WAVEMETERS—Microwave

See **MICROWAVE ACCESSORIES**

WAXES

See **INSULATING COMPOUNDS**

WEDGES—Wood Slot

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.
Mitchell Rand Insulation Co., Inc., 51 Murray St., New York 7, N. Y.

WELDING

See **CONTROLS**

WIRE CAT WHISKERS for TRANSISTORS

ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
Bishop & Co., J., Platinum Works, Malverne, Pa.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.
PIX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Techalloy Co., Inc., Rahns, Pa.

WIRE—Aluminum

Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 580.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
J F D MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.
Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.
North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.
Roebling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
Saxton Products, Inc., 2101 Grand Concourse, New York 53, N. Y.
Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

WIRE—Annunciator

American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
BOSTON INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
Diamond Wire & Cable Co., Sycamore, Ill.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 10, Ill.
Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln Ave., Lowell, Mass.
Okonite Co., Canal St., Passaic, N. J.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
Roebling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
Royal Electric Co., Inc., Pawtucket, R. I.
SEQUOIA PROCESS CORP., 871 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.
Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.

WIRE—Antenna

ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.

Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Copperweld Steel Co., Wire & Cable Div., Glassport, Pa.
 CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Dielectric Materials Co., 5315-17 North Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
 Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
 I. E. Manufacturing, 321 N. Hoynes Ave., Chicago 12, Ill.
 Lowell Insulated Wire Div., Overlakes Corp., 171 Lincoln Ave., Lowell, Mass.
 National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 NATIONAL TEL-TRONICS CORP., 35 St. Casmirs Ave., Yonkers, N. Y. ADV. PG. 312.
 New England Electrical Works, Inc., Lisbon, N. H.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Saxton Products, Inc., 2101 Grand Concourse, New York 53, N. Y.
 Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
 U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

WIRE—Asbestos Insulated

American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 BOSTON INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.
 LEWIS ENGINEERING CO., 52 Rubber Ave., Naugatuck, Conn. ADV. PG. 228.
 Okonite Co., Canal St., Passaic, N. J.
 PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
 Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Royal Electric Co., Inc., Pawtucket, R. I.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.

WIRE—Beryllium Copper

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beryllium Corp., Reading, Pa.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 580.
 DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.
 INSTRUMENT SPECIALTIES CO., INC., 254 Bergen Blvd., Little Falls, N. J. ADV. PG. 575.
 Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
 NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

WIRE—Ceramic Insulated

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 BOSTON INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.
 PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.

WIRE—Copper, Bare

ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
 American Brass Co., 414 Meadow St., Waterbury 20, Conn.
 American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 580.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Copperweld Steel Co., Wire & Cable Div., Glassport, Pa.
 CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 200.
 NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.
 Nonotuck Mfg. Co., Holyoke, Mass.
 North American Phillips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine
 PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Saxton Products, Inc., 2101 Grand Concourse, New York 53, N. Y.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Warren Wire Co., Pownal, Vt.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Copper-Clad

Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Copperweld Steel Co., Wire & Cable Div., Glassport, Pa.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
 LEWIS ENGINEERING CO., 52 Rubber Ave., Naugatuck, Conn. ADV. PG. 228.
 Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
 METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
 NORTH AMERICAN RESEARCH LABS., INC., 725 Lexington Ave., Kenilworth, N. J. ADV. PG. 656.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.

Saxton Products, Inc., 2101 Grand Concourse, New York 53, N. Y.
 Standard Metals Corp., Broad & Whiting Sts., North Attleboro, Mass.
 SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

WIRE—Copper, Insulated

Accurate Insulated Wire Corp., 23 Fox St., New Haven, Conn.
 ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
 Aero Specialties, 85 Prescott St., Worcester, Mass.
 ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
 American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 BOSTON INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.
 BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
 CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Fairbanks Wire Co., Inc., 2287 Hollers Ave., New York 69, N. Y.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.
 HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
 Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
 Jersey Specialty Co., Inc., Little Falls, N. J.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 LEWIS ENGINEERING CO., 52 Rubber Ave., Naugatuck, Conn. ADV. PG. 228.
 National Electric Products Co., 140 Stanwix St., Pittsburgh 22, Pa.
 New England Electrical Works, Inc., Lisbon, N. H.
 North American Phillips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
 Okonite Co., The, Canal St., Passaic, N. J.
 PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
 PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rea Magnetic Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Revere Corporation of America, Wallingford 2, Conn.
 REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
 Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
 ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Saxton Products, Inc., 2101 Grand Concourse, New York 53, N. Y.
 SEQUOIA PROCESS CORP., 971 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Sittler Corp., 18 N. Ada St., Chicago 7, Ill.
 Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
 Surrentan Mfg. Co., 199 Washington St., Boston 8, Mass.
 TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.

Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
I. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

Varren Wire Co., Pownal, Vt.
 Western Insulated Wire Co., 2425 E. 30th St., Los Angeles 58, Calif.
 Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.
 Winsted Division of Hudson Wire Co., Winsted, Conn.

WIRE—Cut and Stripped

Accurate Insulated Wire Corp., 23 Fox St., New Haven, Conn.
EROLITE ELECTRONICS CORP., 507 26th St., Union City, N. J. ADV. PG. 615.
ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 M & Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
 Siss Electronics Corp., Box 123, Sussex, N. J.
OSTON INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.
RAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
 Cable Specialists Inc., of Conn., 166 Palsades Ave., Bridgeport, Conn.

AROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.
WESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Electro Wire Service, 5 Beekman St., New York 7, N. Y.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

Harrison & Co., Philip H., Matawan, N. J.
 Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
 Lenze Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
 National Radiac Inc., 10 Crawford St., Newark, N. J.
 Rex Mfg. Co., 25 E. 4th St., New York 3, N. Y.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Revere Corporation of America, Wallingford 2, Conn.
 Cranston, R. I.

Reversible Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
 Royal Electric Co., Inc., Pawtucket, R. I.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Saratoga Industries, Saratoga Springs, N. Y.
 Scler Corp., 18 N. Ada St., Chicago 7, Ill.
INSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Enameled

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Linden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
JOHN CORP., SIGMUND, 121 S. Columbia Ave. Mt. Vernon, N. Y. ADV. PG. 580.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Field Wire Div. of The Overlakes Corp., 142 Monroe St., Garfield, N. J.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
 Instrument Wire Co., Guilford, Conn.
 Kanthal Corp., Amelia Place, Stamford, Conn.
 New England Electrical Works, Inc., Lisbon, N. H.
Y CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
 North American Phillips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

HELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.
 Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.

Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
 Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
 Warren Wire Co., Pownal, Vt.
 Winsted Division of Hudson Wire Co., Winsted, Conn.

WIRE—Fine Wire Specialties

ACEME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
 Aero Specialties, 85 Prescott St., Worcester, Mass.
ART WIRE & STAMPING CO., 227 High St., Newark 2, N. J. ADV. PG. 497.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
 Carpenter Steel Co., Webb Wire Div., New Brunswick, N. J.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

Copperweld Steel Co., Wire & Cable Div., Glassport, Pa.
 Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.
 Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.
 Eastern Tool & Mfg. Co., 1 Montgomery St., Belleville 9, N. J.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Fairbanks Wire Co., Inc., 2287 Hollers Ave., New York 69, N. Y.
HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
 Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.

HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 200.
 Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.
 Kanthal Corp., Amelia Place, Stamford, Conn.
 Lenze Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
 Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.
 New England Electrical Works, Inc., Lisbon, N. H.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.

North American Phillips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
PX MFG. CO., INC., 24 Bedford St., Newark, N. J. ADV. PG. 598.
 Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.
 Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.

Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
SEQUOIA PROCESS CORP., 971 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
 Techalloy Co., Inc., Rahns, Pa.

TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
 Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 Warren Wire Co., Pownal, Vt.
 York Co., Inc., Otto H., 69 Glenwood Place, East Orange, N. J.

WIRE—Glass Insulated

Accurate Insulated Wire Corp., 23 Fox St., New Haven, Conn.
ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
 Aero Specialties, 85 Prescott St., Worcester, Mass.
ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
 American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 338.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Fairbanks Wire Co., Inc., 2287 Hollers Ave., New York 69, N. Y.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
 Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
 Kanthal Corp., Amelia Place, Stamford, Conn.
 Lenze Electric Mfg., 1751 North Western Ave., Chicago 47, Ill.
LEWIS ENGINEERING CO., 52 Rubber Ave., Naugatuck, Conn. ADV. PG. 228.
 Okonite Co., Canal St., Passaic, N. J.

HELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Revere Corporation of America, Wallingford 2, Conn.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.

ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
SEQUOIA PROCESS CORP., 871 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.
 Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
 Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.

U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 Whitaker Cable Corp., Kansas City 16, Mo.
WIRE—Gold Plated
 American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
COHN CORP., SIGMUND, 121 S. Columbia Ave., Mt. Vernon, N. Y. ADV. PG. 580.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
 North American Phillips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

NORTH AMERICAN RESEARCH LABS., INC., 725 Lexington Ave., Kenilworth, N. J. ADV. PG. 656.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
 Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

WIRE—Guy
ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
 American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Bergen Wire Rope Co., 123 Gregg St., Lodi, N. J.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
COHN CORP., SIGMUND, 121 S. Columbia Ave., Mount Vernon, N. Y. ADV. PG. 580.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Copperweld Steel Co., Wire & Cable Div., Glassport, Pa.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
JFD MFG. CO., INC., 6101-23 Sixteenth Ave., Brooklyn, N. Y. ADV. PG. 666.
 National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
 Saxton Products, Inc., 2101 Grand Concourse, New York 53, N. Y.
 South River Metal Products Co., 377-379 Tunpike, South River, N. J.
 Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.

WIRE—High Voltage

Accurate Insulated Wire Corp., 23 Fox St., New Haven, Conn.

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 338.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Copperweld Steel Co., Wire & Cable Div., Glassport, Pa.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Dielectric Materials Co., 5315-17 North Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
 General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
 Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
 Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
SEQUOIA PROCESS CORP., 971 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
 Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
 Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Hook-up

Accurate Insulated Wire Corp., 23 Fox St., New Haven, Conn.
ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
 American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 B & M Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
BOSTON INSULATED WIRE & CABLE CO., 63 Bay St., Boston 25, Mass. ADV. PG. 338.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Copperweld Steel Co., Wire & Cable Div., Glassport, Pa.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.
 Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.
HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
 Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
 Lenz Electric Mfg. Co., 1751 N. Western Ave., Chicago 47, Ill.
PHALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
 Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia 6, Pa.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Plastic Wire & Cable Corp., Jewett City, Conn.
 Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.
 Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
 Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
 Revere Corporation of America, Wallingford 2, Conn.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
 Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Schott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.
SEQUOIA PROCESS CORP., 971 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.
 Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
 Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
 United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Warren Wire Co., Pownal, Vt.
 Whitaker Cable Corp., Kansas City 16, Mo.

WIRE—Litz

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Fairbanks Wire Co., Inc., 2287 Hollers Ave., New York 69, N. Y.
GUTHMAN & CO., INC., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
 Instrument Wire Co., Guilford, Conn.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138.
 Winsted Division of Hudson Wire Co., Winsted, Conn.

WIRE—Magnet

ACME WIRE CO., New Haven 14, Conn. ADV. PG. 566.
 American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
 Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
 Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Fairbanks Wire Co., Inc., 2287 Hollers Ave., New York 69, N. Y.
 Garfield Wire Div. of The Overlakes Corp., 142 Monroe St., Garfield, N. J.
 General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
GENERAL ELECTRIC CO., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn. ADV. PG. 1-20.
GUTHMAN & CO., EDWIN I., 15 S. Throop St., Chicago 7, Ill. ADV. PG. 196.
HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
 Instrument Wire Co., Guilford, Conn.
 Kaiser Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.
 New England Electrical Works, Inc., Lisbon, N. H.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
PHELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.
 Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia 6, Pa.
 Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.

Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.
 Sprague Electric Co., 125 Marshall St., North Adams, Mass.
 Warren Wire Co., Pownal, Vt.
WHEELER INSULATED WIRE CO., INC., 150 E. Aurora St., Waterbury 91, Conn. ADV. PG. 138.
 Winsted Division of Hudson Wire Co., Winsted, Conn.

WIRE—Metal Shielded

Accurate Insulated Wire Corp., 23 Fox St., New Haven, Conn.
 Aero Specialties, 85 Prescott St., Worcester, Mass.
ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
 American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
 Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.
BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
 Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 Co-Operative Industries, Inc., 100 Oakdale Rd., Chester, N. J.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
 Diamond Wire & Cable Co., Sycamore, Ill.
 Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.
 Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
 Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
LEWIS ENGINEERING CO., 52 Rubber Ave., Naugatuck, Conn. ADV. PG. 228.
 Okonite Co., The, Canal St., Passaic, N. J.
 Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
 Precision Tube Co., Inc., North Wales, Pa.
REX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.
 Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
 Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.
 Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.
 Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
TENSOLITE INSULATED WIRE CO., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
 Uniform Tubes, Level Rd., Colledgeville 2, Pa.
 Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
 Warren Wire Co., Pownal, Vt.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

WIRE—Molybdenum

Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
 Instrument Wire Co., Guilford, Conn.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y. ADV. PG. 300.

WIRE—Nickel Clad Copper

ALLOY METAL WIRE CO., DIVISION OF H. K. PORTER COMPANY, INC., Prospect Park, Pa. ADV. PG. 523.
AMERICAN LEONIC MFG. CO., Amber & Hagert Sts., Philadelphia 25, Pa. ADV. PG. 548.
 Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
 Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
 Cook-Dunbar Smith Co., 85 Sprague St., Providence 7, R. I.
 Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
 Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.
LEWIS ENGINEERING CO., 52 Rubber Ave., Naugatuck, Conn. ADV. PG. 228.
 Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.

NORTH AMERICAN RESEARCH LABS., INC., 725 Lexington Ave., Kenilworth, N. J. ADV. PG. 656.
Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
Standard Metals Corp., Broad & Whiting Sts., North Attleboro, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

WIRE—Phosphor Bronze

ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
American Brass Co., 414 Meadow St., Waterbury 20, Conn.
AMERICAN LEONIC MFG. CO., Amber & Hagert Sts., Philadelphia 25, Pa. ADV. PG. 548.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Phase Brass and Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
JOHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 580.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.

HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 200.
Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.

NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.
Phosphor Bronze Corp., 20 Franklin St., Seymour, Conn.
Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
Shott Co., Walter L., 3225 Exposition Pl., Los Angeles 18, Calif.

SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

WIRE—Plastic Insulated

Accurate Insulated Wire Corp., 23 Fox St., New Haven, Conn.
Aero Specialties, 85 Prescott St., Worcester, Mass.
ALPHA WIRE CORP., 430 Broadway, New York 13, N. Y. ADV. PG. 468.
American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
Waconada Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
B & M Electric Co., 838 Fourth Ave., Brooklyn, N. Y.
Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

BRAND & CO., INC., WILLIAM, North & Valley Sts., Willimantic, Conn. ADV. PG. 396, 397.
CAROL CABLE DIV. OF CRESCENT CO., INC., 20 Central Ave., Pawtucket, R. I. ADV. PG. 155.
CHESTER CABLE CORP., Hill St., Chester, N. Y. ADV. PG. 172, 173.
Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.

Columbia Wire Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Ill.
CORNISH WIRE CO., 50 Church St., New York 7, N. Y. ADV. PG. 222.
Diamond Wire & Cable Co., Sycamore, Ill.
Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.

Drexel Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.
God, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.

Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
Mersey Specialty Co., Inc., Little Falls, N. J.
Orinthal Corp., Amelia Place, Stamford, Conn.
National Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
Orinthal Co., Canal St., Passaic, N. J.

HALO PLASTICS CORP., 25 Foster St., Worcester 8, Mass. ADV. PG. 463.
HELPS DODGE COPPER PRODUCTS CORP., 40 Wall St., New York 5, N. Y. ADV. PG. 156, 157.
Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia 6, Pa.
Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
Plastic Wire & Cable Corp., Jewett City, Conn.
Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.

Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
Rago Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
Severe Corporation of America, Wallingford 2, Conn.
EX CORP., THE, Hayward Rd., West Acton, Mass. ADV. PG. 404.
Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.

Rockbestos Products, Nicoll & Canner Sts., New Haven 4, Conn.
Roebbling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.
ROME CABLE CORP., 330 Ridge St., Rome, N. Y. ADV. PG. 94.

Royal Electric Co., Inc., Pawtucket, R. I.
SEQUOIA PROCESS CORP., 971 Willow St., P. O. Box 1007, Redwood City, Calif. ADV. PG. 464.
Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
Stromberg-Carlson Co., Rochester 3, N. Y.
Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.

TENSOLITE INSULATED WIRE CO., INC., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
United States Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
U. S. WIRE & CABLE CORP., Progress & Monroe Sts., Union, N. J. ADV. PG. 577.
Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.

Whitaker Cable Corp., Kansas City 16, Mo.
WHITNEY BLAKE CO., New Haven 14, Conn. ADV. PG. 64.

WIRE—Platinum

AMERICAN PLATINUM WORKS, N. J. R. R. Ave. at Oliver St., Newark 5, N. J. ADV. PG. 663.
American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
Baker & Co. Inc., 113 Astor St., Newark 5, N. J.
Bishop & Co., J., Platinum Works, Malvern, Pa.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Bristol Co., The, Waterbury 20, Conn.
COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 580.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.

METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.
NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 634.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.
Wildberg Bros., Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

WIRE—Precious Metal Plated

See WIRE—Silver Plated

WIRE—Recording

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.
Fidelitone, Inc., 1616 Devon Ave., Chicago 26, Ill.
Fort Wayne Metals, Inc., Fort Wayne 6, Ind.
Permo, Inc., 6415 Ravenswood Ave., Chicago 26, Ill.
Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.

WIRE—Resistance and Filament

AMERICAN LEONIC MFG. CO., Amber & Hagert Sts., Philadelphia 25, Pa. ADV. PG. 548.
Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.
Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.
JELLIFF MFG. CORP., C. O., 200 Pequot Ave., Southport, Conn. ADV. PG. 196.
Kanthal Corp., Amelia Place, Stamford, Conn.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.

NEY CO., J. M., 179 Elm St., Hartford, Conn. ADV. PG. 208.
North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
Precision Resistor Co., 109 U. S. Highway #22, Hillside 5, N. J.
Techalloy Co., Inc., Rahns, Pa.

WIRE—Silver Plated

American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 580.
Cook-Dunbar Smith Co., 85 Sprague St., Providence 7, R. I.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.

HUDSON WIRE CO., Ossining, N. Y. ADV. PG. 200.
Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.

Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.
MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.
METALS & CONTROLS CORP., GENERAL PLATE DIV., Attleboro, Mass. ADV. PG. 500.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.
North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.

NORTH AMERICAN RESEARCH LABS, INC., 725 Lexington Ave., Kenilworth, N. J. ADV. PG. 656.
Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.
SECON METALS CORP., 7 Intervale St., White Plains, N. Y. ADV. PG. 478.

Standard Metals Corp., Broad & Whiting Sts., North Attleboro, Mass.
Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

WIRE—Stainless Steel

Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
ALLOY METAL WIRE CO., DIVISION OF H. K. PORTER COMPANY, INC., Prospect Park, Pa. ADV. PG. 523.
AMERICAN LEONIC MFG. CO., Amber & Hagert Sts., Philadelphia 25, Pa. ADV. PG. 548.
American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
Armo Steel Corp., 703 Curtis St., Middletown, Ohio.

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Carpenter Steel Co., 142 W. Bern St., Reading, Pa.
Carpenter Steel Co., Webb Wire Div., New Brunswick, N. J.
COHN CORP., SIGMUND, 121 S. Columbus Ave., Mt. Vernon, N. Y. ADV. PG. 580.

CRUCIBLE STEEL CO. OF AMERICA, Henry W. Oliver Bldg., P. O. Box 88, Pittsburgh 30, Pa. ADV. PG. 349.
DRIVER CO., WILBUR B., 1875 McCarter Highway, Newark 4, N. J. ADV. PG. 280.
Driver-Harris Co., 201 Middlesex St., Harrison, N. J.
Fort Wayne Metals, Inc., Fort Wayne 6, Ind.
NESOR ALLOY PRODUCTS CO., 282 Halsey St., Newark, N. J. ADV. PG. 528.

North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
Republic Steel Corp., Republic Building, Cleveland 1, Ohio.
Ryerson & Son Inc., J. T., Box 8000-A, Chicago, Ill.
Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.
Techalloy Co., Inc., Rahns, Pa.

WIRE—Tantalum

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

WIRE—Teflon Insulated

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.
BOSTON INSULATED WIRE & CABLE CO., 65 Bay St., Boston 25, Mass. ADV. PG. 338.
FEDERAL TELEPHONE & RADIO CO., A DIV. OF IT&T, 88 Kingsland Rd., Clifton, N. J. ADV. PG. 182-187.
HITEMP WIRES, INC., 26 Windsor Ave., Mineola, N. Y. ADV. PG. 645.
Sprague Electric Co., 125 Marshall St., North Adams, Mass.

Surprenant Mfg. Co., 199 Washington St., Boston 8, Mass.
TENSOLITE INSULATED WIRE CO., 198 Main St., Tarrytown, N. Y. ADV. PG. 521.
Warren Wire Co., Pownal, Vt.

Wire—Titanium

Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.

WIRE—Tungsten

Associated Engineering & Mfg. Corp., Glen Ridge, N. J.
Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.
Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.
Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.
North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
Northern Electronic & Vacuum Industries, St. Sauveur des Monts, P. Q., Post Office Box 105, Canada.

REMBAR CO., THE, 117 Main St., Dobbs Ferry, N. Y. ADV. PG. 300.
SYLVANIA ELECTRIC PRODUCTS, INC., 1740 Broadway, New York 19, N. Y. ADV. PG. 699-706.

WIRE—Zirconium

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

WIRE MARKING—Service

Acromark Co., The, 9-13 Morrell St., Elizabeth 4, N. J.

Actioncraft Products, 8 Sagamore Hill Dr., Port Washington, N. Y.
 Brady Co., W. H., 727 W. Glendale Ave., Milwaukee 12, Wis.
 Cable Specialists Inc. of Conn., 166 Pallsades Ave., Bridgeport, Conn.
 Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.
 ConRay Corp., 1225 Ray St., Dayton 4, Ohio.
 Harrison & Co., Philip H., Matawan, N. J.
 Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass.
MARKWIK MANUFACTURING CO., INC., 147-39 18th Ave., Whitestone, N. Y. ADV. PG. 621.
 Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Westline Products Div. of Western Lithograph Co., 600 E. Second St., Los Angeles 54, Calif.

WIRE STRIPPERS—Chemical

Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
 Division Lead Co., 7742 W. 61st Place, Summit, Ill.
 Ellanar Chemical Co., 2308 Oakton St., Evanston, Ill.
 Fidelity Chemical Products Co., 472 Frelinghuysen Ave., Newark, N. J.
GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 London Chemical Co., 325 W. 32nd St., Chicago 16, Ill. Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio.

WIRE STRIPPERS—Hand

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Holub Industries, Inc., 414 DeKalb Ave., Sycamore, Ill.

WIRE STRIPPERS—Machine

See **MACHINES—Wire Stripping**

WIRE STRIPPERS—Mechanical

GENERAL CEMENT MFG. CO., ELECTRONIC DIV., 919 Taylor Ave., Rockford, Ill. ADV. PG. 380.
 Tartak Electronics, Inc., 2972 N. Ontario St., Burbank, Calif.
WENCO MFG. CO., 1133 W. Hubbard St., Chicago 22, Ill. ADV. PG. 480.

WOOFERS

See **SPEAKERS**

X-RAY EQUIPMENT—Industrial

Applied Research Labs., 3717 Park Place, Glendale 8, Calif.
 Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.
BRACKE-SEIB X-RAY CO., INC., 293 Third Ave., New York 10, N. Y. ADV. PG. 583.
 Central Research Laboratories, Inc., Red Wing, Minn.
 Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.
 Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.

Nuclear Research & Development Co., 6425 Etzel, St. Louis 14, Mo.

North American Philips Co., Inc., 70 S. Fulton Ave., Mt. Vernon, N. Y.

Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
 Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.

Pye Ltd., Cambridge, England.

Resdel Engineering, 2351 Riverside Drive, Los Angeles 39, Calif.

Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

Technical Operations, Inc., 6 Schouler Court, Arlington, Mass.

Triplet & Barton, Inc., 831 N. Lake St., P. O. Box 3128, Burbank, Calif.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

X-RAY EQUIPMENT—Medical

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.

BRACKE-SEIB X-RAY CO., INC., 293 Third Ave., New York 10, N. Y. ADV. PG. 583.

Cinema-Television, Ltd., Worsley Bridge Rd., London SE 26, England.

F-R MACHINE WORKS, INC., 26-12 Borough Place, Woodside 77, N. Y. ADV. PG. 169-171.

High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.

Kelk Co., G. F., 1195 Lawrence Ave., W., North Park P. O., Canada.

Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.

MARCONI INSTRUMENTS, LTD., 23 Beaver St., New York 4, N. Y. ADV. PG. 150.

Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.

Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.

North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.

St. John X-Ray Laboratory, Califon, N. J.

WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh 30, Pa. ADV. PG. 113-124.

X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

YOKES—Deflection

Allied Mfg. Corp., 605-07 61st St., West New York, N. J.

Automatic Mfg. Co., 65 Gouveneur St., Newark 4, N. J.

CELCO CONSTANTINE ENGINEERING LABORATORIES CO., Island Ave., Mahwah, N. J. ADV. PG. 547, 549, 551.

CHICAGO STANDARD TRANSFORMER CORP., 3580 Elston Ave., Chicago 18, Ill. ADV. PG. 453.

Cinema-Television, Ltd., Worsley Bridge Rd., London SE 26, England.

CLIFTON PRECISION PRODUCTS CO., INC., Broadway at Marple Ave., Clifton Heights Pa. ADV. PG. 394.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Cossor (Canada) Ltd., 301-303 Windsor St., Halifax N. S., Canada.

DX Radio Products Co., Inc., 2300 Armitage Ave., Chicago 47, Ill.

Davis Electric Co., Cape Girardeau, Mo.

Daystrom Instrument Co., Archbald, Pa.

Electro Engineering & Mfg. Co., 627 W. Alexandrine Ave., Detroit 1, Mich.

Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.

ELECTRONIC COMPONENTS INC., 55 E. 11th St., Paterson, N. J. ADV. PG. 380.

FORD INSTRUMENT CO. DIV. OF THE SPERRY CORP., 31-10 Thomson Ave., Long Island City 11, N. Y. ADV. PG. 614.

GUARDIAN ELECTRIC MFG. CO., 1621 W. Walnut St., Chicago 12, Ill. ADV. PG. 377.

GUTHMAN INC., EDWIN I., 15 S. Throop St., Chicago, Ill. ADV. PG. 196.

Halldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.

Joyner Corp., 462 N. Parkside Ave., Chicago 44, Ill.

LEONARD ELECTRIC PRODUCTS CO., INC., 67 Thlrty Fourth St., Brooklyn 32, N. Y. ADV. PG. 569.

MAKEPEACE CO., D. E., Attleboro, Mass. ADV. PG. 321.

Meissner Mfg. Div., Maguire Industries, Inc., Mt. Carmel, Ill.

Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.

NIEMAND BROS., INC., 37-03 35th Ave., Long Island City 1, N. Y. ADV. PG. 418.

Penn Tran Corp., Bellefonte, Pa.

RADIO CORP. OF AMERICA, Tube Dept., Harrison, N. J. ADV. PG. 295, Inside Back & Back Covers.

Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.

RAYTHEON MFG. CO., EQUIPMENT SALES DIV., Waltham 54, Mass. ADV. PG. 26.

Redmond Co., Inc., 201 Monroe St., Owosso, Mich.

Rola Co., Inc., 2530 Superior Ave., Cleveland 14, Ohio.

Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Symphony Radio & Television Co., 925 S. Western Ave., Los Angeles 6, Calif.

TV Products Corp., 1057 Summit Ave., Jersey City, N. J.

TELECHROME, INC., 88 Merrick Rd., Amityville, N. Y. ADV. PG. 303.

Telectron Co., The, 4019 Prospect Ave., Cleveland 3, Ohio.

Teleradio Engineering Corp., 99 Wall St., New York 5, N. Y.

TEL-RAD MFG. CO., INC., 7th & Madison St., Fennimore, Wis. ADV. PG. 545.

Television Laboratories, Inc., Mill St., Wauconda, Ill.

Thordarson-Meissner Mfg. Divs., Mt. Carmel, Ill.

Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.

TRIAD TRANSFORMER CORP., 4055 Redwood Ave., Venice, Calif. ADV. PG. 398.

Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.

TRADE NAME INDEX

The following list of trade names of manufacturers and products in or related to the field of electronics has been prepared from data supplied by manufacturers. This list is intended for use in determining the manufacturer's name when only a purported trade name is known. The editors for obvious reasons have not attempted to determine a manufacturer's right to the exclusive use of any such name. Addresses can be obtained by referring to the Manufacturers Index on Page D-196. Only coined trade names are listed, as it was deemed unnecessary to include a company name inasmuch as the manufacturer's identity was immediately apparent.

- A-10
Suprenant Mfg. Co.
- A-30
Superior Tube Co.
- A-31
Superior Tube Co.
- "A" NICKEL—
International Nickel Co., Inc.
- A BAR E
Amalgamated Electronics
- ABOGLAS
Natar Corp.
- ABRASO
Roebing's Sons Co., John A.
- ABSORB-A-SHOCK
Federal Shock Mount Corp.
- ACA
Amplifier Corp. of America
- ACL
Adler Communications Labs.
- ACCURAY
Industrial Nucleonics Corp.
- ACCWIRE
Accurate Insulated Wire Corp.
- ACE
American Hard Rubber Co.
- ACE
Arro Expansion Bolt Co.
- ACME
Aerovox Corp.
- ACME-LITE
Acme Battery Co.
- ACME-MOLD
Acme Wire Co.
- ACMIOLA
SOS Cinema Supply Corp.
- ACOUSTALLOY
Electro-Voice, Inc.
- ACOUSTIC TAPE
Jensen Industries, Inc.
- ACOUSTICEL
Brush Electronics Co.
- ACRA-COTE
Pacific Universal Products Corp.
- ACRAWAX C
Glyco Products Co., Inc.
- ACRO
Aero Marine Radio Corp.
- ACROCEL
Acromark Co.
- ACROCUT
Acromark Co.
- ACROBOSS
Acromark Co.
- ACROD
Acme Electric Heating Co.
- ACRODIE
Acromark Co.
- ACRO-ETCH
Acromark Co.
- ACROFLEX
Anchor Plastics Co., Inc.
- ACROGRAVE
Acromark Co.
- ACROHEX
Acromark Co.
- ACRO-INK
Acromark Co.
- ACROM
Acme Electric Heating Co.
- ACROMARKER
Acromark Co.
- ACRO-MATCH
Communications Co., Inc.
- ACROPLAC
Acromark Co.
- ACROPRENE
Acromark Co.
- ACROPRINTER
Acromark Co.
- ACROSOUND
Acro Products Co.
- ACROSTAMP
Acromark Co., The
- ACROTOOL
Acromark Co.
- ACROVISION
Acro Products Co.
- ACRYLON
American Monomer Corp.
- ACRYWELD
American Phenolic Corp.
- ACTONE
Acton Co., H. W.
- ACTRON
Radionic Transformer Co.
- ADAPEC
Centralab Div. of Globe-Union, Inc.
- ADAPTORS
ABC Radio Labs.
- ADASHAFT
Centralab Div. of Globe-Union, Inc.
- AD-A-SWITCH
Clarostat Mfg. Co., Inc.
- ADC
Audio Development Co.
- ADDAPLUG
Associated Engineering Corp. of Boston
- ADDITIVE DRIVE
Electro-Voice, Inc.
- ADJUST-A-CONE
Quam Nichols Co.
- ADJUSTA-V
Radio Merchandise Sales, Inc.
- ADJUST-A-VOLT
Standard Electrical Products Co.
- ADJUSTOHM
Ward Leonard Electric Co.
- ADJUSTO SPEDE
Allis Co., Louis.
- ADLAKE
Adams & Westlake Co., The.
- ADVANCE
Acme Battery Co.
- ADVANCETRON
Advance Electronics Co.
- ADVANCE
Driver-Harris Co.
- AECO
American Electric Cable Co.
- AERIOTRON
Westinghouse Electric Corp.
- AEMCO
Automatic Electric Mfg. Co.
- AEROCOM
Aeronautical Communications Equipment Co.
- AEROCON
Aerovox Corp.
- AERO-GUN
Shallcross Mfg. Co.
- AEROFILM
Aerovox Corp.
- AEROFLEX
Anchor Industrial Co.
- AEROFLEX
Anchor Plastics Co., Inc.
- AEROHEAD
Giannini & Co., Inc., G. M.
- AEROLENE
Aerovox Corp.
- AEROLITE
Aerovox Corp.
- AERO-MAGNETTE
Heinemann Electric Co.
- AEROSEAL
Breeze Corpn., Inc.
- AEROTEMP
Aerovox Corp.
- AERO-THREAD
Heli-Coil Corp.
- AEROTROL
Cook Electric Co.
- AEROTRON
Aeronautical Electronics, Inc.
- AEROTWEED
Apex Coated Fabrics Co.
- AEROVANE
Air Control Installations Ltd.
- AEROVANE
Friez Instrument Div., Bendix Aviation Corp.
- A'G'A
Elastic Stop Nut Corp of America
- AGASTAT
Elastic Stop Nut Corp. of America
- AH
Arrow-Hart & Hegeman Electric Co.
- AICO
Aeromotive Equipment Corp.
- AIL
Airborne Instruments Lab., Inc.
- AIRACOUSTIC
Johns-Manville Sales Corp.
- AIR BOY
Mitchell Industries, Inc.
- AIRBOY
American Insulator Corp.
- AIR COM
Mitchell Industries, Inc.
- AIR COMMANDER
Audio Equipment Co., Inc.
- AIRFLEX
Irvington Varnish & Insulator Div. of Minnesota Mining & Mfg. Co.
- AIRFLEX
Transradio Ltd.
- AIR GENERAL
Brach Mfg. Corp.
- AIRGRIT
Matthews & Co., James H.
- AIR INDUCTORS
Barker & Williamson
- AIR KING
Ward Products Corp., Div. The Gabriel Co.
- AIRLEAD
Good, Inc., Don
- AIR-METER
Hastings Instrument Co.
- AIR-RAY
Edin Co.
- AIRSCOOT
Mitchell Industries, Inc.
- AIR SPECIAL
Brach Mfg. Corp.
- AIRSTAT
Minneapolis-Honeywell Regulator Co.
- AIRSWITCH
Minneapolis-Honeywell Regulator Co.
- AIRTURN
Barber-Colman Co.
- AKRA-OHM
Shallcross Mfg. Co.
- ALATHON
du Pont de Nemours & Co., Inc., E. I.
- ALCO
Alhrendt Instrument Co.
- ALCOA
Aluminum Company of America
- ALCROHM
Magnetic Metals Co.
- ALCUPLATE
Metals & Controls Corp. General Plate Div.
- ALFER
Metals & Controls Corp. General Plate Div.
- ALFERON
Driver-Harris Co.
- ALGCO
Auburn Manufacturing Co.
- ALINCO
Alleghany Instrument Co., Inc.
- ALITE
U. S. Stoneware Co.
- ALL-HYDRAULIC
Hydraulic Press Mfg. Co.
- ALL-METL
Barry Corp.
- ALLEN-HEAD
Allen Mfg. Co.
- ALLIED
Sheldon Electric Co.
- ALMANOX
Frenchtown Porcelain Co.
- ALMET
Alloy Metal Wire Co. Div. of H. K. Porter Co., Inc.
- ALNICO
Arnold Engineering Co.
- ALNICO
Crucible Steel Co. of America
- ALNIFER
Metals & Controls Corp.
- ALNOR
Illinois Testing Labs., Inc.
- ALODINE
American Chemical Paint Co.
- ALPHATRON
Canadian Radium & Uranium Corp.
- ALPHATRON
National Research Corp.
- ALPO
Standard-Toch Chemicals, Inc.
- ALRAY
Alloy Metal Wire Co. Div. of H. K. Porter Co., Inc.
- ALROK
Aluminum Co. of America
- ALSCO
Automatic Switch Co.
- ALSIMAG
American Lava Corp.
- ALSIPLATE
Metals & Controls Corp. General Plate Div.
- ALTIVAR
Rotron Mfg., Co., Inc.
- ALUMATREET
Farrelloy Co.
- ALUMAWELD
Johnson Mfg. Co., Inc.
- ALUMILITE
Aluminum Co. of America
- ALUMON
Ethonex, Inc.
- ALUMOX
Ethonex, Inc.
- ALUNDUM
Norton Co.
- ALWAC
Logistics Research Inc.
- ALZAK
Aluminum Co. of America
- AMBERSHEATH
Rome Cable Corp.
- AMINCO
American Instrument Co.
- ALUNDUM
Norton Co.
- AMBERYL
Vaco Products Co.
- AMCO
American Solder & Flux Co.
- AMCON
American Condenser Co.
- AMECO
American Electronics Corp.
- AMERBESTOS
American Steel & Wire Co., U. S. Steel Corp., Sub.
- AMERCLAD
American Steel & Wire Co., U. S. Steel Corp., Sub.
- AMERCON
American Relay & Controls, Inc.
- AMERFLEX
Marco Industries
- AMERGLASS
American Steel & Wire Co., U. S. Steel Corp., Sub.
- AMERICAN
Manning, Maxwell & Moore, Inc.
- AMERICAN BEAUTY
American Electrical Heater Co.
- AMERICAN-PHILLIPS
American Screw Co.
- AMERINE
American Insulator Corp.
- AMERLAC
American Electric Cable Co.
- AMERPLASTIC
American Electric Cable Co.
- AMERSTRAND
American Steel & Wire Co., U. S. Steel Corp., Sub.
- AMERTRAN
Standard Electronics Corp.
- AMETRON
Streeter-Amet Corp.
- AMINC
Dumont-Airplane & Marine Instruments, Inc.
- AMINCO
American Instrument Co.
- AMMOGAS
Westinghouse Electric Corp.

AMO
 General Cement Mfg. Co.
AMO-ENO-MONO GAS
 Westinghouse Electric Corp.
AMOIL
 Consolidated Vacuum Corp.
AMP
 Aircraft-Marine Products, Inc.
AMP
 Pyramid Instrument Corp.
AMPACET
 American Molding Powder &
 Chemical Corp.
AMPCO
 Automatic Metal Products Co.
AMPEC
 Centralab Div.
 Globe Union, Inc.
AMPEX
 Automatic Metal Products Co.
AMPHENOL
 American Phenolic Corporation
AMPLICALL
 Rauland-Borg Corp.
AMPLICORP
 Amplifier Corp. of America
AMPLIFILM
 Aircraft-Marine Products, Inc.
AMPLIMUSE
 Crystal Research Labs., Inc.
AMPLI-PRESS
 Aircraft-Marine Products, Inc.
AMPLISET
 Bristol Co., The
AMPLI-VERSAL
 Aircraft-Marine Products, Inc.
AMPLIVERTER
 Blender-Tongue Laboratories, Inc.
AMPLI-VISION
 International Telemeter Corp.
AMPLUG
 Electrodyne Co.
AMP-O-ELECTRIC
 Aircraft-Marine Products, Inc.
AMPOLEX
 Aircraft-Marine Products, Inc.
AMP-O-MATIC
 Aircraft-Marine Products, Inc.
AMPROBE
 Pyramid Instrument Corp.
AMPTRON
 Friez Instrument Div.
 Bendix Aviation Corp.
AMPSULATION
 Aircraft-Marine Products, Inc.
AMPYROL
 American Steel & Wire Corp.,
 U. S. Steel Corp., Sub.
AMRECON
 American Relay & Controls, Inc.
AMVAR
 American Steel & Wire Co.,
 U. S. Steel Corp., Sub.
ANACONDA
 American Brass Co.
ANGLE DRIVE
 James Vibrapowr Co.
ANGLGEAR
 Airborne Accessories, Inc.
ANKOSEAL
 Ansonia Wire & Cable Co., The
ANNOUNCE-A-LARM
 Dondar Devices
ANNOUNCEMAT
 Recora Co.
ANTEN-A-CATOR
 Gordon Specialties Co.
ANTENNAPLEX
 Radio Corp. of America
ANTENNASCOPE
 Eldico of New York, Inc.
ANTENSIFIER
 Blender-Tongue Laboratories, Inc.
ANTI-LINK
 American Nut & Bolt Fastener Co.
ANYVOLT
 Sorensen & Co.
AO
 American Optical Co.
APACHE
 Sangamo Electric Co.
APECO
 American Photocopy Equipment Co.
APEIZON
 Shell Oil Co.
APELCO
 Applied Electronics Co.
API
 Assembly Products, Inc.
APW
 American Platinum Works
AQUADAG
 Acheson Colloids Co.
AQUALITE
 National Vulcanized Fibre Co.
AQUALUX
 Westinghouse Electric Corp.
AQUAPLATE
 Bache & Co., Semon
AQUASTOP
 Protective Coatings Corp.
AQUATRATOR
 Precision Scientific Co.
AQUATROL
 Minneapolis-Honeywell Regulator Co.
AQUIFLUX
 Special Chemicals Co.

ARC
 Aircraft Radio Corp.
ARALDITE
 Ciba Company, Inc.
ARAX
 Multicore Solders Ltd.
ARGYLINE
 Argyle Electronics Co.
ARHCO
 American Radio Hardware Co., Inc.
ARISTOCRAT
 Electro-Voice, Inc.
ARKLESS
 Economy Fuse & Mfg. Co.
ARL
 Applied Research Labs.
ARLAVOX
 Radionic Transformer Co.
ARMATITE
 Mica Insulator Co.
ARMATURO
 Johns-Manville
ARMITE
 Spaulding Fibre Co., Inc.
ARRESTONE
 Armstrong Cork Co.
ARROWHEAD
 Sangamo Electric Co.
ARTIC-GLO
 Canadian Radium & Uranium Corp.
ASARCO-LO
 Federated Metals Div.
 American Smelting & Refining Co.
ASBESTOS EBONY
 Johns-Manville
ASBESTOSPARK
 Felt Products Mfg. Co.
ASCO
 Automatic Switch Co.
ASCOPI
 Applied Science Corp. of Princeton
ASCOR
 American Speedlight Corp.
ASENCO
 Associated Engineering & Mfg. Corp.
ASHCROFT
 Manning, Maxwell & Moore, Inc.
ASTRA-SONIC
 The Pentron Corp.
ATC
 Automatic Temperature Control Co.,
 Inc.
ATCOTRAN
 Automatic Temperature Control Co., Inc.
ATCOTRONIC
 Automatic Temperature Control Co., Inc.
ATMOCELL
 Merritt & Zaleski, Inc.
ATOMS
 Sprague Electric Co.
ATOMER
 Maico Co., Inc.
ATR
 American Television & Radio Co.
ATTIC-V-BEAM
 Telrex, Inc.
AUBESTON
 Auburn Manufacturing Co.
AUC
 Rockbestos Products Corp.
AUDAX
 Audak Co.
AUDET
 Centralab Div. of
 Globe-Union, Inc.
AUDIAD
 Magnecord, Inc.
AUDICLE
 Sonotone Corp.
AUDIGAGE
 Branson Instruments, Inc.
AUDIO-AID
 Ansley Mfg. Co., Arthur
AUDIODISCS
 Audio Devices, Inc.
AUDIOFILM
 Audio Devices, Inc.
AUDIO HAILER
 Audio Equipment Co., Inc.
AUDIOLD
 Cook Laboratories
AUDIO-LINE
 Hall, Inc., F. Sumner
AUDIOLOG
 Berlant Associates
AUDIOM
 Goodmans Industries, Ltd.,
 Axiom Works
AUDIO MIX
 Pentron Corp., The
AUDIOPHONE
 Farmers Engineering & Mfg., Co.
AUDIO RULE
 Hall, Inc., F. Sumner
AUDIOSCOPE
 Audio-Master Corp.
AUDIOSCOPE
 Sonotone Corp.
AUDITORIUM
 Jensen Mfg. Co.
AUDITRON
 Sonotone Corp.
AUDIPOINTS
 Audio Devices, Inc.
AUDIOTAPE
 Audio Devices, Inc.
AUDITION
 Reeves Soundcraft Corp.

AUIGATOR
 Mitchell Industries, Inc.
AUMAN
 Associated American Trading Division
AUOMETERS
 British Industries Corp.
AURICON
 Berndt-Bach, Inc.
AUTELCO
 Automatic Electric Sales Corp.
AUTOBOOSTER
 Industrial Television, Inc.
AUTOCOUPLER
 Industrial Television, Inc.
AUTO-CRIMP
 Aircraft-Marine Products, Inc.
AUTOCROMATIC
 Acton Co., H. W.
AUTO-DIAL
 American Phenolic Corp.
AUTODYNE
 Westinghouse Electric Corp.
AUTOGRIP
 Magnasyn Mfg. Co.
AUTOLYTIC
 Micamold Radio Corp.
AUTOMANIC
 Premax Products Div.
 Chisolm-Ryder Co., Inc.
AUTOMATIC TERMINATOR
 Aircraft-Marine Products, Inc.
AUTOMIX
 Westinghouse Electric Corp.
AUTOPLATER
 Tracerlab, Inc.
AUTOSCALER
 Tracerlab, Inc.
AUTOSET
 Bristol Co., The
AUTO-SONIC
 Vendo Co.
AUTOSYN
 Eclipse-Pioneer Div.
 Bendix Aviation Corp.
AUTOTROL
 Westinghouse Electric Corp.
AUTOTUNE
 Collins Radio Co.
AUTOVALVE
 Westinghouse Electric Corp.
AUTRASTAT
 Ward Leonard Electric Co.
AVIEN
 Aviation Engineering Corp.
AVIGATOR
 Mitchell Industries, Inc.
AVITRON
 Avion Instrument Corp.
 Div. of American Car & Foundry Co.
AXIFLO
 Westinghouse Electric Corp.
AXIOHM
 Ward Leonard Electric Co.
AXIOM
 Goodmans Industries, Ltd.
AXIVANE
 Joy Mfg. Co.
A-Z
 Plastic Wire & Cable Corp.
AZTEC
 Sangamo Electric Co.

B-2
 Peck & Harvey
BCE
 Berkeley Custom Electronics
B.S.R.
 Birmingham Sound Reproducers, Ltd.
BAACH-INTERNATIONAL
 International Machine Works
BADGER
 Reliance Automatic Lighting Co.
BAKELITE
 Union Carbide & Carbon Co.
BALAC
 Conant Laboratories
BALANCED BEAM
 Precise Measurements Co.
BALINE
 J F D Mfg. Co., Inc.
BALOWSTER
 F. G. Back Video Corp.
BANC-LOK
 Boots Aircraft Nut Corp.
BANTAM
 Aerovox Corp.
BANTAM
 Small Motors, Inc.
BANTAM GT
 CBS-Hytron
 A Division of Columbia Broadcasting
 System, Inc.
BANTAM JR
 CBS-Hytron
 A Division of Columbia Broadcasting
 System, Inc.
BARANM
 Ward Leonard Electric Co.
BARCOL
 Barber Colman Co.
BARCOMBO
 Electronic Enterprises, Inc.
BAREX
 King Laboratories, Inc.
BAROHHM
 Ward Leonard Electric Co.

BARONET
 Electro-Voice, Inc.
BARREL-LIFT
 Falstrom Co.
BARRYMOUNTS
 Barry Corp., The
BAR-X
 Radelco Mfg. Co.
BAT-WING
 Telrex Inc.
BASS REFLEX
 Jensen Mfg. Co.
BATTERY-SCOPE
 McColepin-Christie Corp.
BATRYPOWER
 Radiart Corp.
BAT'S-EYE RADARECTOR
 Kennedy & Co., D. S.
BAYTEX
 Union Bay State Chemical Co., Inc.
BEACHCOMER
 JFD Mfg. Co., Inc.
BEACON
 Esso Standard Oil Co.
BEAM
 Camburn, Inc.
BEAM BENDER
 Technicraft Laboratories, Inc.
BEAMA JUSTER
 Perfection Electric Co.
BEAMED POWER
 Telrex, Inc.
BEAVER
 Cornell-Dubilier Electric Corp.
BECKAMINE
 Reichhold Chemicals, Inc.
BECO
 Brown Electro-Measurement Corp.
BECO
 Westinghouse Electric Corp.
BEE
 Buchanan Electrical Products Corp.
BEE LINE
 Radio Merchandise Sales, Inc.
BEETLE
 American Cyanamid Co.
BELCAP
 Sorague Electric Co.
BELCO
 Bogue Electric Mfg. Co.
BELCON
 Bogue Electric Mfg. Co.
BELFONE
 Bell Sound Systems, Inc.
BELFONE MESTRO
 Bell Sound Systems, Inc.
BELLOWS
 Boots Aircraft Nut Co.
BELL-TIME
 Industrial Timer Corp.
BEMCO
 Becker Electronics Mfg. Corp.
BENCO
 Buck Engineering Co., Inc.
BEN HAR
 Bentley-Harris Mfg. Co.
BENELEX
 Masonite Corp.
BEPCO
 Buchanan Electrical Products Corp.
BERCO BRAND
 Bergen Wire Rope Co.
BERGER
 Republic Steel Corp.
BERKELEY DECIMAL
 Berkeley Scientific Co.
BERKSHIRE
 Radio Corporation of America
BERYLCO
 Beryllium Corp.
BESTPRODUCTS
 Beam Instruments Corp.
BESTO-WIRE
 Rhode Island Insulated Wire Co.
BETTER LIVING
 Sonotone Corp.
BH
 Bentley-Harris Mfg. Co.
B.I.W.
 Boston Insulated Wire & Cable Co.
BIB
 Multicore Solders, Ltd.
BICHROMETER
 Perkin-Elmer Corporation, The
BICO
 Belock Instrument Corp.
BIMORPH
 Brush Electronics Co.
BI-PRENE
 Bishop Mfg. Corp.
BI-SEAL
 Bishop Mfg. Corp.
BI-SILON
 Bishop Mfg. Corp.
BK
 Barrett Varnish Co.
BL
 Browning Laboratories, Inc.
BLACK ARROW
 Sangamo Electric Co.
BLACK BEAUTY
 Sprague Electric Co.
BLACK DIAMOND
 Dunton Co., M. W.
BLACKLINE
 Frederick Post Co.
BLINKER LITES
 Noel Mfg. Co.

BLUE JACKET
 Sprague Electric Co.
BLUE POINT
 Astron Corp.
BLUE SHAFT
 Centralab Div. of Globe-Union, Inc.
BLUE STREAK
 American Electric Cable Co.
BLUE STREAK
 Paragon-Revolute Corp.
BLUEBIRD
 Radio Corporation of America
B. O. ELIMINATOR
 Perfection Electric Co.
BOARDMASTER
 Universal Drafting Machine Corp.
BOLEX
 Paillard Products Inc.
BOLTARON
 Bolta Products Div. of The
 General Tire & Rubber Co.
BOND
 Olin Industries, Inc.
BONDEZE
 Phelps Dodge Copper Products Co.
BONDRITE
 Union Bay State Chemical Co., Inc.
BONDOLITE
 Goodyear Aircraft Corp.
BOND-ROD
 Sherman Mfg. Co., H. B.
BONDWICH
 Metals & Controls Corp.,
 General Plate Div.
BOR-AL-SIL
 Bird Co., Richard H.
BOROFILM
 Aerovox Corp.
BORON X
 Technicraft Co.
BOSCAR
 Benson-Lehner Corp.
BO TENNA
 Radio Merchandise Sales, Inc.
BO TI
 Fretco Inc.
BOVIE
 Liebel-Flarsheim Co.
BOWTIE-FLECTOR
 J F D Mfg. Co., Inc.
BOXSEAL
 Paisley Products Inc.
BOY-MAR
 Electrical Service Co.
BRADLEY
 De Jur-Amsco Corp.
BRADLEYDENSER
 Allen-Bradley Co.
BRADLEYLEAK
 Allen-Bradley Co.
BRADLEYOHM
 Allen-Bradley Co.
BRADLEYOMETER
 Allen-Bradley Co.
BRADLEYSTAT
 Allen-Bradley Co.
BRADLEYSWITCH
 Allen-Bradley Co.
BRADLEYUNIT
 Allen-Bradley Co.
BRANDES
 Cannon Co., C. F.
BRAZE-CLAD
 American Silver Co., Inc.
BRAZO
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
BRENKERT
 Radio Corp. of America
BRELSO
 British Electronics Sales Co.
BRIDGAMATIC
 SOS Cinema Supply Corp.
BRIDGER
 Audio Instrument Co., Inc.
BRILLIANTONE
 Acton Co., H. W.
BRIMAR
 Standard Telephones & Cables, Ltd.
BRINELCO
 Brinell Co., The
BRISTO
 Bristol Co., The
BROADBAND
 Racon Electric Co.
BROADCASTER
 Reeves Soundcraft Corp.
BRONCO
 Metals & Controls Corp.
 General Plate Div.
BRONCO
 Western Insulated Wire Co.
BRONZCHROME
 Eutectic Welding Alloys Co.
BRONZIDITE
 J F D Mfg. Co., Inc.
BROWN DEVIL
 Ohmite Mfg. Co.
BROWN HILL
 R-F Electronics, Inc.
BRYANT
 Westinghouse Electric Corp.
BUCCANEER
 Hudson American Corp.
BUDGET
 Aircraft Marine Products Inc.
BUG
 Vibroplex Co., Inc.

BUILT IN WATCHMAN
 Westinghouse Electric Corp.
BULLGOG
 Phelps Dodge Copper Products Corp.
BULLS-I-UNITS
 Kirkland Co., H. R.
BULPLATE
 Herlec Corp.
BULPLATE
 Sprague Electric Co.
BUNNY-GARD
 Television Accessories Co.
BUSHEND
 Buchanan Electrical Products Corp.
BUSS
 Bussmann Mfg. Co.
BUTACITE
 du Pont de Nemours Co., Inc., E. I.
BUTTERFLY
 Tel-A-Ray Enterprises, Inc.
BUTTON
 Erie Resistor Corp.
B&W
 Barker & Williamson
BUZZ-TIME
 Industrial Timer Corp.
BW COPYFLEX
 Bruning Co., Inc., Charles

C-B
 Caddell-Burns Mfg. Co.
CCC
 Chicago Condenser Corp.
C & C
 McColpin-Christie Corp.
CC PUMP
 Cooper Co., Clark.
C-D-F
 Continental-Diamond Fibre Co.
CDM
 Curtis Development & Mfg. Co.
CDP
 Electro-Voice, Inc.
CDX
 X-Ray Dept. of General Electric Co.
C-H
 Cutler-Hammer, Inc.
CMR
 Assembly Products, Inc.
CMSZ ALLOY
 Electro Metallurgical Co.
 Unit of Union Carbide & Carbon Corp.
CADAC
 Computer Research Corp.
CADET
 Raytheon Mfg. Co.
CAGEPHONE
 Farmers Engineering & Mfg. Co.
CALBENT
 California Bent Glass Co.
CALETCH
 California Bent Glass Co.
CALI-BRIDGE
 Industrial Electronics, Inc.
CALIMAG
 California Magnetic Control Corp.
CALI-POWER
 Industrial Electronics, Inc.
CALIVOLTER
 Calldyne Co., The
CALL-A-PHONE
 Talk-A-Phone Co.
CALLMASTER
 Lyman Electronic Corp.
CALOMIC
 Telegraph Construction & Maintenance
 Co., Ltd.
CALPRINT
 California Bent Glass Co.
CALTROL
 Caltron Co.
CAMBIRCROID
 American Electric Cable Co.
CAMCO
 Camburn, Inc.
CAMTROL
 Lear, Inc.
CANADIAN
 Measurement Engineering, Ltd.
CANDOHMS
 Muter Co.
CANNON-BALL
 Cannon Co., C. F.
CAPE COD NAVIGATOR
 Raytheon Mfg. Co.
CAPACIOLOG
 Barber-Colman Co.
CAPACIPROBE
 Epsco, Incorporated.
CAPACITROL
 Barber-Colman Co.
CAPASWITCH
 Mullenbach Electrical Mfg. Co.
CAPEHART
 Capehart-Farnsworth Corp.
CAPITRON
 Aircraft-Marine Products, Inc.
CAPOHMIST
 Special Products Co.
CAPR
 Camburn, Inc.
CAPRISTOR
 Jeffers Electronics Div.,
 Speer Carbon Co.
CARBIC
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
CARBOFILM
 Hi-Q Div., Aerovox Corp.

CARB-OHM
 Phaestron Co.
CARBOLITE
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
CARBOMITE
 Continental Carbon, Inc.
CARBON-COAT
 Electra Mfg. Co., Resistor' Div.
CARBONYL
 General Dystuff Corp.
CARDAX
 Electro-Voice, Inc.
CARDIETTE
 Sanborn Co.
CARDIOFAX
 Electrofax Corp.
CARDIOSCRIBE
 X-Ray Dept. of General Electric Co.
CARDIOTRON
 Electro-Physical Laboratories, Inc.
CARDYNE
 Electro-Voice, Inc.
CARILLON DYNAMIC
 Miller Mfg. Co., M. A.
CARITRON
 Sheffield Corp., The.
CARL MEYER
 Burke & James, Inc.
CARLITE
 Armco Steel Corp.
CARLITE
 Bogue Electric Mfg. Co.
CARLTON
 Hudson Lamp Co.
CARRON
 United Pressed Products Co.
CARRON-AIRE
 Carron Mfg. Co.
CARTWHEEL
 Aerovox Corp.
CARTRIJ-DRY
 Pyramid Electric Co.
CASCADE
 Audio Industries.
CASCADE
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
CASCADE YAGI
 J F D Mfg. Co., Inc.
CASCAMATIC
 Alliance Mfg. Co.
CASCAMITE
 The Borden Co.,
 Chemical Division.
CASCO
 The Borden Co.,
 Chemical Division.
CASCODE
 J F D Mfg. Co., Inc.
CASCODE AUTOBOOSTER
 Industrial Television, Inc.
CASCOPHEN
 The Borden Co.,
 Chemical Division.
CASCOREZ
 The Borden Co.,
 Chemical Division.
CASTOMATIC
 Federated Metals Div.,
 American Smelting & Refining Co.
CASTORDAG
 Acheson Colloids Co.
CAST-X
 Acme Electric Heating Co.
CATABOND
 Catalin Corp. of America
CATAPAK
 Catalin Corp. of America
CATAVAR
 Catalin Corp. of America
CATHALLOY
 Superior Tube Co.
CATHODE-RAY STETHOSCOPE
 Feiler Engineering Co.
CATHODRAM
 Telegraph Condenser Co., Ltd.
CATHOUISOR
 Cinema-Television, Ltd.
CATHOVISOR
 Cinema-Television, Ltd.
CAT'S EYE
 Ess Specialty Corp.
CAVALCADE
 Molded Insulation Co.
 Aircraft Control Div.
CAVITRON
 Short Wave Plastic Forming Co.
CAVITRON
 Woodwelding, Inc.
CAVI-TUNER
 Radio Receptor Co.
CBWT
 Automatic Metal Products Co.
CCO
 Biiley Electric Co.
C-D SEAL
 Cornell-Dubilier Electric Corp.
CDO
 Eldico of New York, Inc.
CDR ROTOR
 Radiart Corp.
CECILIAN
 Pickard & Burns, Inc.
CECOR
 Commercial Equipment Co., Inc.
CECOTITE
 Cook Electric Co.

CEE-COR
 Permoflux Corp.
CELAB
 Clark Electronic Corp.
CELASCREEN
 Celanese Corp. of America
CELCON
 Celanese Corp. of America
CELEBRITY
 Ampro Corporation.
CELECTRAY
 Weston Electrical Instruments Corp.
CELLO-BOND
 Paisley Products, Inc.
CELLUFOAM
 Masonite Corp.
CELLULOID
 Celanese Corp. of America
CELORON
 Continental-Diamond Fibre Co.
CENCO
 Central Scientific Co.
CENCO-HYHERVAC
 Central Scientific Co.
CENCO-HYVAC
 Central Scientific Co.
CENCO-MEZAVAC
 Central Scientific Co.
CENCO-SUPERVAC
 Central Scientific Co.
CENTILATOR
 Kay Electric Co.
CENTRATHENE
 Centralab Div. of Globe-Union, Inc.
CENTRE-KOOLED
 Sarkes Tarzian Inc.
CEN-TRI-CORE
 Alpha Metals, Inc.
CENTRICORES
 Magnetic Metals Co.
CENTURY
 Electro-Voice, Inc.
CENTURY TELECEIVERS
 Industrial Television, Inc.
CERAMAG
 Stackpole Carbon Co.
CERAMELEX
 Erie Resistor Corp.
CERAMICAPS
 Muter Co.
CERAMICON
 Erie Resistor Corp.
CERA-MITE
 Sprague Electric Co.
CERAMITE
 Herlec Corp.
CEREX
 Monsanto Chemical Co.
 Plastics Div.
CERISSO
 Isolantite Mfg. Corp.
CEROC
 Sprague Electric Co.
CERON
 Sprague Electric Co.
CERTI-CRIMP
 Aircraft-Marine Products, Inc.
CETRON
 Continental Electric Co.
CHALLENGER
 Bogen Co., Inc., David
CHALLENGER
 Rek-O-Kut Co., Inc.
CHAMPION
 Crucible Steel Co. of America
CHAMPION No. 180
 Division Lead Co.
CHANALYST
 Radio Corporation of America
CHANGE-A-CYCLE
 Carter Motor Co.
CHANGE-A-VOLT
 Carter Motor Co.
CHAN-L-MOUNT
 Lord Mfg Co
CHANNEL AUTOBOOSTER
 Industrial Television, Inc.
CHANGE-O-MATIC
 Viewlex, Inc.
CHARGALYZER
 McColpin-Christie Corp.
CHARGATROL
 Assembly Products Co.
CHARGICATOR
 Hickok Electrical Instrument Co.
CHARG-O-MATIC
 Hertner Electric Co.
CHASS-EZ
 General Cement Mfg. Co.
CHEMACO
 Koppers Co.
CHEMALLOY
 Sightmaster of California Co.
CHEMELEC
 U. S. Gasket Co.
CHEMIFLEX
 Technicraft Co.
CHEMIGLAS
 Technicraft Co.
CHEMIGUM
 Goodyear Tire & Rubber Co.
CHEMISEAL
 U. S. Gasket Co.
CHEMLON
 Crane Packing Co.

- CHEMROK
Richardson Co., The
- CHEMXORK
Electro Chemical Engineering Co.
- CHEROKEE
Sangamo Electric Co.
- CHIEFTAIN
Sangamo Electric Co.
- CHIME-MATIC
Executone, Inc.
- CHIPPEWA
Sangamo Electric Co.
- CHITRAN
Chicago Standard Transformer Corp.
- CHLORINOL
Sprague Electric Co.
- CHROMALIZER
Malco Co., Inc.
- CHROMALOX
Wiegand Co., Edwin L.
- CHROMALYZER
Telechrome, Inc.
- CHROMARFLASH
Triumph Mfg. Co.
- CHROMASCOPE
Telechrome, Inc.
- CHROMASOL
Ward Leonard Electric Co.
- CHROMASTER
Ward Leonard Electric Co.
- CHROMAX
Driver-Harris Co.
- CHROMEL
Hoskins Mfg. Co.
- CHROMEL P
Hoskins Mfg. Co.
- CHROMOLYTIC
Micamold Radio Corp.
- CHRONO-SPRAY
Paragon Electric Co.
- CHRONOTEST
Sticht Co., Inc., Herman H.
- CHRONOTHERM
Minneapolis-Honeywell Regulator Co.
- CHRONOTRON
Eclipse Pioneer Div.
Bendix Aviation Corp.
- CIBANITE
Ciba Company, Inc.
- CICRO MICROPOSITIONER
Barber-Colman Co.
- CIMET
Driver-Harris Co.
- CINCH
National Lead Co.
- CINELITE
Mole-Richardson Co.
- CINEMAPHONE
SOS Cinema Supply Corp.
- CINEVISION
Calbest Engineering & Electronics Co.
- CINE-VOICE
Berndt-Bach Inc.
- CINTEL
Cinema-Television, Ltd.
- CIRCLATRON
Gadgets, Inc.
- CIRCLE
Hogan Laboratories, Inc.
- CIRCLE B
Bristol Motor Div.,
Vocaline Company of America
- CIRCLE ESS
Stewart Mfg. Corp., F. W.
- CIRCLET
Trumbull Dept. of General Electric Co.
- CIRCLE-VANE
Ward Products Corp., Div., The Gabriel Co.
- CIRCUITMASTER
Fordham Mfg. Co.
- CIRCUITROL
Kollman Instrument Corp.
- CIRCUITRON
LaPointe Electronics Inc.
- CK
Raytheon Mfg. Co.
- "CL"
Alpha Wire Corp.
- CLAMPIPE
Mueller Electric Co.
- CLARKSTAN
Pacific Transducer EBG Corp.
- CLASSIC
Jensen Industries, Inc.
- CLASSMETER
Nuclear Instrument & Chemical Corp.
- CLEARSITE
Economy Fuse & Mfg. Co.
- CLEARSONIC
U. S. Television Mfg. Corp.
- CLETRON
Cleveland Electronics, Inc.
- CLEVELITE
Cleveland Container Co.
- CLEVITE
Transistor Products, Inc.
- CLIMATITE
Triad Transformer Mfg. Co.
- CLIP ON
Ferranti Electric, Inc.
- CLIPPER
Sterling Transformer Corp.
- CLIPPER SEALS
Johns-Manville
- CLORINOL
Sprague Electric Co.
- CLOSTEMP
Westinghouse Electric Corp.
- CLOVER-V-BEAMS
Telrex, Inc.
- CMH
Flexonics Corp.
- COATINGAGE
Branson Instruments, Inc.
- CO-3
Cast Optics Corp.
- CO-AX
Transradio Ltd.
- COAXITUBE
Precision Tube Co., Inc.
- COAXWITCH
Bird Electronic Corp.
- COBANIC
Driver Co., Wilbur B.
- COBENIUM
Driver Co., Wilbur B.
- CODEMASTER
Marchant Research, Inc.
- CODUR
Maas & Waldstein Co.
- COHARDITE
Connecticut Hard Rubber Co.
- COHRLASTIC
Connecticut Hard Rubber Co.
- COILITE
National Vulcanized Fibre Co.
- COINIDEO
Coradio, Inc.
- COINRAD
Northeastern Engineering, Inc.
- COLONIAL
Sylvania Electric Products, Inc.
- COLORBRITE
Eberhard Faber Pencil Co.
- COLOREDE
Instrument Development Laboratories, Inc.
- COLOR-EYE
Instrument Development Laboratories, Inc.
- COLORMASTER
Manufacturers Engineering & Equipment Co.
- COLORTOP
Trico Fuse Mfg. Co.
- COLORTRONIC
Thomas Electronics, Inc.
- COMANCHE
Sangamo Electric Co.
- COMCO
Communications Co., Inc.
- COMET
Driver-Harris Co.
- COMMANDAIR
JFD Mfg. Co., Inc.
- COMMULAC
Martindale Electric Co.
- COMMUNICATOR
West Coast Electronics Co.
- COMMUNO-PHONE
Bogen Co., Inc., David
- COMMUTATOR RESURFACERS
Ideal Industries, Inc.
- COMPACTUATOR
Air Associates, Inc.
- COMPAR
Goodyear Tire & Rubber Co.
- COMPARITOL
Scherr Co., Inc., George
- COMPA-STATION
Motorola Inc.
- COMPENTROL
Centralab Div. of Globe-Union, Inc.
- COMPO
Muter Co.
- COMPOUND DIFFRACTION PROJECTOR
Electro-Voice, Inc.
- COMPREGNITE
Borden Co., The, Chemical Div.
- COMP-U-TRIM
Eastern Precision Resistor Corp.
- COMTONE
Communications Co., Inc.
- CONCERT
Jensen Industries, Inc.
- CONCERT GRAND
Stewart-Warner Corp.
- CONCERT HALL
Louis Bros.
- CONCERT-LINE
Shure Brothers, Inc.
- CONCERTONE
Berlant Associates
- CONDENS-O-WELD
Westinghouse Electric Corp.
- CONDUCTALUTE
Sauereisen Cements Co.
- CON-FEE-PHONE
Simpson Mfg. Co., Inc., Mark
- CONFESSIONAIRE, THE
Audio Equipment Co., Inc.
- CONFIDENCER
Roanwell Corp.
- CONFLEX
Metals & Controls Corp.,
General Plate Div.
- CONICAL-V-BEAM
Telrex Inc.
- CONNECTRONICS
Continental Connector Corp.
- CONNONATA
Conn Ltd., C. G.
- CONNONETTE
Conn Ltd., C. G.
- CONNTENNA
Connecticut Telephone & Electric Corp.
- CONOLITE
Continental Can Co., Inc.
- CONPERNIK
Westinghouse Electric Corp.
- CONSTRUCT-O-GRIP
Technology Instrument Corp.
- CON-TAC-TOR
Minneapolis-Honeywell Regulator Co.
- CONTINENTAL
DeJur-Amsco Corp.
- CONTROFLEX
Eagle Signal Corp.
- CONTROLITE
Ward Leonard Electric Co.
- CONVECTRON
Eclipse Pioneer Div.
Bendix Aviation Corp.
- CONVERS-O-CALL
National Inter-Communication Systems, Inc.
- CONVOTROL
Automatic Electric Sales Corp.
- COOK SOUNDS OF OURTIMES
Cook Laboratories Inc.
- COOKE
R. Y. Ferner Co.
- COOLER-PROOF
Paisley Products Inc.
- COPEL
Hoskins Mfg. Co.
- COPOLENE
American Phenolic Corp.
- COPPER ARMORED SISALCRAFT
American Sisalcraft Corp.
- COPROX
Bradley Labs., Inc.
- COPRENE
Mass & Waldstein Co.
- COPROX
Bradley Labs., Inc.
- COPYFLEX
Bruning Co., Inc., Charles
- COPYMASTER
Peck & Harvey.
- CORAL DESIGNS
Dietz Co., Henry G.
- COREPROOF
Magnetic Metals Co.
- CORKOUSTIC
Armstrong Cork Co.
- CORO-GARD
Minnesota Mining & Mfg. Co.
- COROHON
Hi-Q Div., Aerovox Corp.
- CORONASEAL
Square Root Mfg. Corp.
- CORONATEST
Network Mfg. Corp.
- CORONET
Camburn, Inc.
- CORONOX
Westinghouse Electric Corp.
- COROX
Westinghouse Electric Corp.
- CORRIB
Ohmite Mfg. Co.
- CORSAIR
Hudson American Corp.
- CORSAIR
JFD Mfg. Co., Inc.
- CORULITE
Premax Products Div.
Chisholm-Ryder Co., Inc.
- CORWICO
Cornish Wire Co.
- COSMALITE
Cleveland Container Co., The
- CO-SPIRAL
Stephens Mfg. Corp.
- COSSOR
Beam Instruments Corp.
- COTO
Coto-Coil Co., Inc.
- COTTONITE
Acme Wire Co.
- COUNTOMATIC
Instrument Development Labs.
- COUPLATE
Centralab Div.
Globe Union Inc.
- COX
Commercial Research Labs., Inc.
- CO-X
Boston Insulated Wire & Cable Co.
- COXPROX
Bradley Labs.
- CP-2
Cast Optics Corp.
- CPC
Columbus Products Corp.
- CR-39
Cast Optics Corp.
- CRL
Centralab Div. of Globe-Union, Inc.
- CRABLOCK
Burndy Engineering Co. Inc.
- CRAFTSMEN
Radio Craftsmen, Inc.
- CRAFT LABORATORIES
Electro Craft Industries, Inc.
- CRANEPHONE
Farmers Engineering & Mfg. Co.
- CRAPO
Indiana Steel & Wire Co.
- CREME-O-WAX
General Cement Mfg. Co.
- CRESTBRITE
Crest Transformer Corp.
- CRESTRAN
Crest Transformer Corp.
- CRESTROL
Crest Transformer Corp.
- CRESTWOOD
Daystrom Electric Corp.
- CRISE
Acro Mfg. Co.
- CROLITE
Crowley & Co., Inc., Henry L.
- CROLOY
Crowley & Co., Inc., Henry L.
- CROMAG
Crowley & Co., Inc., Henry L.
- CROMALOY
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
- CROMEL-ALUMEL
Hoskins Mfg. Co.
- CROSLEY
Avco Mfg. Corp.
- CROTHANE
Crowley & Co., Inc., Henry L.
- CROWN
International Radio & Electronics Corp.
- CRUCIBLE WELD
Westinghouse Electric Corp.
- CRUSFIDER
Hudson American Corp.
- CRYSLON
Crystal Research Labs., Inc.
- CRYSTALAB
Crystal Research Labs., Inc.
- CRYSTALEAR
Brush Electronics Co.
- CRYSTALIGNED
Magnetic Metals Co.
- CRYSTALINER
Monitor Products Co.
- CRYSTAL-SEAL
Gits Molding Corp.
- CRYSTAL-VOX
Laurehk Radio Mfg. Co.
- CRYSTOGRAPH
Offner Electronics, Inc.
- CRYSTOLON
Norton Co.
- C S P
Westinghouse Electric Corp.
- CTS
Chicago Telephone Supply Corp.
- CUB CORDER
Ectro, Inc.
- CUE TAPE
Rangertone, Inc.
- CUNICO
Arnold Engineering Co.
- CUNIFE
Arnold Engineering Co.
- CUNNINGHAM
Radio Corp. of America
- CUPALOY
Westinghouse Electric Corp.
- CUPRON
Driver Co., Wilbur B.
- CUPROVAC-E
Vacuum Metals Corp.
- CURTAIN OF LIGHT
Electronic Control Corp.
- CUSHIONED-POWER
Robotron Corp.
- CUSHIONTONE
Armstrong Cork Co.
- CUSTOMODE
Jensen Mfg. Co.
- CYCLAC
Marbon Corp.
- CYCLE-PROGRESS
Automatic Temperature Control Co.
- CYCLELOG
Foxboro Co., The
- CYCL-FLEX
Eagle Signal Corp.
- CYCLO-FLEX
Wilson & Co., G. C.
- CYCLOHM
Howard Industries, Inc.
- CYCLO-RAY
Friez Instrument Div.
Bendix Aviation Corp.
- CYCLO-TROL
Cyclotron Specialties Co.
- CYCLOTROL
Minneapolis-Honeywell Regulator Co.
- D 54
Mallory & Co., Inc., P. R.
- "D" NICKEL
International Nickel Co., Inc.
- DAG
Acheson Colloids Co.
- DAKA-WARE
Davies Molding Co., Harry
- DALBAR
Electronic Enterprises
- DALE
Electronic Development Co.
- DALMOTRON
Dalmo Victor Co.
- DALOHM
Dale Products, Inc.
- DAMASCENE
Linick Chemical Co.

DANCO
 Daniels, Inc., C. R.
DANDEE
 Aerovox Corp.
DANDUX
 Daniels, Inc., C. R.
DA-NITE
 Bendix Aviation Corp.
DAREX
 Dewey and Almy Chemical Co.
DASON
 Davis & Co., J. W.
DAYTAR
 Viewlex, Inc.
DAVENOIL
 Daven Co.
DAVEY
 Vibroscope Co.
DAVOHM
 Daven Co.
DBPC
 Koppers Co., Inc.
DC SILICONES
 Dow Corning Corp.
DE ARMOND
 Rowe Industries
DE FOREST
 Radio Corp. of America
DECASWEEP
 Decade Instrument Co.
DECAFIER
 Decade Instrument Co.
DECALATOR
 Decade Instrument Co.
DECASOL
 Decimeter, Inc.
DECAVIDER
 Decade Instrument Co.
DECO
 Dumont Electric Co.
DECOHM
 Davis Electric Co.
DEEMINITE
 Crystal Research Labs., Inc.
DEMINIZER
 Crystal Research Labs., Inc.
DEEMON-HEAT
 Wall Mfg. Co.
DEFOREST
 Radio Corp. of America.
DE-FROST-IT
 Paragon Electric Co.
DEHYDRA
 Wappler, Inc.
DE-ION
 Westinghouse Electric Corp.
DEKABOX
 Electro-Measurements, Inc.
DEKAPOT
 Electro-Measurements, Inc.
DEKASTAT
 Electro-Measurements, Inc.
DEKA-XTAL
 Scientific Radio Products Co.
DELCO
 General Motors Corp.
DELPEC
 Centralab Div. of Globe-Union, Inc.
DELTABESTON
 General Electric Co.
DELTAMAX
 Allegheny Ludlum Steel Corp.
DELTAMAX
 Arnold Engineering Co.
DEMCO
 Dormitizer Electric Co., Inc.
DENSICHRON
 Welch Scientific Co., W. M.
DENSITE
 West Virginia Pulp & Paper Co.
DEOXIDINE
 American Chemical Paint Co.
DEOXO
 Baker & Co., Inc.
DEPTH-O-METER
 Bludworth Marine Div.
 National-Simplex-Bludworth, Inc.
DERLIKOR
 Associated American Trading Division.
DESCO
 Dietz Design & Mfg. Co.
DETECT-A-FIRE
 Fenwal, Inc.
DETECTOMETER
 Dillon & Co., Inc., W. C.
DETECTRODE
 Detectolab, Inc.
DETERMOHM
 Ohmite Mfg. Co.
DEW POINTER
 Illinois Testing Labs., Inc.
DIABO
 Tibbetts Industries, Inc.
DIACLOR
 Sangamo Electric Co.
DIACONE
 Altec Lansing Corp.
DI-ACRO
 O'Neil Irwin Mfg. Co.
DIAGNOMETER
 Supreme, Inc.
DIAL
 Nebel Lab., R. E.
DIALCO
 Dialight Corporation
DIAMACONTROL
 Standard Electronics Research Corp.

DIAMATROL
 Standard Electronics Research Corp.
DIAMOND
 Continental-Diamond Fibre Co.
DIAMOND
 Tetrad Corp.
DIAMOND G
 Garrett Co., Inc., G. K.
DIAMOND-H
 Hart Mfg. Co.
DIAMOND PRODUCTS
 Garrett Co., Inc., George K.
DIAMOND WEAVE
 Sickles Div., F. W., General Instrument Corp.
DIAMONTINE
 Linick Chemical Co.
DIAPHLEX
 Cook Electric Co.
DIATRON
 Consolidated Engineering Corp.
DICO
 Diamond Mfg. Co.
DICTABELT
 Dictaphone Corp.
DICTACORD
 Dictaphone Corp.
DIEFLEX
 Insulation Manufacturers Corp.
DIEGRAF
 Grafo Colloids Corp.
DIELITE
 Wirt Co.
DI-FAN
 Andrew Co.
DIFFERENTIAL
 Electro-Voice, Inc.
DIFFUSICONE
 University Loudspeakers, Inc.
DI-FORMED
 Precision Paper Tube Co.
DIGESTER
 Telecomputing Corp.
DILECTO
 Continental Diamond Fibre Co.
DI-MAX
 Armco Steel Corp.
DIMINUETTE
 Permoflux Corp.
DIMMERETTE
 Ward Leonard Electric Co.
DIOMITE
 Transistor Products, Inc.
DIPLOIT
 Dielectric Materials Co.
DIP PAK
 Fidelity Chemical Products Corp.
DIPWITE
 Special Chemicals Co.
DIPWRAP
 Paisley Products Inc.
DIRECT-DRIVE
 Shure Brothers Inc.
DIRECTION EXPOSURE SHIELD
 Technical Operations, Inc.
DIRECTRON
 Barry Electronics Corp.
DIRECTRON
 Sanford Miller Co.
DIRECTRONIC
 Snyder Mfg. Co.
DISCALOY
 Westinghouse Electric Corp.
DISCAPS
 Radio Materials Corp.
DISCOHM
 Ward Leonard Electric Co.
DISKCHANGERS
 Webster-Chicago Corp.
DISPATCHER
 Motorola Inc.
DISPLAY KING
 Gale Dorothea Mechanisms
DIVCO
 Division Lead Co.
DIVCO HOT-ROZ
 Division Lead Co.
DIVCO INTENSIF-REZ
 Division Lead Co.
DIVERSIF-ADAPTOR
 Decimeter, Inc.
DIVIDOHM
 Ohmite Mfg. Co.
DOBRO
 Valco Mfg Co.
DOG
 Radio Corporation of America
DOMEPAK
 Sprague Electric Co.
DONUT
 Associated Research Inc.
DOSIFILM
 R-C Scientific Instrument Co., Inc.
DOSIMETER
 Instrument Development Labs.
DOT
 United-Carr Fastener Corp.
DOUGLAS
 British Industries Corp.
DOWMETAL
 Dow Chemical Co.
DPR
 Hardman Co., Inc., H. V.
DREADNAUGHT
 Wall Mfg. Co.
DRI-N-TITE
 Horn Co., Inc., A. C.

DRIXO
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
DRITHERM
 North American Electric Lamp Co.
DRUM-KARRIER
 Falstrom Co.
DU NOUY
 Central Scientific Co.
DUARC
 Mole-Richardson Co.
DUAL DANDEE
 Aerovox Corp.
DUALDRUM
 Gorrell & Gorrell
DUAL-HORN
 Brociner Electronics Laboratory
DUAL-LOCK
 Simmons Fastener Corp.
DUART
 Mass & Waldstein Co.
DUBL-VEE
 Workshop Associates,
 Div. of The Gabriel Co.
DUBL-X
 Telex, Inc.
DUCO
 du Pont de Nemours & Co., Inc., E. I.
DUETTE
 Jensen Mfg. Co.
DULAC
 Maas & Waldstein Co.
DULUX
 du Pont de Nemours & Co., Inc., E. I.
DUO
 J F D Mfg. Co., Inc.
DUOCARB
 Driver Co., Wilbur B.
DUO-CHROME
 Duotone Co., Inc.
DUOCREX
 Horn Co., Inc., A. C.
DUODE
 Beam Instruments Corp.
DUODIAL
 Helipot Corp.
DUODISC
 Duotone Co., Inc.
DUO-FLEX
 Dumore Co., The
DUOLITE
 Pittsburgh Plate Glass Co.
DUOLUX
 Masonite Corp.
DU OP
 General Control Company
DUO-PULSATOR
 Fischer & Co., R. A.
DUO-PULSE
 Automatic Temperature Control Co., Inc.
DUOSCALE
 Tracerlab, Inc.
DUOSEAL
 Welch Scientific Co., W. M.
DUOSONIC
 Sonic Industries, Inc.
DUO-SPEED
 Pentron Corp.
DUO-SPEED
 V-M Corp.
DUOTAPE
 Duotone Co., Inc.
DUPLATE
 Pittsburgh Plate Glass Co.
DUPLEX
 Altec Lansing Corp.
DUPLO-RECORD
 Diplomat Co. of America.
DUPY
 Inet, Inc.
DURAFLEX
 Co-operative Industries, Inc.
DURALINE
 Universal Drafting Machine Corp.
DURALON
 U. S. Stoneware Co.
DURAMEG
 Sprague Electric Co.
DURAMIC
 Aerovox Corp.
DURAMOULD
 Dumont-Airplane & Marine Instruments,
 Inc.
DURANICKEL
 International Nickel Co., Inc.
DURANITE
 Aerovox Corp.
DURATAPE
 Rahm Instruments, Inc.
DUATRON
 Hoffman Corp., C. L.
DURISITE
 U. S. Stoneware Co.
DURITE
 Borden Co., Chemical Div.
DURO
 Rogers Corp.
DUROFILM
 Filmwood Corp.
DUROID
 Rogers Corp.
DURPOINT
 Duotone Co., Inc.
DUSTRONIC
 Radex Corp.
DUTCH BOY
 National Lead Co.

DUTCH BRAND
 Van Cleef Bros. Inc., Div. of
 Johns-Manville.
DUTI-RATED
 Foote Brothers Gear & Machine Corp.
DUXSEAL
 Johns-Manville
D-XER
 JFD Mfg. Co., Inc.
DX MASTERSPEAKERS
 DX Radio Products Co., Inc.
DYEPRINT
 Times Facsimile Corp.
DYKANOL
 Cornell-Dubilier Electric Corp.
DYMIN-VANE
 Ward Products Corp., Div.
 The Gabriel Co.
DYNACONE
 Lord Mfg. Co.
DYNACORD
 Calitone Corp.
DYNAFOCAL
 Lord Mfg. Co.
DYNA-GAGE
 Photocon Research Products
DYNAGRAPH
 Offner Electronics, Inc.
DYNALOG
 Foxboro Co., The
DYNAMASTER
 Bristol Co., The
DYNA-METER
 Industrial Electronics, Inc.
DYNAMIC
 Jackson Electrical Instrument Co.
DYNA-MIKE
 Industrial Electronics, Inc.
DYNAPRENE
 Whitney Blake Co.
DYNATHERM
 American Diathermy Products, Inc.
DYNAURAL
 Scott, Inc., Herman Hosmer
DYNAVAR
 Allied Products Div.,
 Hamilton Watch Co.
DYNETRIC
 Gisholt Machine Co.
DYNETRIC
 Westinghouse Electric Corp.
DYNOGRAPH
 Annis Co., R. B.
DYNOGRAPH
 Offner Electronics, Inc.
DYNOID
 McQuay-Norris Mfg. Co.

E A D
 Eastern Air Devices, Inc.
EAI
 Electronic Associates, Inc.
"E" NICKEL
 The International Nickel Co., Inc.
EF
 Electric Furnace Co.
E G & G
 Edgerton, Germeshausen & Grier, Inc.
E-V
 Electro-Voice, Inc.
EARSET
 Telex, Inc.
EASY-FLO
 Handy & Harman
EASY LISTNER
 Mitchell Industries, Inc.
EBONOL
 Enthone, Inc.
EBROK
 Richardson Co., The
ECCO
 Electrovox Co., Inc.
ECCO
 Triad Transformer Mfg. Co.
ECHO
 Fort Wayne Metals Inc.
ECHOPHONE
 Hallicrafters Co.
ECKCO
 Eckstein Radio & Television Co.
EEO
 Economy Fuse & Mfg. Co.
ECONOMASTER
 Sonotone Corp.
ECON-OHM
 Model Engineering & Mfg. Inc.
ECONO-SLIDE
 Grant Pulley & Hardware Co.
ECONOSTAT
 Barber-Colman Co.
ECONO-SWITCH
 Centralab Div. of
 Globe Union, Inc.
ECTROTHERM
 Electronic Processes Corp.
EDGEOHM
 Ward Leonard Electric Co.
EDIPHONE
 Edison, Inc., Thomas A.
EDIPHONE-TELEDIPHONE
 Edison Inc., Thomas A.
EDSCORP
 Edmund Scientific Co.
EEL
 Electronic Enterprises Inc.

- EFCON
Electronic Fabricators, Inc.
- EGYPTIAN TIP
Mitchell Industries, Inc.
- EI
Electrical Industries, Inc.
- EICO
Electronic Instrument Co., Inc.
- EIGHT-BALL
Ward Products Corp.,
Div. of The Gabriel Co.
- EILEX
Electro Engineering Works
- EILEX
Electro Impulse Labs.
- EIMAC
Eitel-McCullough, Inc.
- EKOMATIC
Laboratoire Industriel de
Physique Applique.
- EKOTAPE
Webster Electric Co.
- EL
Electrons, Inc.
- ELASTOBOND
Paisley Products, Inc.
- ELASTRON
Industrial Synthetics Corp.
- ELC
Armco Steel Corp.
- ELCOFONE
Loral Electronics Corp.
- ELDEC
Electro Development Co.
- ELECOM
Electronic Computer Div.,
Component Dept.,
Underwood Corp.
- ELECOTONE
Northeastern Engineering, Inc.
- ELECTOUNITE
Republic Steel Corp.
- ELECTRACER
Special Products Co.
- ELECTREX
Gorrell & Gorrell
- ELECTRICORD
Pacific Electriccord Company
- ELECTRITE
West Virginia Pulp & Paper Co.
- ELECTRIX
U. S. Rubber Co.
- ELECTRO BOND
Short Wave Plastic Forming Co.
- ELECTRO-BOND
Woodwelding, Inc.
- ELECTRO-CAL
Industrial Electronics, Inc.
- ELECTROCAM
Westinghouse Electric Corp.
- ELECTRO-CHEMICAL
Electrovox Co., Inc.
- ELECTRO-CLUTCH
I-T-E Circuit Breaker Co.
- ELECTRO CORDER
Electron Enterprises.
- ELECTROEJACT
Southwest Products, Inc.
- ELECTRO-FLOW
Super Flow Solder Co., Inc.
- ELECTRO-GLOW
Industrial Devices, Inc.
- ELECTRO GRAPHIC
Precision Measurements Co.
- ELECTRO-LARYNX
Aurex Corp.
- ELECTROLIMIT
Pratt Whitney Div.,
Niles-Bement-Pond Co.
- ELECTROMANOMETER
Sanborn Co.
- ELECTRO-MATIC
Automatic Signal Div.,
Eastern Industries Inc.
- ELECTROMAX
Leeds & Northrup Co.
- ELECTROMET
Electro Metallurgical Co., A Div. of
Union Carbide & Carbon Corp.
- ELECTRONAMIC
Precision Apparatus Co. Inc.
- ELECTRONHEAT
Resdel Engineering Corporation.
- ELECTRONIC DESIGNS
Yonkers Industries
- ELECTRONIC EAR
Sonotone Corp.
- ELECTRONIC ESSENTIALS
Aerolite Electronics Corp.
- ELECTRONIC FEATHER
Westinghouse Electric Corp.
- ELECTRONIC MEMORY
Webster-Chicago Corp.
- ELECTRONIC STETHOSCOPE
Feller Engineering Co.
- ELECTRONIK
Minneapolis-Honeywell Regulator Co.
- ELECTROPLOTTER
Benson-Lehner Corp.,
- ELECTRO-PROBE
Erwood, Inc.
- ELECTROPHOTOMETER
Fisher Scientific Co.
- ELECTROQUIPT
Filtors, Inc.
- ELECTROSCOPE
Feller Engineering Co.
- ELECTROSE
Insulation Mfg. Co.
- ELECTROSHIELD
American Cladmetals Co.
- ELECTROTESTER
Feller Engineering Co.
- ELECTROTEMP
Westinghouse Electric Corp.
- ELECTROTYPER
Benson-Lehner Corp.
- ELECTRO-WIPE
Duotone Co., Inc.
- ELECTROWRITER
Pioneer Electric & Research Corp.
- ELECTROX
Schauer Mfg. Corp.
- ELECTRO-O-VANE
Minneapolis-Honeywell Regulator Co.
- ELECTRUNITE
Republic Steel Corp.
- ELECTROTUNER
General Instrument Corp.
- ELEKTRAN
Ward Products Div. of
The Gabriel Co.
- ELEPHANT
Phosphor Bronze Corp.
- ELFURNO
Electric Furnace Co.
- ELINCO
Electric Indicator Co.
- ELINVAR EXTRA
Allied Products Div.,
Hamilton Watch Co.
- ELKALOY
P. R. Mallory & Co., Inc.
- ELKONITE
P. R. Mallory & Co., Inc.
- ELKONIUM
P. R. Mallory & Co., Inc.
- ELMAC
Multi-Products Co.
- EL MENDO
Electro Motive Mfg. Co.
- ELMET
North American Philips Co., Inc.,
- ELVANOL
du Pont de Nemours & Co., Inc., E. I.
- E-M
Electric Machinery Mfg. Co.
- EMC
Electronic Measurements Corp.
- EMC
Howard Industries, Inc.
- EMCOR
Elgin Metalformer Corp.
- EMDECO
Magnetic Devices Corp.
- EMEC
Electronic Manufacturing Engineers Co.
- EMPIRE
Mica Insulator Co.
- EMPIRE
Russell, Burdall & Ward
Bolt and Nut Co.
- E. N.
Electro-Nite Carbon Co.
- ENAMELITE
Acme Wire Co.
- ENDURO
Republic Steel Corp.
- ENDURPRENE
General Insulated Wire Works, Inc.
- ENDOGAS
Westinghouse Electric Corp.
- ENERGIZED
Alpha Metals, Inc.
- ENE-VOLT
Gorrell & Gorrell
- ENGRAVOGRAPH
New Hermes, Inc.
- ENPO
Piqua Machine & Mfg. Co.
- ENTHOX
Enthone, Inc.
- ENVOY
Ansley Mfg. Co., Arthur
- EONITE
U. S. Rubber Co.
- EOPRENE
U. S. Rubber Co.
- E. P.
Electronic Products Co.
- EPCO
Etched Products Corp.
- EPM
Electronic Parts Mfg. Co., Inc.
- EPIC
Electrical & Physical Instrument Corp.
- EPIPHEN
Borden Co., The, Chemical Div.
- EPLAB
Eppley Lab., Inc., The
- EPOGLAS
Plastilight, Inc.
- EPON
Shell Chemical Corp.
- EPUT
Berkeley Division,
Beckman Instruments, Inc.
- EQUALOAD
Keystone Carbon Co., Inc.
- ERSIN MULTICORE
Multicore Solders Ltd.
- ESCO
Electric Specialty Co.
- ESCO
Electro Switch Corp.
- ESICO
Electric Soldering Iron Co.
- ESNA
Elastic Stop Nut Corp.
- ESNAILS
Elastic Stop Nut Corp.
- ESSAR
Unitronics, Inc.
- ESTAR
Sprague Electric Co.
- ESTOGLAS
Plastilight Inc.
- ETCO
Electronic Transformer Co., Inc.
- ETHOCEL
Dow Chemical Co.
- ETHYLON
American Phenolic Corp.
- ETHOLOC
Weckesser Co.
- EUREKA
Morse Co., Frank W.
- EVABRITE
Bache & Co., Semon
- EVALAST
Bache & Co., Semon
- EVANOHM
Driver Co., Wilbur B.
- EVELYN
Rubicon Co.
- EVEN-BREAK
Electric Eye Equipment Co.
- EVENRAY
Fosterlra Pressed Steel Corp.
- EVEREADY
National Carbon Co., Div. of
Union Carbide & Carbon Corp.
- EVERLASTING
Harper Co., The, H. M.
- EVERLOCK
Thompson-Bremer Co.
- EVER-LOK
Russell & Stoll Co., Inc.
- EXACT PHOTOCOPIY
General Photo Products Co.
- EXCELLALL
Frederick Post Co.
- EXIDE
Electric Storage Battery Co.
- EXIDE-IRONCLAD
Electric Storage Battery Co.
- EXIDE-MANCHEX
Electric Storage Battery Co.
- EXPANDIT
Tele-Ex-Pand Corp.
- EXPRESS
Centralab Div. of Globe-Union, Inc.
- EYE WITNESS
Radio Corporation of America
- E-Z
Ideal Industries, Inc.
- E-Z
Pyramid Products Co.
- E-Z-CODE
Westline Products Div. of
Western Lithograph Co.
- E-Z CUE
Amplifier Corp. of America
- E-ZEE-ON
Indiana Steel Products Co.
- EZSOL
Hudson Wire Co.
- FC
Electro-Mechanical Div. of
General Riveters, Inc.
- F-C-I
Film Capacitors, Inc.
- FM
Electro-Mechanical Div. of
General Riveters, Inc.
- FABRILITE
du Pont de Nemours & Co., Inc., E. I.
- FAIRYLITE
Shoe Form Co., Inc.
- FARADON
Cornell-Dubilier Electric Corp.
- FARATRON
Lumenite Electric Co.
- FARCO
Farrelloy Co.
- FARMRADIO
Wilmar Mfg. Co., Inc.
- FASALOY
Fansteel Metallurgical Corp.
- FASTACK
Paisley Products, Inc.
- FASTELL
Fansteel Metallurgical Corp.
- FASTATCH
Centralab Div. of Globe-Union, Inc.
- FASTENEERING
Central Screw Co.
- FASTICK
Paisley Products, Inc.
- FASTOP
Lear, Inc.
- FAST'S
Koppers Co., Inc.
- FATHOMETER
Raytheon Mfg. Co.
- FAX-FILM
Brush Electronics Co.
- FAXIMILE
Hogan Laboratories, Inc.
- FAXPAPER
Hogan Laboratories, Inc.
- FEATHERIDE
Webster Electric Co.
- FEATHERLITE
Brush Electronics Co.
- FEDCO
Federal Engineering Co.
- FEDERAL RECORDER
Conn Ltd., C. G.
- FEL-PAK
Felt Products Mfg. Co.
- FEL-PRO
Felt Products Mfg. Co.
- FEMCO
Farmers Engineering & Mfg. Co.
- FENOX
Bakelite Corp.
- FERRAMIC
General Ceramics & Steatite Corp.
- FERRI-LOOPSTICK
Superelex Electronics Corp.
- FERROVAC-E
Vacuum Metals Corp.
- FIBROID
Johns-Manville.
- FIBERGLAS
Owen-Corning Fiberglas Corp.
- FIBESTOS
Monsanto Chemical Co.
- FIBRACOUSTIC
Johns-Manville
- FIBRETONE
Johns-Manville
- FIDELITONE
Permo, Inc.
- FIFTY-FOUR
Cardwell Electronic Productions
Corp., Allen D.
- FILMCIRCUITS
Filmwood Corp.
- FILMGRAPH
Miles Reproducer Co., Inc.
- FILMITE
Sprague Electric Co.
- FILMPOT
Fairchild Camera & Instrument Corp.
- FILPEC
Centralab Div. of Globe-Union, Inc.
- FILPLATE
Centralab Div. of Globe-Union, Inc.
- FILMSCRIBER
Miles Reproducer Co., Inc.
- FILMITE
Sprague Electric Co.
- FILMPOT
Fairchild Camera & Instrument Corp.
- FILPEC
Centralab Div. of Globe-Union, Inc.
- FILTACOL
Magnetic Core Corp.
- FILT-A-COR
Magnetic Core Corp.
- FILTERETTE
Tobe Deutschmann Corp.
- FILTERNOYS
Continental Carbon, Inc.
- FILTEROL
Sprague Electric Co.
- FILTER POINT
Duotone Co., Inc.
- FILTERS L
Sprague Electric Co.
- FILTERVOLT
Insuline Corp. of America
- FIL-TRAN
Vidaire Electronics Mfg. Co.
- FINCO
Finn Co.
- FINCOR
Fidelity Instrument Corp.
- FINNFLEX
Finn & Co., Inc., T. R.
- FIRE DEVIL
Littelfuse, Inc.
- FIREFLOCK
Cellusuede Products, Inc.
- FIREYE
Combustion Control Corp.
- FIREWALL
Rockbestos Products Corp.
- FIREZONE
Rockbestos Products Corp.
- FISHBONE
Telrex Inc.
- FISCHERQUARTZ
Fischer & Co., R. A.
- FISCHERSINE
Fischer & Co., R. A.
- FISCHERSOUND
Fischer & Co., R. A.
- FISCHERTHERM
Fischer & Co., R. A.
- FISCHERWAVE
Fischer & Co., R. A.
- FISHERFONE
Fisher Research Lab.
- 5-WAY
Superior Electric Co., The
- FIXTOHM
Campbell Industries, Inc.
- FLAG GRIP
Aircraft-Marine Products, Inc.
- FLAME-OTROL
Barber-Colman Co.
- FLAME-WARDEN
Combustion Research Laboratories, Inc.
- FLASH
Phillips Mfg. Co., Inc.
- FLASH
Sheldon Electric Co.
Div. of Allied Electric Products, Inc.

LATAACK
Paisley Products Inc.

LATOHM
Centralab Div. of Globe-Union, Inc.

LATWRAP
Paisley Products Inc.

LEET COM
Communications Co., Inc.

LEET CONTROL
Hammarlund Mfg. Co.

LEETWOOD
Conrac, Inc.

LEXAGUIDE
Airtron Inc.

LEXALL
Rome Cable Corp.

LEX-A-POWER
Trumbull Dept. of General Electric Co.

LEXARC
Westinghouse Electric Corp.

LEXFLAT
Paisley Products Inc.

LEXIFONE
Dukane Corp.

LEXIFORM
Precision Paper Tube Co.

LEXILUGS
Frankel Connector Co.

LEXISPLICES
Frankel Connector Co.

LEXITE
Markel & Sons, L. Frank

LEXITIP
Weller Mfg. Co.

LEXI-TROL
Wilson & Co., G. C.

LEXITUBE
Schott Co., Walter L.

LEXLOC
Standard Pressed Steel Co.

LEXO-FLUTE
Arro Expansion Bolt Co.

LEXOHM
Clarostat Mfg. Co., Inc.

LEXO-MOLD
Plastronics

LEXON
Flexonics Corp.

LEXOPULSE
Eagle Signal Corp.

LEXO WAX C
Glyco Products Co., Inc.

LEX-SOK
Stupakoff Ceramic & Mfg. Co.

LEX-STAFF
Pfanstiehl Chemical Co.

LXTACK
Paisley Products Co.

LIGHT COM
Communications Co., Inc.

LIGHTWEIGHT
Bendix Aviation Corp.

LIMOSEAL
Telegraph Condenser Co., Ltd.

LINTWOOD
Filmwood Corp.

LIPON
Westinghouse Electric Corp.

LOOD-FLASH
Photobell Company

LOSOL
American Chemical Paint Co.

LOWMETER
Hastings Instrument Co.

LOWRATOR
Fischer & Porter Co.

LUORADDEX
Westinghouse Electric Corp.

LUORETOR
Menlo Research Laboratory

LUOROFLEX-C
Resistoflex Corp.

LUOROFLEX-T
Resistoflex Corp.

LUORO-RECORD
Fairchild Camera & Instrument Corp.

LUOROSPOT
Westinghouse Electric Corp.

LUOROVUE
Westinghouse Electric Corp.

LUROPACK
Telegraph Condenser Co., Ltd.

LUSH-LITE
Littelfuse, Inc.

LUSHLITE
Drake Mfg. Co.

LUTED ELECTRODE
P. R. Mallory & Co., Inc.

LUX GATE
Eclipse-Pioneer Div.,
Bendix Aviation Corp.

LUXOL
Standard Metals Corp.

LUXRITE
National Lead Co.

LYING ARROW
Ward Products Corp. Div. of
The Gabriel Co.

M-E
Federal Mfg. & Engineering Corp.

M-G
General Controls Co.
N. A.
Paisley Products, Inc.

MALIZER
Quam Nichols Co.

MNOGRAFS
Webster-Chicago Corp.

FOOTROL
General Control Company

FORASITE
Reichhold Chemicals, Inc.

FORDWICA
Ford Radio & Mica Corp.

FORMEX
General Electric Co.

FORM FLEX
Aircraft Transformer Corp.

FORMULA 21
Aircraft-Marine Products, Inc.

FORMULA 22
Aircraft-Marine Products, Inc.

FORMVAR
Acme Wire Co.

FORMVAR
Phelps Dodge Copper Products Co.

FORTICEL
Celanese Corp. of America.

FORTISAN
Celanese Corp. of America.

44
Kester Solder Co.

FORTISSIMO
Permoflux Corp.

"49" ALLOY
Magnetic Metals Co.

49ER
Forty Niner Corp.

49-1
Triplet & Barton, Inc.

FOSTERITE
Westinghouse Electric Corp.

FOTO-FLO
Haloid Co., The

FOTOELECTRIC
Worner Electronic Devices

FOTOLINE
California Bent Glass Co.

FOTOLUX
American Speedlight Corp.

F. P.
Mallory & Co., Inc., P. R.

FRAHM
Biddle Co., James C.

FREAS
Precision Scientific Co.

FREE-CUT INVAR "36"
Carpenter Steel Co.

FREED-EISEMANN
Freed Electronics & Controls Corp.

FREE-VANE
Bristol Co., The

FREQUEMATIC
Federal Telephone & Radio Corp.

FRETARAY
Fretco, Inc.

FRETLINE
Fretco, Inc.

FRIGISTAT
Minneapolis-Honeywell Regulator Co.

FRINGE LEADER
Radio Merchandise Sales, Inc.

FRINGEMASTER
Radio Merchandise Sales, Inc.

FRINGE MASTER
Tel-A-Ray Enterprises, Inc.

FROEHLER
Associated American Trading Division.

FROST
Chicago Telephone Supply Corp.

FURNATRON
Westinghouse Electric Corp.

FUSELITE
Alden Products Co.

FUSES
Jefferson Electric Co.

FUSETRON
Bussmann Mfg. Co.

FUSIONWELD
Avon Tube Div.,
Higbie Mfg. Co.

FUSTATS
Bussmann Mfg. Co.

FXR
F-R Machine Works, Inc.

FYBERGLASS
Rush Wire Stripper Div.,
Eraser Co., Inc., The

FYBEROID
Wilmington Fibre Specialty Co.

GA & F CARBONYL
Antara Chemical Div., General Aniline
& Film Corp.

G-C
General Cement Mfg. Co.

G METER
Boonton Radio Corp.

GALVO PROTECTOR
Audio Instrument Co., Inc.

GAMATEK
Consolidated Engineering Corp.

GAMMATRON
Heintz & Kaufman Div. of
The Robert Dollar Co.

GANGPOT
Giannini & Co., Inc., G. M.

GAP/R
Philbrick Researches, Inc., George A.

GARCEAU
Electro-Medical Lab., Inc.

GARDINER
Federated Metals Div., American
Smelting & Refining Co.

GARDSMAN
West Instrument Corp.

GAROD
The Wilcox-Gay Corp.

GARRIFLEX
Pitbar-Garrison Co., Inc.

GARRILENE
Pitbar-Garrison Co., Inc.

GASK-O-SEAL
Wolfe Co., Inc., Franklin C.

GB
Goldsmith Bros. Smelting & Refining Co.

GEARMOTOR
Motoresearch Co.

GEDA
Goodyear Aircraft Corp.

GEM
Jefferson Electric Co.

GEMTENNA
Tennalab.

GEN
Symphony Radio & TV Co.

GENCOTE
General Plastics Corp.

GENEMOTOR
Carter Motor Co.

GENERALITIES
Fostoria Pressed Steel Corp.

GENESCOPE
Simpson Electric Co. Div. of
American Gage & Machine Co.

GENEVALOC
Bendix Aviation Corp., Pacific Div.

GEN-RAL
Muter Co.

GEOCABLE
Georator Corp.

GEOFORMER
Triad Transformer Mfg. Co.

GEOHMETER
Georator Corp.

GEON
Goodrich Chemical Co., B. F.

GEOREEL
Georator Corp.

GEORGIAN
Electro-Voice, Inc.

GEOTRODE
Georator Corp.

GEOVOLT METER
Georator Corp.

GER-HIDE
Gering Products, Inc.

GERON
Gering Products, Inc.

GER-PAK
Gering Products, Inc.

GI
General Industries Co.

GIANT SIX
Burgess Battery Co.

GIBSILOY
Gibson Electric Co.

GLASBES
Electro-Technical Products Div.
of Sun Chemical Corp.

GLASOHM
Clarostat Mfg. Co., Inc.

GLASSEAL
Pyramid Electric Co.

GLASS SEALING "42"
Carpenter Steel Co.

GLASSMIKE
Condenser Products Co.

GLASWELD
U. S. Plywood Corp.

GLENNITE
Glenco Corp.

GLENNITE
Gulton Mfg. Corp.

GLENNITE
Vibro Ceramics Corp.

GLIDER
Shure Brothers

G-LINE
Bogen Co., Inc., David

GLO-MELT
Wasso Electric Products Corp.

GLOBAL
Molded Insulation Co.

GLOBAR
Carborundum Co.

GLOBE TROTTER
Radio Corporation of America

GLO-N-GLO
Canadian Radium & Uranium Corp.

GLOSSTEX
Daniels, Inc., C. R.

GLO-TECH
Fischer & Porter Co.

GLYCOWAX S-932
Glyco Products Co., Inc.

GLYDAG
Acheson Colloids Co.

GLYPTAL
General Electric Co.

GM
Detroit Diesel Engine Div. of General
Motors Corp.

GOLD CUP
Carbonneau Industries, Inc.

GOLDEN BEAM
Motorola, Inc.

GOLDEN THROAT
Radio Corporation of America

GOLDEN VIEW
Motorola Inc.

GOLDEN VOICE
Motorola Inc.

GOLD-SEAL
Miller Co., B. F.

GOLD SHIELD
J F D Mfg. Co., Inc.

GOLDEN WAND
Peerless Products Industries

GOODELL
Minnesota Electronics Corp.

GOODLINE
Good, Inc., Don

GOOD-RITE
Goodrich Chemical Co., B. F.

GOTHARD
Johnson Co., E. F.

GP
Erle Resistor Corp.

GRC
Gries Reproducer Corp.

GRACOIL
Gramer Transformer Co.

GRADIENT
Shure Brothers, Inc.

GRAFOIL
Brush Electronics Co.

GRAFOLUX
Grafo Colloids Corp.

GRAFO CONCENTRATE
Grafo Colloids Corp.

GRA-LAB
Dimco-Gray Co.

GRAMIX
U. S. Graphite Co. Div. of
The Wickes Corp.

GRANODINE
American Chemical Paint Co.

GRAPHALLOY
Graphite Metallizing Corp.

GRAPHANALOGUE
Gerber Scientific Instrument Co.

GRAPHITAR
U. S. Graphite Co. Div. of
The Wickes Corp.

GRAPHILON
Graphite Metallizing Corp.

GRATRAN
Gramer Transformer Co.

GRAVIGAGE
Ess Specialty Co.

GREENBIT
Equipment and Service Co.

GREEN GEM
Rauland-Bora Corp.

GREENOHM JR.
Clarostat Mfg. Co., Inc.

GREIBACH METER
Columbus Products Corp.

GRENZ
Westinghouse Electric Corp.

GRIDNIC
Driver-Harris Co.

GRIP-HOLD
JFD Mfg. Co.

GRIP-POINT
Vaco Products Co.

GRIPSNIP
Sargent & Co.

GRIP-SPINTITE
Stevens-Walden, Inc.

GRIP TIGHT
Paisley Products, Inc.

GRIPMASTER
Walker Co., George

GRIPPER
Scovill Mfg. Co.

GRIPTITE
Stevens-Walden, Inc.

GRIZZLY
U. S. Rubber Co.

GROMMES
Precision Electronics

GTC
General Transformer Co.

GUDELACE
Gudebrod Bros. Silk Co., Inc.

GUDE-NYLACE
Gudebrod Bros. Silk Co., Inc.

GUEST TELEVISION
Industrial Television, Inc.

GUIDELINE
Airtron, Inc.

GUIDE-A-TUBE
S-C Laboratories, Inc.

GYRALINE
Cascade Research Corp.

GYRO FLUX GATE
Eclipse-Pioneer Div.,
Bendix Aviation Corp.

GYROPILOT
Sperry Gyroscope Co., Div. of
The Sperry Corp.

GYROSTIE
Gyromechanisms Inc.

GYROSYN
Sperry Gyroscope Co., Div. of
The Sperry Corp.

GYRO-TENNA
Delson Mfg. Corp.

H. C. R. ALLOY
Telegraph Construction &
Maintenance Co., Ltd.

HABIRLENE
 Phelps Dodge Copper Products Corp.
HABIRSHAW
 Phelps Dodge Copper Products Corp.
HALADOL
 Haloid Co., The
HALLOWELL
 Standard Pressed Steel Co.
HALO
 Haloid Co., The
HALOBROME
 Haloid Co., The
HALOWAX
 Union Carbide & Carbon Corp.
HALROSS
 Canadian Aviation Electronics, Ltd.
HAM CRYSTALS
 Nebel Lab., R. E.
HAMMERTONE
 Maas & Waldstein Co.
HAMMETER
 Simpson Electric Co. Div. of
 American Gage & Machine Co.
HAMSWITCH
 Mallory & Co., Inc., P. R.
HANDI-GLOW
 Industrial Devices Inc.
HANDIE TALKIE
 Motorola Inc.
HANDY DUTCHMAN
 Aircraft-Marine Products, Inc.
HANDY-FLUX
 Handy & Harman
HANDYVAR
 Martindale Electric Co.
HARMIC
 Wall Mfg. Co.
HARTLEY-TURNER
 Hartley Co., Ltd., H. A.
HARVEL
 Irvington Varnish & Insulator Div. of
 Minnesota Mining & Mfg. Co.
HARVEY
 Harvey Wells Electronics, Inc.
HARVEY
 Peck & Harvey
HASCROME
 Haynes Stellite Co.,
 Division of Union Carbide & Carbon Corp.
HASTELLOY
 Haynes Stellite Co.,
 Division of Union Carbide & Carbon Corp.
HAYSTELLITE
 Haynes Stellite Co.,
 Division of Union Carbide & Carbon Corp.
HAZEGAGE
 Ess Specialty Corp.
HC
 Nebel Lab., R. E.
HEAD
 Industrial Electronics, Inc.
HEATEX
 Acme Wire Co.
HEATHKIT
 Heath Co.
HECO
 Helmenann Electric Co.
HECTOFAX
 Western Union Telegraph Co.
HEETMOR
 Acme Electric Heating Co.
HELIOFLASH NO. 124
 MacLeod & Hanopol
HELI-O-LITES
 C. F. Pease Co.
HELIOS
 Keuffel & Esser Co.
HELIX
 Biggs Co., Carl H.
HERCOCEL A
 Hercules Powder Co., Inc.
HERCOCEL E
 Hercules Powder Co., Inc.
HERCULES
 Acromark Co.
HERCULES
 Rubicon Co.
HERCULES
 Shure Brothers, Inc.
HERCULITE
 Pittsburgh Plate Glass Co.
HERLEC
 Sprague Electric Co.
HERMEFLEX
 Kearfott Co., Inc.
HERMETICIAN
 Fusite Corp.
HERMICO
 Hermetic Seal Products Co.
HEVIMET
 Carbonyl Dept. of General Electric Co.
HEXAMAG
 Ferroxcube Corp. of America
HEX-LOK
 Boots Aircraft-Nut Corp.
HEX-SCRU
 Stronghold Screw Products Inc.
HEXSEAL
 Automatic & Precision Mfg. Co.
HEYCO
 Heyman Mfg. Co.
H & H
 Arrow-Hart & Hegeman Electric Co.
HI
 Holub Industries, Inc.
HI-BALL
 Radlart Corp.
HI BRITE
 Shannon Luminous Materials Co.
HICO-LITE
 Hauman Instrument Co.
HI DRIVE
 Specialty Battery Co.
HIDE-AWAY
 JFD Mfg. Co., Inc.
HI-DUTY
 Schmidt, Inc., Geo. T.
HI-FARAD
 Aerovox Corp.
HI-FI
 Ampro Corporation.
HI-FOAM
 Plastronics.
HI-FLUX
 Annis Co., R. B.
HI-G
 General Controls Co.
HI-GAIN
 Radio Merchandise Sales, Inc.
HI-MAG
 P. R. Mallory & Co., Inc.
HIGH PERMEABILITY '49'
 Carpenter Steel Co.
HIGHWAYMAN
 JFD Mfg. Co., Inc.
HI-KAP
 Centralab Div. of Globe-Union, Inc.
HI-K CERAMICON
 Erie Resistor Corp.
HIKONOL
 Telegraph Condenser Co., Ltd.
HI-LOY
 Schmidt, Inc., Geo. T.
HINJON JR.
 Thomas & Betts Co.
HIPERCO
 Westinghouse Electric Corp.
HIPERMALLOY
 United Transformer Co.
HIPERNIK
 Westinghouse Electric Corp.
HIPERSIL
 Westinghouse Electric Corp.
HIPOWER
 Radiart Corp.
HI-Q
 Aerovox Corp.
HIS MASTER'S VOICE
 Radio Corporation of America
HI-TEMP
 Consolidated Wire & Associated Com-
 panies.
HI-TEMP
 Rome Cable Corp.
HI TRONIC
 Bliss Electronic Corp.
HI-V
 Linear Equipment Laboratories
HI-VOLT
 Industrial Devices, Inc.
HI-VO-KAPS
 Centralab Div. of Globe-Union, Inc.
HK
 Dollar Co., Robert
HOBBY-FLEX
 Dumore Co., The
HOLD-TITE
 U. S. Rubber Co.
HOLITE
 Holyoke Wire & Cable Co.
HOLLYTRAN
 Transformer Engineers
HOLLYWOOD VIBRA-TONE
 Fischer & Co., R. A.
HOLMES-ROLLIN
 Rollin Co.
HOLTITE
 Continental Screw Co.
HOLTZER-CABOT
 National Pneumatic Co., Inc.
HOME HEALTH
 Waters Conley Co.
HOMEASE
 Bogue Electric Mfg. Co.
HORNAC
 Horn Co., Inc., A. C.
HORNET
 New York Transformer Co., Inc.
HORTON
 Becker Electronics Mfg. Corp.
HOTSPOT
 Mitchell Industries, Inc.
HOUSE OF HEARING
 Sonotone Corp.
HOUSE OF RESISTORS
 Clarostat Mfg. Co., Inc.
HP
 Aerovox Corp.
HP
 Hewlett-Packard Co.
H-Q
 Hammarlund Mfg. Co.
HUBBELLOCK
 Hubbell, Inc., Harvey
HUDCO
 Hudson Wire Co.
HUDSON
 Oxford Electric Corp.
HUDSON BAY
 Refrigeration Systems, Inc.
HUMDINGER
 Clarostat Mfg. Co., Inc.
HUMIDIGRAPH
 Bristol Co., The
HUMIDI-SEAL
 Pyramid Electric Co.
HUMIDISTAT
 Minneapolis-Honeywell Regulator Co.
HUMIDOLAIN
 Star Porcelain Co.
HUMIDUSTAT
 Minneapolis-Honeywell Regulator Co.
HUMPHREY
 Pacific Scientific Co.
HURLETRON
 Electric Eye Equipment Co.
HUSITE
 Huse Liberty Mica Co.
HUSHATONE
 Brush Electronics Co.
HUSKY
 Price Electric Corp.
HYCAR
 Goodrich Chemical Co., B. F.
HYDENT
 Burndy Engineering Co. Inc.
HYDEX
 Jensen Mfg. Co.
HYDRAMOTOR
 General Controls Co.
HYDRATUBE
 Recora Co.
HYDRIFINED
 Magnetic Metals Co.
HYDRIMET
 Metal Hydrides, Inc.
HYDRORECORDER
 Raymond Rosen Engineering Products,
 Inc.
HYDROGRAF
 Grafo Colloids Corp.
HYDRON
 Clifford Mfg. Co.
HYDROPHEN
 Reichhold Chemicals, Inc.
HYDROSEC
 U. S. Rubber Co.
HYFLEX
 Irvington Varnish & Insulator Div. of
 Minnesota Mining & Mfg. Co.
HYFLUX ALNICO
 Indiana Steel Products Company
HYGRADE
 Foote Brothers Gear & Machine Corp.
HYGRADE
 Mitchell-Rand Insulation Co., Inc.
HYGRADE
 Markel & Sons, L. Frank
HYGRADIAL
 Friez Instrument Div.,
 Bendix Aviation Corp.
HYHERVAC
 Central Scientific Co.
HYLINK
 Burndy Engineering Co. Inc.
HY LOW
 Stevens Products Inc.
HYLUG
 Burndy Engineering Co. Inc.
HY-MET
 Astron Corp.
HYMU
 Magnetic Metals Co.
HYMU "80"
 Carpenter Steel Co.
HYPASS
 Sprague Electric Co.
HYPENSIL
 Westinghouse Electric Corp.
HYPER
 Radio Music Corp.
HYPER-MAG
 Radio-Music Corp.
HYPERSONIC
 Brush Electronics Co.
HYPERVAC
 Central Scientific Co.
HYPEX
 Jensen Mfg. Co.
HYPOT
 Associated Research, Inc.
HYPRESS
 Burndy Engineering Co. Inc.
HY-PUSS
 Sorague Electric Co.
HYRING
 Burndy Engineering Co., Inc.
HY SOL
 Houghton Laboratories, Inc.
HYSPAR
 Midland Paint & Varnish Co.
HYSTERSET
 Ward Leonard Electric Co.
HYTEMCO
 Driver-Harris Co.
HYTOOL
 Burndy Engineering Co. Inc.
HYTROL
 Hydro-Aire, Inc.
HYVAC
 Central Scientific Co.
HYVOL
 Aerovox Corp.
IDA
 Computer Corp. of America
I. D. C.
 Motorola Inc.
IDEAL
 Melody Master Mfg. Co.
IDEALFONE
 Automatic Electric Sales Corp.
IDECO
 Dresser-Stacey Co.
IHC
 Illinois Condenser Co.
IHT
 Illinois Condenser Co.
ILLINI-HYCAP
 Illinois Condenser Co.
ILLUSTRAVOX
 Electro Engineering & Mfg. Co.
I M C
 Induction Motors Corp.
IMC
 Insulation Manufacturers Corp.
IMCOR
 Insulation Manufacturers Corp.
IMMERSATHERM
 Mercoid Corp.
IMP
 Carter Parts Co.
IMP
 Pyramid Electric Co.
IMPEDOMETER
 Electrodyne Company
IMPERIAL
 Indiana Steel & Wire Co.
IMPREGNITE
 Standard Varnish Works
IMPRUVOL
 Koopers Co., Inc.
IMPULSE SEQUENCE
 Bristol Co., The
INCA
 Phelps Dodge Copper Products Corp.
INCAS
 Sangamo Electric Co.
INCELOID
 American Products Mfg. Co., Inc.
INCO
 International Nickel Co., Inc., The
INCONEL
 Alloy Metal Wire Co.
INCONEL
 International Nickel Co., Inc., The
INCORO
 Western Gold & Platinum Works.
INCOSIL
 Western Gold & Platinum Works
INCREDUCTOR
 C. G. S. Laboratories, Inc.
INCREVOLT
 Sorensen & Co.
INDALLOY
 Indiana Steel Products Company
INDCO
 Industrial Condenser Corp.
INDELCO
 Industrial Electronics Co., Inc.
INDELI-DENT
 Markwik Manufacturing Co., Inc.
INDOX
 Indiana Steel Products Co.
INDUCTIONEERING
 Ohio Crankshaft Co.
INDUCTORIDS
 De Coursey Engineering Lab.
INDUCTOTHERM
 X-Ray Dept. of General Electric Co
INDUCTUNER
 Mallory & Co., Inc., P. R.
INDUR
 Reilly Tar & Chemical Corp.
INDUSTRIAL
 Technic Inc.
INDUSTRIAL TELECEIVERS
 Industrial Television, Inc.
INDUSTRO
 Haloid Co., The
IND-X-MATIC
 Brush Electronics Co.
INERTAIRE
 Westinghouse Electric Corp.
INERTEEN
 Westinghouse Electric Corp.
INFERNOCOTE
 Wirt Co.
INFRARED
 Fostoria Pressed Steel Corp.
INLINE
 American Phenolic Corp.
INMANCO
 Insulation Manufacturers Corp
INMCO
 Instrument Motors.
IN-RES-CO
 Instrument Resistors Co.
INSA-LUTE
 Sauereisen Cements Co.
INSANOL
 Westinghouse Electric Corp
INSL
 Insl-X Co., Inc.
INSTAGRAPH
 Bristol Co., The
INSTANSOLDER
 Cole Radio Works
INSTOMATIC
 Sanborn Co.
INSULAZED
 Magnetic Metals Co.

SULCON
Stupakoff Ceramic & Mfg. Co.

SULITE
Extruders, Inc.

SULUGS
Burndy Engineering Co. Inc.

SUROK
Richardson Co., The

TELIN
Federal Telephone & Radio Co., a Div. of IT&T.

TERCHEMICAL
Precision Scientific Co.

TERLINK
Federal Telephone & Radio Co., a Div. of IT&T.

INTERNATIONAL
Colortone Electronics, Inc.

TUC
Insulating Tube Co.

VAR
Telegraph Construction & Maintenance Co., Ltd.

VAR "36"
Carpenter Steel Co.

NOTRON
U. S. Radium Corp.

AC
International Resistance Co.

IS
American Scientific Co.

RISH
Radio Industries, Inc.

IN
Williams & Co., C. K.

ROQUOIS
Sangamo Electric Co.

RADIOMETERS
Sensitive Research Instrument Co.

V-O-LITE
Irvington Varnish & Insulator Div. of Minnesota Mining & Mfg. Co.

V-O-VOLT
Irvington Varnish & Insulator Co.

ATRON
Consolidated Engineering Corp.

OL
Isolantite Manufacturing Corp.

OMICA
Mica Insulator Co.

OMODE
M B Mfg. Co.

OPLANE
Motorola, Inc.

D-Q
Isolantite Mfg. Corp.

D-Q
Motorola, Inc.

OTRON
Consolidated Engineering Corp.

OTRON
Nuclear Instrument & Chemical Corp.

Illinois Condenser Co.

ECO
Industrial Test Equipment Co.

ELITE
I-T-E Circuit Breaker Co.

FLEX
Irvington Varnish & Insulator Div. of Minnesota Mining & Mfg. Co.

THENE
Irvington Varnish & Insulator Co.

Collyer Insulated Wire Co.

L. E.
Entwistle Co., James L.

-C
Jersey Specialty Co.

CAP
Jeffers Electronics Div. of Speer Carbon Co.

P CAPACITOR
Jeffers Electronics Div. of Speer Carbon Co.

CKNIFE
Radio Merchandise Sales

CKSON
Vulcan Electric Co.

DE POWDER
Linck Chemical Co.

GABI
Biddle Co., James G.

INCO
Jacobs Instrument Co.

INCOMP
Jacobs Instrument Co.

V-BEE-TEE
J-B-T Instruments, Inc.

CO
Jarvis Electronics Corp.

ARKIT
Littelfuse Inc.

FFLEX
Cook Electric Co.

TIE
J F D Mfg. Co., Inc.

FLINE
Carbonneau Industries, Inc.

FENNA
JFD Mfg. Co., Inc.

TOMIC
J F D Mfg. Co., Inc.

JIFFY-TENNA
Delson Mfg. Corp.

JIFFY-TITE
Millen Mfg. Co.

JK
Knights Co., James J. M.

JOMANCO
Paisley Products, Inc.

J.S.C.
Johns-Manville.

JUMBO
Jersey Specialty Co., Inc.

JFD Mfg. Co., Inc.

J-W
Johnson-Williams, Ltd.

JUPITER GUM
Paisley Products, Inc.

J-W SNIFFER
Johnson-Williams, Ltd.

K-CAP
Automatic Mfg. Co.

K 42 B
Westinghouse Electric Corp.

"K" MONEL
International Nickel Co., Inc., The

"KR" MONEL
International Nickel Co., Inc., The

K-TRAN
Automatic Mfg. Co.

KALOTRON
Thermosen, Inc.

KALWOOD
Keller Products Co.

KANTARK
Trico Fuse Mfg. Co.

KANTLINK
Positive Lock Washer Co.

KANT-LINK
American Nut & Bolt Fastener Co.

KANTLINK
Eaton Mfg. Co.

KAPPA
Wright & Sons Co., William E.

KARADIO
Eckstein Radio & Television Co.

KARBOMET
Driver-Harris Co.

KARMA
Driver-Harris Co.

KARROPAK
Felt Products Mfg. Co.

KASIL
Philadelphia Quartz Co.

KAY-LAB
Kalbfell Labs., Inc.

KATOLIGHT
Kato Engineering Co.

KAYGREY
Rogers Corp.

KAYPAR
Rogers Corp.

KAYROK
Rogers Corp.

KEI
Kurman Electric Co., Inc.

KEL-F
Electronic Mechanics, Inc.

KEL-F
Kellogg Co., M. W.

KELLERFLEX
Pratt & Whitney Div., Niles-Bement-Pond Co.

KELLER POLYGRAPH
Associated Research, Inc.

KEMET
Union Carbide & Carbon Co.

KEMGO
Markem Machine Co.

KENCO
Kenwood Engineering Co., Inc.

KENEX
Westinghouse Electric Corp.

KENITE
Keystone Electronics Corp.

KEN-RAD
General Electric Co.

KEPS
Shakeproof Div., Illinois Tool Works.

KERATYM
Horn Co., Inc., A. C.

KERN-PAILLARD
Paillard Products Inc.

KETOS
Crucible Steel Co. of America

KEYBOARD
Weinschel Engineering Co.

KEYUNCIATOR
Power Equipment Co.

KIC
Union Carbide & Carbon Corp.

K-H
Krohn-Hite Instrument Co.

KILO-SWEEP
Kay Electric Co.

KILOVOLT
Caddell-Burns Mfg. Co.

KIN-EX
Vidaire Electronics Mfg. Co.

KINE-LITE
Vidaire Electronics Mfg. Co.

KINE-TEST
Vidaire Electronics Mfg. Co.

KING MARKWELL
Markem Machine Co.

KIRKSITE
National Lead Co.

KLAMP-TITE
I-T-E Circuit Breaker Co.

KLEEN'R
Conrac, Inc.

KLEIN-KOAT
Klein & Sons, Mathias

KLIP-LITE
Cable Electric Products Co.

KLIPOK
Trico Fuse Mfg. Co.

KLIFSCHORN
Klipsch & Associates

KLIPXIT
Vaco Products Co.

KLIPZON
United Technical Laboratories

KLIXON
Spencer Thermostat Div., Metals & Controls Corp.

K-LOK
Erie Resistor Corp.

KLOZURE
Garlock Packing Co.

KLYDONOGRAPH
Westinghouse Electric Corp.

KNEADED
Eberhard Faber Pencil Co.

KNIGHT
Allied Radio Corp.

KNOCKOMETER
Sperry Gyroscope Co., Div. of The Sperry Corp.

KNOPP
Electrical Facilities, Inc.

KODAGRAPH
Eastman Kodak Co.

KODAK
Eastman Kodak Co.

KODAPAK
Eastman Kodak Co.

KODIFIER
Markwik Manufacturing Co., Inc.

KOHINOOR
Waldes Kohinoor, Inc.

KOILED KORD
Kellogg Switchboard & Supply Co.

KOLORDISK
Centralab Div., Globe Union Inc.

KONAL
Westinghouse Electric Corp.

KON-NEC-TOR
General Electric Co.

KOOL KLAMPS
Birtcher Corp.

KOOLOHM
Sprague Electric Co.

KOTOL
U. S. Rubber Co.

KOTRON
Standard Arcturus Corp.

KOVAR
Stupakoff Ceramic & Mfg. Co.

KOVAR
Westinghouse Electric Corp.

KOVAR-ZIP
Waldes Kohinoor, Inc.

KRISTON
Goodrich Chemical Co., B. F.

KROME KOAT
General Cement Mfg. Co.

KRYSTAL KOAT
General Cement Mfg. Co.

K-TRAN
Automatic Mfg. Corp.

KUPEC
Centralab Div., Globe Union, Inc.

KULGRID
Sylvania Electric Products, Inc.

KUM-KLEEN
Avery Adhesive Label Corp.

KURMELER
Kurman Electric Co., Inc.

K-V-O
Soraque Electric Co.

KWIKFLUX
Special Chemicals Co.

KWIK-KALL
Loge Sound Engineers, J. M.

"L" NICKEL
International Nickel Co., Inc.

LB
Louis Bros.

LAB-BILT
Specialty Battery Co.

LABCASE
Berkshire Laboratories

LABCHECK
Berkshire Laboratories

LABMARKER
Berkshire Laboratories

LABOHM
Berkshire Laboratories

LABPEAK
Berkshire Laboratories

LABRECT
Berkshire Laboratories

LABSTROBE
Berkshire Laboratories

LABTEST
Berkshire Laboratories

LABTRANS
Berkshire Laboratories

LABVAR
Berkshire Laboratories

LABVOLT
Berkshire Laboratories

LABVOLT
Electrodyne Co.

LACKON
U. S. Radium Corp.

LAMCO
La Magna Mfg. Co., Inc.

LAMICOID
Mica Insulator Co.

LAMICOID
Insulating Fabricators, Inc.

LAMICORES
Magnetic Metals Co.

LAMINAC
American Cyanamid Co.

LAMIPACKS
Magnetic Metals Co.

LAMITEX
Franklin Fibre-Lamitex Corp.

LAUBSCHER
American Laubscher Corp.

LAURETT
Laurehk Radio Mfg. Co.

LAUXEIN
Monsanto Chemical Co.

LAUXITE
Monsanto Chemical Co.

LAVA
Kirchberger & Co., Inc., TM

LAVA
Maryland Lava Co.

LAVITE
Steward Mfg. Co., D. M.

LAVOLAIN
Star Porcelain Co.

LAYTEX
U. S. Rubber Co.

LAZY-X
Radiart Corp.

L-C CHECKER
Aerovox Corp.

LEAK
British Industries Corp

LEARADIO
Lear, Inc.

LEARAVIAN
Lear, Inc.

LEARMATIC
Lear, Inc.

LEARTRON
Lear, Inc.

LEATHAFLEX
Paisley Products, Inc.

LECTURN
J. M. Loge Sound Engineers

LECTRO-FORMED
Bart Laboratories, Co., Inc.

LECTROPACK
Telegraph Condenser Co., Ltd

LECTROVISION
Transvision, Inc.

LEDEX
Leland, Inc., G. H.

LEESONA
Universal Winding Co.

L-F
Liebel-Flarshelm Co.

LEKTRO
Conn Ltd., C. G.

LE-LAND
Leland Electric Co.

LEMOL
American Monomer Corp

LERCO
Lynn Electronic Research Co.

LERO
Lynn Electronic Research Co.

LEROY
Keuffel & Esser Co.

LEVEL
White Rodgers Electric Co

LEVELRATOR
Fischer & Porter Co.

LEVERPAK
Continental Can Co., Inc.

LIECO
Lerner Instrument & Electronics Mfg. Corp.

LIFE-LINE
Westinghouse Electric Corp.

LIFE SAVER
Cole Radio Works

LIFETIME
Reeves Soundcraft Corp.

LIFETONE
Duotone Co., Inc.

LIGHT WATCHMAN
Ripley Co., Inc.

LIGHTNING
Vaco Products Co.

LIGHTNING BUG
Vibroplex Co., Inc.

LIGHTNING SENTRY
J F D Mfg. Co., Inc.

LIGNOTITE
Paisley Products, Inc.

LIGNOTOX
Paisley Products, Inc.

LIMITEMP
Westinghouse Electric Corp.

LIMITROL
Barber-Colman Co.

LIMITRON
Arma Corp.

- LIN-DE**
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
- LINDOX**
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.
- LINEAR STANDARD**
United Transformer Co.
- LINEARSYN**
Control Components Co.
- LINEATOR**
Airborne Accessories, Inc.
- LINE-O-FLO**
Barber-Colman Co.
- LINE-O-LIFE**
Carter Motor Co.
- LINE-O-POWER**
Foote Brothers Gear & Machine Corp.
- LINE STARTER**
Westinghouse Electric Corp.
- LINICON**
United Condenser Corp.
- LINK-LOCK**
Simmons Fastener Corp.
- LINVAR**
Muirhead & Co., Ltd.
- LITE-GAGE**
Photocon Research Products
- LITE-O-STAT**
Viewlex, Inc.
- LITHALOID**
Haloid Co., The
- LITHOFAX**
Western Union Telegraph Co.
- LITHOFORM**
American Chemical Paint Co.
- LITTLE DEVIL**
Ohmite Mfg. Co.
- LITTLE GEM**
Sickles Co., F. W. Div. General Instrument Corp.
- LITTLE GIANT**
Crucible Steel Co. of America
- LITTLE GIANT**
JFD Mfg. Co., Inc.
- LITTLE MAJOR**
Arro Expansion Bolt Co.
- LLOYD'S**
Johnson Mfg. Co., Inc.
- LOADBOND**
Catalin Corp. of America
- LOADALARM**
Brinell Company, The.
- LOADED-X**
Radiart Corp., The
- LOALIN**
Catalin Corp. of America
- LO-C**
Eastern Precision Resistor Corp.
- LO-C**
Linear Equipment Laboratories
- LOCALITE**
Fostoria Pressed Steel Corp.
- LOCKIT**
Tele-Ex-Pand Corp.
- LOCK-O-SEAL**
Wolfe Co., Inc., Franklin C.
- LOCKSEAM**
Superior Tube Co.
- LOCK-TITE**
Continental Screw Co.
- LOCK-TITE**
Thomas & Betts Co.
- LOFYLD**
Millivac Instrument Corp.
- LOGATEN**
Kay-Lab, Inc.
- LOGE LECTERN**
Loge Sound Engineers, J. M.
- LOGGER**
Audio Instrument Co., Inc.
- LOGRINC**
Logistics Research Inc.
- LOHM**
Driver-Harris Co.
- LOMU**
Magnetic Metals Co.
- LONG RANGER**
Ward Products Corp. Div of The Garbriel Co.
- LOOPHOM**
Ward Leonard Electric Co.
- LOOPSTICK**
Superex Electronics Corp.
- LOS GATOS**
Lewis & Kaufman, Ltd.
- LO-VOLT**
Industrial Devices, Inc.
- LOXIT**
Scovill Mfg. Co.
- L. P.**
Hickok Electrical Instrument Co.
- L-R**
Ripley Co., Inc.,
- L'TATRO**
Eckstein Radio & Television Co.
- LUCERO**
Driver-Harris Co.
- LUCITE**
du Pont de Nemours & Co., Inc., E. I.
- LUCKY STRIKE**
Precision Radiation Instruments Inc.
- LUG-CLIP**
Littelfuse, Inc.
- LUKENWELD**
Lukens Steel Co.
- LUXIDE**
Celanese Corp. of America
- LUMARITH**
Celanese Corp. of America
- LUMENAR**
Heiland Research Corp.
- LUMATROL**
Micro Balancing, Inc.
- LUMETRON**
Photovolt Corp.
- LUSTERIZED**
American Electric Cable Co.
- LUSTERLAC**
American Electric Cable Co.
- LUSTREX**
Monsanto Chemical Co.
- LUSTROM**
Monsanto Chemical Co.
- LUXAN**
Rauland Corp.
- LUMAPANE**
Rauland Corp.
- LUXIFLUX**
Special Chemicals Co.
- LUXOLENE**
DeLuxe Coils, Inc.
- LUXOR**
Ace Mfg. Corp.
- LUXSTAR**
Viewlex, Inc.
- LUXTRON**
Bradley Labs., Inc.
- LVSYN**
Control Components Co.
- LYNN**
Vaco Products Co.
- LYRIC**
Rauland-Borg Corp.
- M-C-R-W-S**
Stevens Mfg. Co., Inc.
- MACADIE**
British Industries Corp.
- MAESTRO**
Reeves Soundcraft Corp.
- MAGATAPE**
Crestwood Recorder Co.
- MAGIC CIRCLE**
A.R.F. Products, Inc.
- MAGICORES**
Crowley & Co., Inc., Henry L.
- MAGIC MIRROR**
Pacific Universal Products Corp.
- MAGIC RIBBON**
Brush Electronics Co.
- MAGIC WAND**
Ward Products Corp. Div. of The Gabriel Co.
- MAGIFLEX**
Transradio, Ltd.
- MAGMOTOR**
Carter Motor Co.
- MAGNIAC**
Magnetic Devices, Inc.
- MAGNADINE**
Radio Music Corp.
- MAGNADUR**
Ferroxcube Corp. of America
- MAGNAGLO**
Magnaflux Corp.
- MAGNAPHONIC**
Magnasync Manufacturing Co.
- MAGNA-STRIPE**
Reeves Soundcraft Corp.
- MAGNATELE**
Electro Engineering & Mfg. Co.
- MAGNATONE**
Magna Electronics Co.
- MAGNA-TORC**
Hansen Mfg. Co., Inc.
- MAGNAVOLT**
Inet Div. of Leach Corp.
- MAGNEBRAKE**
Vickers, Inc.
- MAGNECLUTCH**
Vickers, Inc.
- MAGNECORDER**
Magnecord, Inc.
- MAGNECORDETTE**
Magnecord, Inc.
- MAGNEFLUX**
Lear, Inc.
- MAGNELOOP**
Amplifier Corp. of America
- MAGNEMATIC**
Amplifier Corp. of America
- MAGNEMITE**
Amplifier Corp. of America
- MAGNEMUSE**
Amplifier Corp. of America
- MAGNEPAINT**
Micro-Circuits Co.
- MAGNEPASTE**
Micro-Circuits Co.
- MAGNERAMA**
Amplifier Corp. of America
- MAGNERASER**
Amplifier Corp. of America
- MAGNERIBBON**
Amplifier Corp. of America
- MAGNESCOPE**
Amplifier Corp. of America
- MAGNESIL**
Magnetics, Inc.
- MAGNESTAT**
Magnetic Research Corp.
- MAGNESYN**
Eclipse-Pioneer Div., Bendix Aviation Corp.
- MAGNETAPE**
Amplifier Corp. of America
- MAGNETEX**
Califone Corp.
- MAGNETONE**
Brush Electronics Co.
- MAGNETORQUE**
Avion Instrument Corp. Div. of American Car & Foundry Co.
- MAGNETRONIC**
Cook Electric Co.
- MAGNETTE**
Heinemann Electric Co.
- MAGNETWIN**
Amplifier Corp. of America
- MAGNILASTIC**
Cook Electric Co.
- MAGNISET**
Bristol Co., Inc.
- MAGNIVOLT**
Inet, Inc.
- MAGNO**
Driver-Harris Co.
- MAGNOGRAPH**
Offner Electronics, Inc.
- MAGNORITE**
Norton Co.
- MAIL-A-VOICE**
Brush Electronics Co.
- MAJESTIC**
Garod Radio Corp.
- MALLOCENE**
Mallory & Co., Inc., P. R.
- MALLOSIL**
P. R. Mallory & Co., Inc.
- MALLOTRO**
Mallory & Co., Inc., P. R.
- MALTESE**
Bache & Co., Semon
- MAMCO**
Master Appliance Mfg. Co.
- MANHATTAN**
Raybestos-Manhattan, Inc.
- MAPICO**
Columbian Carbon Co.
- MARBELITE**
Good-All Electric Mfg. Co.
- MARCOL**
Esso Standard Oil Co.
- MARCONITE**
Marconi Wireless Telegraph Co., Ltd.
- MARI-GI'DE**
Bludworth Marine Div., National-Simplex-Bludworth, Inc.
- MARINE ARROW**
Bludworth Marine Div., National-Simplex-Bludworth, Inc.
- MARINE PILOT**
Bludworth Marine Div., National-Simplex-Bludworth, Inc.
- MARINER**
Hudson American Corp.
- MARINER**
JFD Mfg. Co., Inc.
- MARINERS PATHFINDER**
Raytheon Mfg. Co.
- MARK-TIME**
Rhodes Inc., M. H.
- MARKA-SWEEP**
Kay Electric Co.
- MARK-N-COUNT**
May Engineering Co.
- MARKER-PULSER**
Brubaker Mfg. Co., Inc.
- MARKER-SWEEPER**
Brubaker Mfg. Co., Inc.
- MARKLAD**
Markite Corp.
- MARK TWAIN**
Raytheon Mfg. Co., Equipment Sales Div.
- MARS**
Staedtler Inc., J. S.
- MARS-LUMOGRAPH**
Staedtler, Inc., J. S.
- MASCO**
Simpson Mfg. Co., Inc., Mark
- MASTERCRAFT**
F & M Sales, Inc.
- MASTERLOUIT**
Kellogg Switchboard & Supply Co.
- MASTER MARINER**
Hudson American Corp.
- MASTERPHONE**
Kellogg Switchboard & Supply Co.
- MASTERPRO**
Rek-O-Kut Co.
- MASTERTAPE**
Audio-Master Corp.
- MAST-LOK**
Argyle Electronics Co.
- MATSURF**
Arkwright Finishing Co.
- MAXIMAR**
X-Ray Dept. of General Electric Co.
- MAXI-POWER**
Foote Brothers Gear & Machine Corp.
- MAXISERVICE**
X-Ray Dept. of General Electric Co.
- MAXISCOPE**
X-Ray Dept. of General Electric Co.
- MAX MIXER**
Special Products Co.
- M. B. C.**
Ray-O-Vac Co.
- MCA**
Molding Corp. of America
- MEASURAY**
Sheffield Corp., The.
- MEASURTEST**
Marconi Instruments Ltd.
- MECATORN**
Tornrgren Co., Inc., C. W.
- MECATORN-SPYN**
Tornrgren Co., Inc., C. W.
- MECHA**
Servomechanisms, Inc.
- MECHANI-SEAL**
Fafnir Bearing Co.
- MECHANOPHASE**
Electro-Voice, Inc.
- MEDIQUARTZ**
Dallons Labs.
- MEDI-SINE**
Dallons Labs.
- MEDI-SONAR**
Dallons Labs.
- MEDI-SURGICAL**
Dallons Labs.
- MEDITHERM**
Dallons Labs.
- MEFCO**
Production Engineering Co.
- MEGALUME**
Clarke Instrument Div., National Electrical Machine Shops, Inc.
- MEGA-MATCH**
Kay Electric Co.
- MEGA-NODE**
Kay Electric Co.
- MEGA-PIPPER**
Kay Electric Co.
- MEGA-PIX SR.**
Kay Electric Co.
- MEGA-PULSER**
Kay Electric Co.
- MEGA-SWEEP**
Kay Electric Co.
- MEGALIGNER**
Kay Electric Co.
- MEGALYZER**
Kay Electric Co.
- MEGALYZER JR.**
Kay Electric Co.
- MEGASTYRENE**
Transradio, Ltd.
- MEGATENNA**
Kay Electric Co.
- MEGAVAC**
Central Scientific Co.
- MEGA-X**
Kay Electric Co.
- MEGGER**
Biddle Co., James G.
- MEG-METER**
Winslow Co., Inc., The
- MEGA-MARKER SR.**
Kay Electric Co.
- MEGOMER**
Sticht Co., Inc., Herman H.
- MEG-O-MAX**
Sprague Electric Co.
- MEL**
Measurement Engineering, Ltd.
- MELCOAT**
Melpar, Inc.
- MELCOR**
Melpar, Inc.
- MELLOTONE**
Electron Enterprises
- MELMAC**
American Cyanamid Co.
- MELODIER**
Waters Conley Co.
- MELODISC**
Home Recording Products Corp.
- MELPAK**
Melpar, Inc.
- MEMOBELT**
Dictaphone Corp.
- MEMOSCOPE**
Millivac Instrument Corp.
- MEMOSTAT**
Minnesota Electronics Corp.
- MEMO-TAPE**
Product Associates, Inc.
- MERC-O-SEAL**
Mercury Contacts, Inc.
- MERCTRON**
Ebert Electronics Corp.
- MERCU-TROL**
Mack Electrical Devices, Inc.
- MERCURY**
Electro-Voice, Inc.
- MERCURY**
Kemlite Labs.
- MERCURY**
Vulcan Electric Co.
- MERCURYSTAT**
Westinghouse Electric Corp.
- MERITONE**
American Laubscher Corp.
- MERITONE**
Autocrat Electronics Co.
- MERITONE**
American Laubscher Corp.
- MERITONE-LAUBSCHER**
American Laubscher Corp.
- MERITUNE**
Polytech Devices, Inc.
- MERL**
Miller Research Laboratories

ETA-BASAL PORTABLE
Electro-Physical Laboratories, Inc.

ETAL MIKE
Sperry Gyroscope Co.
Div. of the Sperry Corp.

ETAL SHIELDED WIRE
Uniform Tubes

ETALASTIC
Cook Electric Co.

ETALBOSS
Telegraph Condenser Co., Ltd.

ETALCLAD
Battery Division,
Burgess Battery Co.

ETALITE
Astron Corp.

ETALIX
North American Philips Co., Inc.

ETALMITE
Telegraph Condenser Co., Ltd.

ETALPACK
Telegraph Condenser Co., Ltd.

ETALSEAL
Brush Electronics Co.

ETAMETER
Bristol Co., The

ETAPHONE
Bristol Co., The

ETAPLATING
Metaplast Process, Inc.

ETA VANE
Bristol Co., The

ETCLAD
I-T-E Circuit Breaker Co.

ETEOR
Associated American Trading Division.

ETEROR
Astron Corp.

ETERMAX
Leeds & Northrup Co.

ETEROL
Automatic Temperature Control Co.

ETEX
Metal Textile Corp.

ETHAFLEX
Plax Corp.

ETL-CAN
Pyramid Electric Co.

ET-L-FLEX
Robinson Aviation, Inc.

ETLOHM
Litton Industries

ETRO-LITE
Viewlex, Inc.

ETRONOMA
Crystal Research Labs, Inc.

ETROPOLITON
Radion Corp.

ETROSCOPE
Photocon Research Products

ETROTHERM
General Controls Co.

ETSO
Philadelphia Quartz Co.

EX
U. S. Graphite Co., Div. of
The Wickes Corp.

EXACOTE
U. S. Graphite Co., Div. of
The Wickes Corp.

EXALOY
U. S. Graphite Co., Div. of
The Wickes Corp.

EXATOP
U. S. Graphite Co., Div. of
The Wickes Corp.

EXICAN
U. S. Graphite Co., A Div. of
The Wickes Corp.

EXITE BRIQUETTES
U. S. Graphite Co., Div. of
The Wickes Corp.

EXIC
Molded Insulation Co.

EXBOND
Continental-Diamond Fibre Co.

EXDISC
Telegraph Condenser Co., Ltd.

EXFIL
Cosa Corp.

EXGLAS
National Electric Coil Co.

EXCANITE
Mica Insulator Co.

EXCARTA
Westinghouse Electric Corp.

EXCO
Mica Insulator Co.

EXCRO
Minneapolis-Honeywell Regulator Co.

EXCRO
New Hampshire Ball Bearings, Inc.

EXCROACT
Bristol Co., The

EXCRO-CAL
Cubic Corp.

EXCRO CIRCLE
Precise Measurements Co.

EXCROCORES
Magnetic Metals Co.

EXCRODIAL
Borg Equipment Div.
The George W. Borg Corp.

EXCRODOT
Felts Corp.

EXCRODRILL
Teletronics Laboratory, Inc.

MICRODUAL
Transradio, Ltd.

MICRODYNE
Audak Co.

MICROFLASH
General Radio Co.

MICROFLEX
Eagle Signal Corp.

MICROLATOR
Kay Electric Co.

MICROLINE
Sperry Gyroscope Co., Div. of
The Sperry Corp.

MICROLITE
Glass Fibers, Inc.

MICROLYTIE
Micamold Radio Corp.

MICROMAG
Magnetic Research Corp.

MICROMATCH
Jones Electronics Co., Inc., M. C.

MICROMAX
Leeds & Northrup Co.

MICRO-MIKER
Kay-Lab, Inc.

MICROMITE
Telegraph Condenser Co., Ltd.

MICROMOTORS
Redmond Co., Inc.

MICRO-NAMIC
Micro Balancing, Inc.

MICROPACK
Telegraph Condenser Co., Ltd.

MICROPADS
Telewave Labs., Inc.

MICROPAINT
Micro-Circuits Co.

MICROPOSITIONER
Barber-Colman Co.

MICROPOT
Borg Equipment Div.,
George W. Borg Corp.

MICRO-PROCESSED
Instrument Specialties Co., Inc.

MICRO-PULSER
Kay Electric Co.

MICRO-RELAY
Terado Co.

MICROSEN
Manning, Maxwell & Moore, Inc.

MICRO-SET MANOSTAT
Precision Scientific Co.

MICROSIL
Magnetic Metals Co.

MICROTEMP
Transistor Products, Inc.

MICROTESTERS
Simpson Electric Co. Div.,
American Gage & Machine Co.

MICROTHERM
Barber-Colman Co.

MICROTHERM
Raytheon Mfg. Co.

MICROTORQUE
Giannini & Co., Inc., G. M.

MICRO-TROLLER
Westinghouse Electric Corp.

MICROTOMIC
Eberhard Faber Pencil Co.

MICROVAC
Stokes Machine Co., F. J.

MICROVOLTER
Ferris Instrument Co.

MICROWALL
Rex Corp.

MICROWEAVE
Holliston Mills Inc., The

MID
Hudson American Corp.

MIDDLESEX
Bogen Co., Inc., David

MIDGET
Sprague Electric Co.

MIDGETALK
Simpson Mfg. Co., Inc., Mark

MIDGETROL
Mallory & Co., Inc., P. R.

MIDOHM
Driver-Harris Co.

MIDWAY
Cardwell Electronics Productions Corp.
Allen D.

MIGHTY MITE
Mechanical Industries Production Co.

MIJAKON
Fast & Co., John E.

MIKASUB
Fast & Co., John E.

MIKE
Cornell-Dubilier Electric Corp.

MILCAPS
Dumont-Airplane & Marine
Instruments, Inc.

MILCO
Miller Mfg. Co., M. A.

MIL-LINE
Radell Corp.

MILLISEC
Stevens-Arnold, Inc.

MILLISU
Stevens-Arnold Inc.

MILWAUKEE WROT
Wrought Washer Mfg. Co.

MINALITE
Westinghouse Electric Corp.

MINATROL
Westinghouse Electric Corp.

MINIAC
Marchant Research, Inc.

MINI-AMP
Industrial Devices, Inc.

MINIBOX
Bud Radio, Inc.

MINI-CHOPPER
Servomechanisms, Inc.

MINICUBE
Sanders Associates, Inc.

MINIGANG
Giannini & Co., Inc., G. M.

MINIGRAPH
Westinghouse Electric Corp.

MINI-LINE
Balley Meter Co.,

MINIMAG
Transistor Products, Inc.

MINI MAX
National Carbon Division,
Union Carbide & Carbon Corp.

MINIMITE
Astron Corp.

MINI-NOISE
Microdot Division, Felts Corp.

MINIPAK
Radio Specialty Mfg. Co.

MINISCALER
Atomic Instrument Co.

MINISEL
Electronic Devices, Inc.,
Precision Rectifier Div.

MINI-SHIELD
Staver Co., Inc.

MINI-SIGNAL
Premier Crystal Labs., Inc.

MINI-SPRING
Staver Co., Inc.

MINITAPE
Stancil-Hoffman Corp.

MINITORQUE
Giannini & Co., Inc., G. M.

MINI-VOLT
Industrial Devices, Inc.

MIN-KAPS
Centralab Div. of Globe-Union, Inc.

MINSUA
Keuffel & Esser Co.

MINUTE MAN
Ward Products Corp.,
Div. of The Gabriel Co.

MIRACLE POINT
Gerett Corp., M. A.

MIRADO
Eagle Pencil Co.

MIRAGLAS
Mitchell-Rand Insulation Co., Inc.

MIRALITE
Mitchell-Rand Insulation Co., Inc.

MIROC
Mitchell-Rand Insulation Co., Inc.

MIROPOINT
Duotone Co., Inc.

MIRRO-CLARIC
SOS Cinema Supply Corp.

MIRROSCOPE
Simpson Electric Co., Div.,
American Gage & Machine Co.

M.I.T.
Massachusetts Institute of Television.

MITEERAY
Fretco, Inc.

MIX-N-WHIP
Howard Industries, Inc.

M. L. S.
Paisley Products Inc.

M M M
Midwest Molding & Manufacturing Co.

MOBILFONE
Radionic Laboratory.

MOBIL-MIKE
Electro-Voice, Inc.

MODIFIED HILO
Driver Co., Wilbur B.

MODUFLOW
Minneapolis-Honeywell Regulator Co.

MODULINE
Sprague Electric Co.

MODULITE
Berndt-Bach, Inc.

MODULITE
Electronic Control Corp.

MODUTROL
Minneapolis-Honeywell Regulator Co.

MODUTRONIC
Bill Jack Scientific Instrument Co.

MODU-WAVE
Sciaky Bros., Inc.

MOHICAN
Sangamo Electric Co.

MOLARC
Mole-Richardson Co.

MOLDARTA
Westinghouse Electric Corp.

MOLDITE
National Moldite Co.

MOLDLOCK
American Brass Co.

MOLDTEX
Racon Electric Co.

MOLDTITE
United Condenser Corp.

MOLECULE SQUEEZER
Robinette Co., W. C.

MONEL
International Nickel Co., Inc.

MONISEAL
Magnetic Metals Co.

MONISEAL "444"
Carpenter Steel Co.

MONITORADIO
Radio Apparatus Corp.

MON-KEY
Electric Eye Equipment Co.

MONOBAR
Tibbetts Industries, Inc.

MONOBLOC
Winchester Electronics Co.

MONOCOIL
Kupfrian Mfg. Co.

MONODRUM
Gorrell & Gorrell

MONOMOTORS
Redmond Co., Inc.

MONO-PAC
Beltone Hearing Aid Co.

MONOPHONE
Automatic Electric Co.

MONOPLEX
Shure Brothers, Inc.

MONOSET
Bristol Co., The

MONOSET
Telex, Inc.

MONOTUBE
Tuttle & Kift

MORBOARD
Moore Co., Howard J.

MORBOND
Moore Co., Howard J.

MORCO
Moore Co., Howard J.

MORCOLENE
Moore Co., Howard J.

MORCON
Moore Co., Howard J.

MORCORK
Moore Co., Howard J.

MORCOTATE
Moore Co., Howard J.

MORCOWEDGE
Moore Co., Howard J.

MORFLEX
Moore Co., Howard J.

MORFLON
Moore Co., Howard J.

MORPRENE
Moore Co., Howard J.

MORSE EUREKA
Morse Co., Frank W.

MORTEX
Moore Co., Howard J.

MORVARN
Moore Co., Howard J.

MOTO-MAGS
Keystone Products Co.

MOTO-MITE
Globe Industries, Inc.

MOTORLITE
Ward Leonard Electric Co.

MOTOR WATCHMAN
Westinghouse Electric Corp.

MOT-O-TROL
Westinghouse Electric Corp.

MOTRON
Robinette Co., W. C.

MPB
Miniature Precision Bearings, Inc.

MSRD
Menlo Research Laboratory

M-SCOPE
Fisher Research Lab.

MU
Acro Mfg. Co.

MUCHROMM
Magnetic Metals Co.

MUFAX
Muirhead & Co., Ltd.

MUGWUMP
Radio Merchandise Sales, Inc.

MULLARD
International Electronics Corp.

MUL-TEL
Brach Mfg. Corp.

MULTI-ANALYST
Electronic Instrument Co., Inc.

MULTICARDIOTRON
Electro-Physical Labs.

MULTICON
Standard Electronics Corp.

MULTICORE
British Industries Corp.

MULTICOUNTER
Atomic Instrument Co.

MULTIFLEX
Eagle Signal Corp.

MULTI-GATE
Hammarlund Mfg. Co.

MULTI-LOW-RANGE
Dillion & Co., Inc., W. C.

MULTI-MASTER
Precision Apparatus Co. Inc.

MULTIMET
Haynes Stellite Co.
Division of Union Carbide & Carbon Corp.

MULTIMETER
Rawson Electrical Instrument Co.

MULTIPLANE
Lord Mfg. Co.

MULTIPLE-SHOT
Gits Molding Corp.

MULTIPOT
Ford Engineering Co.

MULTIPOWER
E. A. Myers & Sons

MULTI-PULSER
Kay Electric Co.

MULTI-RECTIFIER
Green Electric Co., Inc.

MULTISCALER
Atomic Instrument Co.

MULTISCOPE
Acme Telectronix Div.
Nea Service Inc.

MULTISOURCE
Applied Research Labs.

MULTI-SPEED
Pentron Corp.

MULTI-SWAGE
Bead Chain Mfg. Co.

MULTITROL
Ward Leonard Electric Co.

MULTIVIDEO
Industrial Television, Inc.

MULTIVISION
Industrial Television, Inc.

MULTIVOLT
Ohmite Mfg. Co.

MULTI-Z
Halldorson Transformer Co.

MULTRON
Avion Instrument Corp., Div. of
American Car & Foundry Co.

MUL-TV
Jerrold Electronics Corp.

MUMETAL
Telegraph Construction &
Maintenance Co., Ltd.

MU NET
Sickles, F. W. Div.
General Instrument Corp.

M-UNIT
Gorrell & Gorrell

MUROSCOPE
Simpson Electric Co. Div. of
American Gage & Machine Co.

MUSIC MASTER
M. P. Engineering Co.

MUSIC MASTER
Sonic Industries, Inc.

MUSIKING
Symphony Radio & Television Corp.

MUTED-STYLUS
Shure Brothers, Inc.

M/W GAIN SET
Kay Electric Co.

MYKAPLAST
United Condenser Corp.

MYKE-A-TROL
Industrial Electronics, Inc.

MYKROY
Electronic Mechanics, Inc.

NA-ALD
Alden Products Co.

NALCO
National Lead Co.

NALCO
North American Electric Lamp Co

NAMCO
National Acme Co.

NARCIOL
National Research Corp.

NARCO
National Aeronautical Corp.

NARCO OMNIGATOR
National Aeronautical Corp.

NARCO OMNIHOMER
National Aeronautical Corp.

NARDA
Nassau Research & Development
Associates, Inc.

NARL
North American Research
Labs., Inc.

NASAT
Westinghouse Electric Corp.

MATCO
National Tel-Tronics Corp.

NATIONAL
Valco Mfg. Co.

NATITE
National Ceramic Co.

NAUGAHYDE
U. S. Rubber Co.

NAVAJO
Sangamo Electric Co.

NAVARRÉ
Videon Electronic Corp.

N-CAPS
Eastern Precision Resistor Corp.

NEG'ATOR
Hunter Spring Co.

NEOLAC
U. S. Stoneware Co.

NEMCO
National Electronic Mfg. Corp.

NEOLAY
U. S. Rubber Co.

NE-O-LITE
General Cement Mfg. Co.

NEPCO
National Electric Products Co.

NEPEC
Centralab Div.,
Globe Union Inc.

NESTIER
Doepke Mfg. Co., Inc., Chas. Wm.

NEUTRASEAL
Cook Electric Co.

NEVA TIP
Radio Merchandise Sales, Inc.

NEVERSLIP
Philadelphia Steel & Wire Corp.

NEYDIUM
Ney Co., J. M.

NEY-ORO
Ney Co., J. M.

NICAD
Nickel Cadmium Battery Corp.

NICHROME
Driver-Harris Co.

NICORO
Western Gold & Platinum Works.

NIFER
Metals & Controls Corp.,
General Plate Div.

NILSTAIN
Driver Co., Wilbur B.

NILVAR
Driver-Harris Co.

999 "PLUS"
Handy & Harman

NIREX
Driver-Harris Co.

NITE-T-LITE
Littelfuse, Inc.

NITRATE-ASBESTOMENT
Johns-Manville

NITRON
Monsanto Chemical Co.

NITRONEAL
Baker & Co., Inc.

NIVAC
Vacuum Metals Corp.

NOARK
Federal Electric Products Co.

NOBATRON
Sorensen & Co., Inc.

NOBLELOY
Continental Carbon, Inc.

NOBLEWEST
Noble & Westbrook Mfg. Co.

NOBRUSH
Georator Corp.

NOFLAME-COR
Cornish Wire Co.

NOISERASER
Minnesota Electronics Corp.

NOKORODE
Dunton Co., M. W.

NOMU
Magnetic Metals Co.

NON-LINK
Positive Lock Washer Co.

NONSTRIP
Rex Corp.

NO-OX
Schott Co., Walter L.

NORBIDE
Norton Co.

NODRSEAL
Johns-Manville

NORELCO
North American Phillips Co., Inc.

NORTHEAST
Delco Appliance Div.
General Motors Corp.

NORWOOD
Control Engineering Corp.

NTC
Keystone Carbon Co., Inc.

N. U.
National Union Radio Corp.

NU-BLAC
Star Porcelain Co.

NU-BLOK
United Mfg. & Service Co.

NU BLOK, JR.
United Mfg. & Service

NU-BRAZEE
American Silver Co., Inc.

NUCAMITE
National Union Radio Corp.

NUCLEOMETER
Radiation Counter Laboratories, Inc.

NUKEMITE
Nukem Products Corp.

NU PAMITE
National Union Radio Corp.

NUSO
Esso Standard Oil Co.

NU TIP
Mallory & Co., Inc., P. R.

NWL
Nothelfer Winding Labs.

NU-WAY
Marshall Associates, Inc., John

NU WRINKLE CAP
Mallory & Co., Inc., P. R.

NW 25
Kelllogg Co., M. W.

NYFORM
Acme Wire Co.

NYGRIP
Weckesser Co.

NYLASINT
Polymer Corp.

NYLATINT
Polymer Corp.

NYLATRON
Polymer Corp.

NYLOBOND
Aircraft-Marine Products, Inc.

NYLOCLIP
Burndy Engineering Co. Inc.

NYLEX
Boston Insulated Wire & Cable Co.

NYLOK
Production Engineering Co.

NYLON
du Pont de Nemours & Co., Inc., E. I

NYLONITE
Plastic Wire & Cable Corp.

NYLON-ZIP
Waldes Kohlnoor Inc.

OAKWOOD
Osborn Products

OCTOHL
Eastman Kodak Co.

OFC
Ortho Filter Corp.

OHIO
Ohio Carbon Co.

OHMAX
Driver-Harris Co.

OHMOID
Wilmington Fibre Specialty Co

OHM-SPUN
Statac Co.

OHMSTONE
Johns-Manville

OILDAG
Acheson Colloids Co.

OILMITE
Tobe Deutschmann Corp.

OKLIP
Burndy Engineering Co., Inc.

OKOBESTOS
Okonite Co.

OKOGLOSS
Okonite Co.

OKOLENE
Okonite Co.

OKOLITE
Okonite Co.

OKOPRENE
Okonite Co.

OKOSEAL
Okonite Co.

OMCO
Earnshaw-Tharp-Christensen Corp.

OMNI-GLOW
Industrial Devices, Inc.

OMNIMATIC
Lear, Inc.

OMNIMETER
Lear, Inc.

OMNIOMETER
Radiation Counter Laboratories, Inc.

OMNITENNA
Tennalab

OPALON
Monsanto Chemical Co.

OPENACTOR
Jeffers Electronics Div. of
Speer Carbon Co.

OPTIMATIC
Minneapolis-Honeywell Regulator Co.

OPTIMIKE
Instrument Development
Laboratories, Inc.

OPTO-MATIC
Trico Fuse Mfg. Co.

ORENCO
Ortho Engineering Corp.

ORIENTER
Lear Inc.

ORPHEUS
International Research Associate

ORTHOFILTER
Orthon Corp., The

ORTHONIK
Armo Steel Corp.

ORTHONIK
Westinghouse Electric Corp.

ORTHONOL
Magnetics, Inc.

ORTHOSIL
Thomas & Skinner
Steel Products Co.

ORTHOSONIC
Electronic Labs., Inc.

ORYX
Television Accessories Co.

OSAGE
Linck Chemical Co.

OSAGE
Sangamo Electric Co.

OSCAR
Benson-Lehner Corp.

OSCILLATRON
Vectron, Inc.

OSCILLO-TRACER
Waters, Inc., Robert A.

OSCILLO-RECORD
Fairchild Camera & Instrument Corp.

OSISO
Westinghouse Electric Corp.

OUNGER
United Transformer Corp.

OXYHEMOGRAPH
Photocon Research Products

OXWELD
Linde Air Products Co.
Unit of Union Carbide & Carbon Corp.

OZALID
General Aniline & Film Corp.

OZAMATIC
Ozalid Div. General
Aniline & Film Corp.

P. A.
Aerovox Corp.

P-A-B-X
Automatic Electric Sales Corp.
P & B
Potter & Brumfield

P-28
Cook Ceramic Mfg. Co.

PAGE
Precision Apparatus Co., Inc.

PAGE-SETTER
J F D Mfg. Co., Inc.

PACEMAKER
Electrodyne Co.

PACIFIC
Transformer Engineers

PACKMASTER
Radio Specialty Mfg. Co.

PAGE PHONE
Farmers Engineering & Mfg. Co.

PAISOL
Paisley Products, Inc.

PAISTEX
Paisley Products, Inc.

PAISTIC
Paisley Products, Inc.

PAISTICK
Paisley Products, Inc.

PAKAP
Audio Products Corp.

PAL
J F D Mfg. Co., Inc.

PALINEY
Ney Co., J. M.

PAL
Palnut Co., Inc.

PAMCO
Paraplegics Mfg. Co., Inc.

PANADAPTOR
Panoramac Radio Products, Inc.

PANALYZOR
Panoramac Radio Products, Inc.

PANARAMA
JFD Mfg. Co., Inc.

PANARAMIC EXPOSURE SHIELD
Technical Operations, Inc.

PANDEX
Westinghouse Electric Corp.

PANDUX
Pacific Transducer Corp.

PANEL
Dzus Fastener Co., Inc.

PANELYTE
St. Regis Paper Co.

PAN-I-LITE
Alden Products Co.

PANORADIO
Panoramac Radio Products, Inc.

PANDRAMA
J F D Mfg. Co., Inc.

PANORAMIC
Radio Merchandise Sales, Inc.

PANORAMOSCOPE
Panoramac Radio Products, Inc.

PANOSCOPE
Panoramac Radio Products, Inc.

PANTO
Preis Engraving Machine Co., H. P.

PAPERITE
Acme Wire Co.

PARA-CON
Ward Products Corp.,
Div. of The Gabriel Co.

PARACORE
U. S. Rubber Co.

PARA-FLUX
Radio Music Corp.

PARAFORMED
Paramount Paper Tube Corp

PARAGON
Keuffel & Esser Co.

PARALEAD
Chester Cable Corp.

PARISIANOID
Parisian Novelty Co.

PARLON
Hercules Powder Co., Inc.

PARTEK
Magnaflex Corp.

PATHFINDER
Sangamo Electric Co.

PATRICIAN
Electro-Voice, Inc.

PATRONIC
SOS Cinema Supply Corp.

PATTERSON
du Pont de Nemours & Co., Inc., E. I.

PAWNEE
Sangamo Electric Co.

PAYOFFPAK
Continental Can Co., Inc.

P-A-X
Automatic Electric Sales Corp.

PDCP
Phelps Dodge Copper Products Co.
P. E. C.
Centralab Div.
Globe Union Inc.

P.E.C.
Precision Electronic Components Ltd

PEAKTROL
Control Corp.

PECO
Pacific Electricord Co.

PEDASINE
Fisher & Co., R. A.

PEDIGREE
George Co., P. D.

PEERAGE
Electro-Voice, Inc.

PEERLESS
 Altec Lansing Corp.
PEERLESS
 National Vulcanized Fibre Co.
PEE-CEE
 Printed Cellophane Tape Co.
PEE-WEE
 Mueller Electric Co.
PELCO
 Product Engineering Laboratories, Inc.
PEL-X
 Holliston Mills, Inc., The
PEM
 Penn Engineering & Mfg. Corp.
PENACOLITE
 Koppers Co., Inc.
PENDET
 Centralab Div. of
 Globe-Union, Inc.
PENGUIN
 Daniels, Inc., C. R.
PERCEPTOSCOPE
 Sonotone Corp.
PERFECT-O-CUT
 Tablet & Ticket Co.
PERKINS
 Westinghouse Electric Corp.
PERMACELL
 U. S. Rubber Co.
PERMADINE
 American Chemical Paint Co.
PERMAKAY
 Motorola, Inc.
PERMALLOY
 Arnold Engineering Co.
PERMANICKEL
 International Nickel Co., Inc.
PERMANITE
 Foote Mineral Co.
PERMANITE
 I-T-E Circuit Breaker Co.
PERMA-NUTS
 Tubular Rivet & Stud Co.
PERMA-POWER
 General Transformer Corp.
PERMASEAL
 Sprague Electric Co.
PERMA-SWITCH
 Centralab Div. of
 Globe-Union, Inc.
PERMATAGS
 Actioncraft Products
PERMENDUR
 Arnold Engineering Co.
PERMENDUR
 Telegraph Construction &
 Maintenance Co., Ltd.
PERMENORM
 Arnold Engineering Co.
PERMERON
 I-T-E Circuit Breaker Co.
PERMO
 Fidelitone, Inc.
PERMO COMPOUNDS
 Hardman Co., Inc., H. V.
PERMOGRAPH
 Electro-Physical Labs., Inc.
PERMOHM
 Yonkers Industries
PERMO-MAGNETIC
 Fidelitone, Inc.
PERMO-SWITCH
 Centralab Div. of Globe-Union, Inc.
PETITE
 Mitchell Industries, Inc.
FAN-TONE
 Pfanzstehl Chemical Co.,
FAN-WOOD
 Pfanzstehl Chemical Co.
P-50
 Superior Tube Co.
HALOCORD
 Phalo Plastics Corp.
HALON
 Phalo Plastics Corp.
HANTOM
 Ward Products Corp. Div. of
 The Gabriel Co.
HASATROL
 Mallory & Co., Inc., P. R.
HASEFORMER
 Eastern Specialty Co.
HENOCEL
 Plastilite Inc.
PHENOCOTE
 Wirt Co.
PHENOFLEX
 Dielectric Materials Co.
PHENOL FIBRE
 Taylor Fibre Co.
PHENOLITE
 National Vulcanized Fibre Co.
PHENOWELD
 Hardman Co., Inc., H. V.
HILHARMONIC
 Espey Mfg. Co., Inc.
PHIL-TROL
 Phillips Control Corp.
HONOLA
 Waters Conley Co.
HONOPHRAGMS
 Magnetic Metals Co.
HONOSTROBE
 Berkshire Laboratories.
HOS-COPPER
 Westinghouse Electric Corp.

PHOSNIC
 Chase Brass & Copper Co., Inc.
PHOTACT
 Keuffel & Esser Co.
PHOTELMETER
 Central Scientific Co.
PHOTO-ARC
 Peerless Photo Products
PHOTO-IT
 Duplomat Co. of America
PHOTOLINE
 Bruning Co., Inc., Charles
PHOTOLUX
 Westinghouse Electric Corp.
PHOTO-MARK PROCESS
 Precision Marking Co.
PHOTOPHONE
 Radio Corporation of America
PHOTO-TROLLER
 Westinghouse Electric Corp.
PHOTOTRON
 Thomas Electronics, Inc.
PHOTOTRONIC
 Weston Electrical Instruments Corp.
PHOTOX
 Westinghouse Electric Corp.
PHOTRONIC
 Weston Electrical Instruments Co.
PHOZOR
 Industrial Test Equipment Co.
PICOPACK
 Telegraph Condenser Co., Ltd.
PIC-SYNC
 Fairchild Recording Equipment Co.
PICK-A-SHAFT
 Clarostat Mfg. Co., Inc.
 P. I. D.
 Burnell & Co.
PIEZO-RAY
 Commercial Research Labs., Inc.
PILOTONE
 Pilot Radio Corp.
PILOTROL
 Bailey Meter Co.
PILOTSTAT
 Minneapolis-Honeywell Regulator Co.
PILOTUNER
 Pilot Radio Corp.
PINCOR
 Pioneer Gen-E-Motor Corporation
PINHEAD
 Soraaue Electric Co.
PINK PEARL
 Eberhard Faber Pencil Co.
PIN-POINTER
 Radio Merchandise Sales, Inc.
PIONEER
 Bendix Aviation Corp.
PISTOGRIP
 Wall Mfg. Co.
PIX-EYE
 Radio Merchandise Sales, Inc.
P-K
 Parker Kalon Division of
 General American Transportation Corp.

PL
 Penta Laboratories, Inc.
PLANOFAX
 Times Facsimile Corp.
PLASCAP
 Mallory & Co., Inc., P. R.
PLASCENE
 Chester Cable Corp.
PLASKON
 Barrett Div., Allied Chemical
 & Dye Corp.
PLASKON
 Libbey-Owens-Ford Glass Co.
PLAST-ALLOY
 Plastic Metals Div.
 National Radiator Co.
PLAST-CORIRON
 Plastic Metals Division
 The National Radiator Co.
PLASTACELE
 du Pont de Nemours & Co., Inc., E. I.
PLASTAPACK
 Telegraph Condenser Co., Ltd.
PLASTI-BOND
 Aircraft-Marine Products, Inc.
PLASTICON
 Condenser Products Co.
PLASTICON
 Plastic Wire & Cable Corp.
PLASTICORD
 Chester Cable Corp.
PLASTICORE
 Chester Cable Corp.
PLASTICOTE
 Chester Cable Corp.
PLASTIFLEX
 Calresin Corp.
PLASTI-GRIP
 Aircraft-Marine Products, Inc.
PLASTIK-707
 United Technical Laboratories
PLASTILOKT
 Precision Paper Tube Co.
PLASTIPEEL
 Protective Coatings Corp.
PLAST-IRON
 Plastic Metals Division
 National Radiator Co., The
PLASTISEL
 Electronics Devices, Inc.,
 Precision Rectifier Div.
PLASTI-STOP
 Aircraft-Marine Products, Inc.

PLASTITE
 Whitney Blake Co.
PLAST-MAGNETITE
 Plastics Metals Division
 National Radiator Co., The
PLAST-MANGANESE
 Plastics Metals Division
 National Radiator Co., The
PLAST-NICKEL
 Plastics Metals Division
 National Radiator Co., The
PLASTOK
 Richardson Co., The
PLASTOLYTIC
 Condenser Manufacturers, Inc.
PLASTO-PAK
 Standard-Toch Chemicals, Inc.
PLASTRONICS
 Maico Co., Inc.
PLAST-SILICON
 Plastics Metals Division
 National Radiator Co., The
PLAST-SPONGE
 Plastics Metals Division
 National Radiator Co., The
PLAST-STEEL
 Plastic Metals Division
 National Radiator Co., The
PLASTURBO
 Master Appliance Mfg. Co.
PLATE-LOK
 Boots Aircraft Nut Co.
PLATO
 Raytheon Mfg. Co.
PLAXPAK
 Plax Corp.
PLAYAL
 Sonotone Corp.
PLAYBACK
 Reeves Soundcraft Corp.
PLAYBOY
 Carbonneau Industries, Inc.
PLAYSALL
 Carbonneau Industries, Inc.
PLENTI-POWER
 Westinghouse Electric Corp.
PLEXICON
 Erie Resistor Corp.
PLIABOOK
 Paisley Products, Inc.
PLIASTIC
 Paisley Products, Inc.
PLIATAS
 Paisley Products, Inc.
PLIOBOND
 Goodyear Tire & Rubber Co.
PLIOGRIP
 Goodyear Tire & Rubber Co.
PLIOLITE
 Goodyear Tire & Rubber Co.
PLIOTHERM
 Goodyear Tire & Rubber Co.
PLIO-TUF
 Goodyear Tire & Rubber Co.
PLIOVIC
 Goodyear Tire & Rubber Co.
PLUG-IN
 JFD Mfg. Co., Inc.
PLUG-IN-LINE
 Alden Systems Co.
PLUG-STAT
 Control Products, Inc.
PLUS SOUND
 Pentron Corp., Inc.
PLYACIEN
 Reichhold Chemicals, Inc.
PLYAMINE
 Reichhold Chemicals, Inc.
PLYMOUTH
 Colortone Electronics, Inc.
PLYMOUTH
 Meck TV, Inc.
PLYOPHEN
 Reichhold Chemicals, Inc.
PLYPAK
 Hinde & Dauch
PM
 Electro-Mechanical Div. of
 General Riveters, Inc.
PN
 Brush Electronics Co.
PNR
 Rockbestos Products Corp.
POCKETSCOPE
 Waterman Products Co., Inc.
PODROMETER
 Branson Instruments, Inc.
POINTARC
 Western Union Telegraph Co.
POLAROID
 Pioneer Scientific Corp.
POLATENNA
 Capehart-Farnsworth Corp.
POLATRON
 Capehart-Farnsworth Corp.
POLECTRON
 Antara Chemical Div., General
 Aniline & Film Corp.
POLEX
 Union Plastics Corp.
POLICARB
 Driver Co., Wilbur B.
POLICALARM
 Radio Apparatus Corp.
POLIMERATOR
 Short Wave Plastic Forming Co.
POLINEAR RECORDER
 Sound Apparatus Co.

POLYCO
 Polymer Corp., The
POLYCOUPLER
 C. G. S. Laboratories, Inc.
POLYFILM
 Extruders, Inc.
POLYFLEX
 Plax Corp.
POLYMER
 Sylvania Electric Products, Inc.
POLY-PEDANCE
 Standard Transformer Corp.
POLYPENCO
 Polymer Corp., The
POLYRANGER
 Sensitive Research Instrument Corp
POLYTAPE
 Extruders, Inc.
POLYTHENE
 du Pont de Nemours & Co., Inc., E. I.
POLYTHERM
 Dielectric Materials Co.
POLY-VISO
 Sanborn Co.
POLYWELD
 American Phenolic Corp.
POLYZOL
 Aircraft-Marine Products, Inc.
PONOGOMETER
 Technology Instrument Corp.
POP
 United Shoe Machinery Corp.
PORTA-FLEXER
 Miskella Infra-Red Co.
PORTAFONE
 Stewart Warner Electric Div.,
 Stewart-Warner Corp.
PORT-A-PHONE
 Feiler Engineering Co.
PORTA-KALL
 Loge Sound Engineers, J. M.
PORTAPOWER
 Cornell-Dubiller Electric Corp.
PORTAPOWER
 Electronic Labs., Inc.
PORTA-POWER
 General Transformer Corp.
PORTENTIOTROL
 Barber-Colman Co.
PORTOMASTER
 Peck & Harvey
PORT-O-REEL
 Industrial Electrical Works
PORT PILOT
 Bludworth Marine Div.,
 National-Simplex-Bludworth, Inc.
PORTRAYA
 Haloid Co., The
PORTRONIC
 Photographic Products, Inc.
POST-LITE
 Littelfuse, Inc.
POSTLITE
 Drake Mfg. Co.
POTENTIOTIALS
 Barber-Colman Co.
POWDERMET
 Yale & Towne Mfg. Co.,
 Powdered Metal Products Div.
POWER BOOSTER
 McColepin-Christie Corp.
POWEREEL
 Industrial Electrical Works
POWERFAC
 Schweltzer, Inc., Peter J.
POWER-FLEX
 Dumore Co., The
POWERSEL
 Electronic Devices, Inc.,
 Precision Rectifier Div.
POWERSPAN
 Videon Electronic Corp.
POWERSTAT
 Superior Electric Co.
POWER STREAK
 American Electric Cable Co.
POWER BLOX
 Authorized Manufacturers
 Service Co., Inc.
POWRMIKE
 University Loudspeakers, Inc.
POWR PAX
 Authorized Manufacturers
 Service Co., Inc.
POWR-RIB
 Ohmite Mfg. Co.
POWR-PAKT
 Alliance Mfg. Co.
PPG
 Pittsburgh Plate Glass Co.
P.R.C.
 Precision Resistor Co.
PRD
 Polytechnic Research & Development
 Co., Inc.
PRECEDENT
 Radio Engineering Labs., Inc.
PRECEPTRON
 Sonotone Corp.
PRECIPITRON
 Westinghouse Electric Corp
PRECISE-OHM
 Precision, Inc.
PRECISIONER
 Malco Co., Inc.
PRECISION-GAUGED
 Precision Products Co.

- PREDICO**
 Beam Instruments Corp.
PRESSWOOD
 Masonite Corp.
PRE-FAB
 Collins Audio Products Co.
PREGWOOD
 Formica Co.
PREMAX
 Chisholm-Ryder Co., Inc.
PREMIER-TONE
 Premier Metal Etching Co.
PRESET
 Bristol Co., The
PRESS-FIT
 Sealectro Corp.
PRESSITE
 West Virginia Pulp & Paper Co.
PRESSMASTER
 Heiland Research Corp.
PRESSOVAC
 Central Scientific Co.
PRESSTOP
 Brinnell Co., The
PRES-SURE
 Buchanan Electrical Products Corp.
PRESSUREGRAPH
 Electro Products Labs., Inc.
PRES-SURE-SPLICE
 Buchanan Electrical Products Corp.
PRES-SURE-TOOL
 Buchanan Electrical Products Co.
PRESSURETROL
 Minneapolis-Honeywell Regulator Co.
PRESTEEL
 Worcester Pressed Steel Co.
PRESTEST
 Miller Mfg. Co., M. A.
PRESTITE
 Westinghouse Electric Corp.
PRES-TO-HEAT
 Triton Mfg. Co., Inc.
PREST-O-LITE
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
PREST-O-WELD
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
PRESTROL
 Gerett Corp., M. A.
PRINTMASTER
 Ozalid Div.,
 General Aniline & Film Corp.
PRINTOHM
 Sprague Electric Co.
PRIVATE EYE
 Television Utilities Corp.
PRIVATE TUTOR
 Eidico of New York, Inc.
PRIVATEER
 Hudson American Corp.
PRMCO
 Ports Mfg. Co.
PRODAG
 Acheson Colloids Co.
PRODELIN
 Product Development Co., Inc.
PRODUCTIMETERS
 Durant Manufacturing Co.
PROFESSIONAL
 Decimeter, Inc.
PROFESSIONAL JR.
 Camera Equipment Co.
PROGAR
 Langevin Mfg. Co.
PROKAR
 Sprague Electric Co.
PROMATIC
 General Control Company
PROMCO
 Progressive Mfg. Co.
PROPELLAIR
 Robbins & Myers, Inc.
PROTECTOGL
 Minneapolis-Honeywell Regulator Co.
PROTECTORELAY
 Minneapolis-Honeywell Regulator Co.
PROTECTOX
 Technic, Inc.
PROTECTOR
 Brinnell Company, The
PROTELGRAM
 North American Phillips Co., Inc.
PROTRON
 Professional Electronics Co.
PROVAC
 Electronic Designs, Inc.
PRYSTAL
 Catalin Corp. of America
P. S.
 Motorola, Inc.
PTF
 Minnesota Mining & Mfg. Co.
PUEBLO
 Sangamo Electric Co.
PULSESCOPE
 Waterman Products Co., Inc.
PULSER-SWEEPER
 Brubaker Mfg. Co., Inc.
PULTEC
 Pulse Techniques, Inc.
PURATONE
 Brach Mfg. Corp.
PURETONE
 Sonotone Corp.
PURIFIL
 Electric Eye Equipment Co.
- PUROX**
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
PUSHNUTS
 Painot Co., Inc.
PUSH-PULL
 James Vibrapowr Co.
PWC
 Plastic Wire & Cable Corp.
PYGMY
 Vuican Electric Co.
PYRALIN
 du Pont de Nemours & Co., Inc., E. I.
PYRANOL
 General Electric Co.
PYRA SHELL
 Auburn Button Works, Inc.
PYRASHELL
 Shoe Form Co., Inc.
PYREX
 Corning Glass Works
PYROCON
 Illinois Testing Labs., Inc.
PYROHM
 Aerovox Corp.
PYROLANCE
 Illinois Testing Labs., Inc.
PYROMASTER
 Bristol Co., The
PYROMIC
 Telegraph Construction & Maintenance Co., Ltd.
PYROTESTER
 Electro-Tech Equipment Co.
PYROTROL
 Bristol Co., The
PYROTRON
 Bailey Meter Co.
PYROVAC
 Eitel-McCullough, Inc.
PYROVISOR
 Bristol Co., The
- Q-GAS**
 Nuclear Instrument & Chemical Corp.
Q-LACE
 Guthman Inc., Edwin I.
Q-MAX
 Communication Products Co., Inc.
Q METER
 Boonton Radio Corp.
QM 136
 Barrett Varnish Co.
QIKLUG
 Burndy Engineering Co., Inc.
QIKTAP
 Burndy Engineering Co., Inc.
Q. U. A. O.
 Beam Instruments Corp.
QUAD-EX
 Telrex Inc.
QUADRALINE
 Radio Engineering Labs., Inc.
QUADREX
 Westinghouse Electric Corp.
QUADROCONDEX
 Westinghouse Electric Corp.
QUANTOMETERS
 Applied Research Laboratories
QUARTZ Q
 Millen Mfg. Co., James
QUELARC
 Pyle-National Co.
QUICKLAG
 Westinghouse Electric Corp.
QUICK-LOCK
 Simmons Fastener Corp.
QUICK-PIVOT
 JFD Mfg. Co., Inc.
QUIETONE
 Cornell-Dubilier Electric Corp.
QUIK-CALL
 Motorola, Inc.
QUIK-CONNECT
 Aircraft-Marine Products, Inc.
QUIK-LABEL
 Brady Co., W. H.
QUIK-MASKS
 Brady Co., W. H.
QUIK-RIG
 JFD Mfg. Co., Inc.
QUIK-SHOT
 Kemode Mfg. Co., Inc.
QUIK-SIGN
 Brady Co., W. H.
QUINORGO
 Johns-Manville.
QUINORGOBORD
 Johns-Manville
QUINTENNA
 Tennalab
QUINTERRA
 Johns-Manville.
QUINTERRABOARD
 Johns-Manville
QUINTETTE
 Radio Merchandise Sales, Inc.
QX CHECKER
 Boonton Radio Corp.
- "R" MONEL**
 International Nickel Co., Inc., The.
RCP
 Radio City Products Co., Inc.
- RdF STIKON**
 Ruge-De Forest, Inc.
RACON BROADBAND
 Racon Electric Co.
RADACOL
 Magnetic Core Corp.
RAD-A-COR
 Magnetic Core Corp.
RADALIGNER
 Kay Electric Co.
RADALYZER
 Kay Electric Co.
RADA-PULSER
 Kay Electric Co.
RADAIR
 Bassett Inc., Rex.
RADALARM
 Communications Co., Inc.
RADAMETER
 Raytheon Mfg. Co.
RADA-NODE
 Kay Electric Co.
RADARANGE
 Raytheon Mfg. Co.
RADAR-TENNA
 Brach Mfg. Corp.
RADA-SWEEP
 Kay Electric Co.
RADAX
 Electro-Voice, Inc.
RADAX SUPER
 Electro-Voice, Inc.
RADECTOR
 Jordan Electronic Mfg. Co., Inc.
RADELIN
 U. S. Radium Corp.
RADEX
 Boston Insulated Wire & Cable Co.
RADIAC
 Arnhold Ceramics, Inc.
RADI-AIRE
 Reynolds Electric Co.
RADIMAX
 Nuclear Research & Development, Inc.
RADIOCARB A
 Driver Co., Wilbur B.
RADIOCRAFTER
 Technicraft Co.
RADIOEAR
 Myers & Sons, E. A.
RADIOFOCAL
 Lord Mfg. Co.
RADIOHM
 Driver-Harris Co.
RADIOHM
 Centralab Div. of
 Globe-Union, Inc.
RADIOLA
 Radio Corp. of America.
RADIOMARINE
 Radio Corp. of America.
RADIOMETAL
 Telegraph Construction & Maintenance Co., Ltd.
RADIOPAK
 Kaar Engineering Co.
RADIO-PILOT
 Fisher Research Lab.
RADIOSTAT
 Allen-Bradley Co.
RADIOSURG
 Electronic Surgical Equipment Co., Inc.
RADIOTECHNIC
 Peirce Wire Recorder Corp.
RADIOTHERM
 Westinghouse Electric Corp.
RADIOTRON
 Radio Corp. of America.
RAFAFX
 Haller, Raymond & Brown, Inc.
RAKSCOPE
 Waterman Products Co., Inc.
RANGELUG
 Frankel Connector Co.
RANGER
 JFD Mfg. Co., Inc.
RANGER
 Sorensen & Co., Inc.
RANGER
 Westinghouse Electric Corp.
RANGERECD
 Rangertone, Inc.
RANGEREORDER
 Rangertone, Inc.
RANGERETTE
 Rangertone, Inc.
RANGESPLICES
 Frankel Connector Co.
RANGETAPS
 Frankel Connector Co.
RATOSIGHTS
 Fisher & Porter Co.
RATOSLEEVES
 Fisher & Porter Co.
RATOTRONIC
 Fisher & Porter Co.
RAUTOMATIC
 American Scientific Co.
RAYBOULD
 Scovill Manufacturing Co.
RAYCHRONIX
 Radioactive Products, Inc.
RAYCHRONOMETER
 Radioactive Products, Inc.
RAYDIST
 Hastings Instrument Co.
RAYFUSER
 Radioactive Products, Inc.
- RAYMERSON**
 Trumbull Dept. of General Electric Co.
RAYOFLEX
 Schott Co., Walter L.
RAYONIC
 Waterman Products Co., Inc.
RAYOTUBE
 Leeds & Northrup Co.
RAYPHOTO
 Times Facsimile Corp.
RAYSONDE
 Friez Instrument Div.,
 Bendix Aviation Corp.
RAYTHERM
 Raytheon Mfg. Co.
RAYTRAN
 Raypar, Inc.
RAY-X
 Raytheon Mfg. Co.
R B & W
 Russell, Burdall &
 Ward Bolt and Nut Co.
R/C
 Radio Condenser Co.
RCA
 Radio Corp. of America
RCA VICTOR
 Radio Corp. of America
RdF STIKON
 Ruge-De Forest, Inc.
REAC
 Reeves Instrument Corp.
REACTRON
 United Condenser Corp.
REACTRON
 Ward Leonard Electric Co.
READY COUNT
 Alden Systems Co.
REBEL
 Klipsch & Associates
RECARB-X
 U. S. Graphite Co.
 Div. of The Wickes Corp.
RECEPTRON
 Howard Mfg. Corp.
RECIPOT
 Giannini & Co., Inc., G. M.
RE-CIRK-IT
 Heinemann Electric Co.
RECITALIST
 Rek-O-Kut Co. Inc.
RECO
 Rectifier Engineering Co.
RECO
 Reynolds Electric Co.
RECORDALL
 Miles Reproducer Co., Inc.
RECORDIO
 Garod Radio Corp.
RECORDION
 Wilcox-Gay Corp.
RECORDIOPPOINT
 Wilcox-Gay Corp.
RECORDISES
 Recordisc Corp.
RECORD-LIFE
 Minnesota Electronics Corp.
RECORDO
 Wilcox-Gay Corp.
RE-CORD-O-FONE
 Bell Sound Systems, Inc.
RECORDOMATIC TITRATOR
 Precision Scientific Co.
RECTICHARGER
 Raytheon Mfg. Co.
RECTIFILTER
 Raytheon Mfg. Co.
RECTIGON
 Westinghouse Electric Corp.
RECTIGRAPH
 Haloid Co., The
RECTI-RINGER
 Raytheon Mfg. Co.
RECTISEL
 Electronic Devices, Inc.,
 Precision Rectifier Div.
RECTODYNE
 McColpin-Christie Corp.
RECTOMATIC
 Westinghouse Electric Corp.
RECTOPLATER
 Mallory & Co., Inc., P. R.
RECTOPOWER
 Mallory & Co., Inc., P. R.
RECTOSTARTER
 McColpin-Christie Corp.
RECTOSTARTER
 Mallory & Co., Inc., P. R.
RECTOTRUCK
 Mallory & Co., Inc., P. R.
RECTOX
 Westinghouse Electric Corp.
RED BALL
 Columbia Resistors, Inc.
REDFLASH
 Vaco Products Co.
RED HEAD
 Girdler Corp.
REDIFON
 Beam Instruments Corp.
REDI-RIG
 Radio Merchandise Sales, Inc.
RED LETTER
 Ruby Chemical Co.
RED SEAL
 Radiart Corp.

D SEAL
 Radio Corporation of America
OSKIN
 Sangamo Electric Co.
DUX
 Ciba Company, Inc.
DEEER
 Reeder Co., Charles M.
VEVELEC
 Reeve Electronics, Inc.
FLECTAR
 Back Video Corp., F. G.
FLECTOGAGE
 Sperry Products, Inc.
FLECTOSCOPE
 Sperry Products, Inc.
FLEX TRUMPETS
 University Loudspeakers, Inc.
RACTALLOY
 Westinghouse Electric Corp.
FRASIL
 Thompson Co., H. L.
GENCY
 Electro-Voice, Inc.
GENCY
 I.D.E.A.
AGENT
 Duotone Co., Inc.
GOHM
 Electric Regulator Corp.
GULITE
 Ward Leonard Electric Co.
JAFIX
 Popper & Sons, Inc.
KORDER
 Gorrell & Gorrell
L
 Radio Engineering Labs., Inc.
LATROL
 Automatic Temperature Control Co.
LAYMATIC
 Kellogg Switchboard & Supply Co.
LIABLE MAILERS
 Corrugated Paper Products, Inc.
LIACAP
 Sanders Associates, Inc.
LIACUBE
 Sanders Associates, Inc.
LIAPAK
 Sanders Associates, Inc.
LIAPLATE
 Sanders Associates, Inc.
LIATRON
 Westinghouse Electric Corp.
LIO
 U. S. Rubber Co.
LIOHM
 Sanders Associates, Inc.
MACO
 Clarkstan Corp.
MALLOY
 Arnold Engineering Co.
MOTE-O-CABLE
 JFD Mfg. Co., Inc.
N
 Nebel Lab., R. E.
O-D
 Diamond Wire & Cable Co.
PAIRACK
 J. F. D. Mfg. Co., Inc.
PEATER
 Kemlite Labs.
SIGUM
 Paisley Products Inc.
SIMENE
 Monsanto Chemical Co.
SIN-FIVE
 Kester Solder Co.
SINITE
 Precision Paper Tube Co.
SINITE
 Resin Industries
SINOX
 Monsanto Chemical Co.
SI-RAP
 Paisley Products Inc.
SISTOL
 Collyer Insulated Wire Co.
TMA #770
 Stone City Machine & Tool Co., Inc.
ETTAX
 Roanwell Corp.
VCOTHENE
 Revere Corporation of America
VODEX
 Van Dyke Instruments, Inc.
EVOLUTE
 Paragon-Revolute Corp.
EVOLUTE COMET
 Paragon-Revolute Corp.
EVOLUTE ROCKET
 Paragon-Revolute Corp.
X
 Crucible Steel Co. of America
EX
 Shure Brothers, Inc.
EX-FLEX
 Flexonics Corp.
EXLACE
 Rex Corp.
EXOLITE
 Rex Corp.
EXSELEN
 Electrical Facilities, Inc.
EXTRUDE
 Rex Corp.
EX-TUBE
 Flexonics Corp.

REXVANE
 Westinghouse Electric Corp.
REX-WELD
 Flexonics Corp.
REZISTAL
 Crucible Steel Co. of America
RFI
 Ace Engineering & Machine Co., Inc.
RHEOTROL
 Barber-Colman Co.
RHINOBESTOS
 Westinghouse Electric Corp.
RHOMAX
 Magnetic Metals Co.
RHOMETAL
 Telegraph Construction & Maintenance Co., Ltd.
RHOMU
 Magnetic Metals Co.
RHYTHMASTER
 Rek-O-Kut Co. Inc.
RIBBON HEAT
 Cox & Co., Inc.
RIBFLEX
 Ward Leonard Electric Co.
RIBOHN
 Ward Leonard Electric Co.
RICHELAIN
 Richardson Co., The
RIGHT OFF THE SHELF
 Star Stainless Screw Co.
RIGIDFRAME
 Delco Appliance Div., General Motors Corp.
R. I. P.
 Westinghouse Electric Corp.
RITEOHM
 Ohmite Mfg. Co.
RK
 Raytheon Mfg. Co.
R-M
 Raybestos-Manhattan, Inc.
R & M
 Robbins & Myers, Inc.
R M B
 Landis & Gyr, Inc.
RMC
 Radio Materials Corp.
R. M. C.
 Radio Music Corp.
RME
 Radio Mfg. Engineers, Inc.
RMS
 Radio Merchandise Sales, Inc.
ROBCO
 Pilot International Corp.
 Robco Mfg. Div.
ROBOLITES
 Universal Microphone Co.
ROBOMATIC REFRACTOMETER
 Precision Scientific Co.
ROBOTROL
 Reliance Automatic Lighting Co.
ROCKET
 Olympic Radio & Television Co.
ROCKLOID
 Standard-Toch Chemical, Inc.
RODAR
 Driver Co., Wilbur B.
ROEBX
 Roebing's Sons Co., John A.
ROECLAD
 Roebing's Sons Co., John A.
ROEGLAS
 Roebing's Sons Co., John A.
ROEPLASTIC
 Roebing's Sons Co., John A.
ROEPRENE
 Roebing's Sons Co., John A.
RO FLEX
 Rome Cable Corp.
ROGER
 Roanwell Corp.
RO LENE
 Rome Cable Corp.
ROLLCO
 Rollins Co.
ROLLOCON
 Circon Component Co.
ROLLPINS
 Elastic Stop Nut Corp.
ROL-TOP
 Boots Aircraft Nut Corp.
RO MARINE
 Rome Cable Corp.
RO NEON
 Rome Cable Corp.
RO PRENE
 Rome Cable Corp.
ROTABRAKE
 Lear, Inc.
ROTA-DAPTER
 Easy-Up Tower Co.
ROTALYZER
 Kay Electric Co.
ROTA-TOWER
 Easy-Up Tower Co.
ROTO-BEAM
 Gordon Specialties Co.
ROTO BEAM
 Kings Electronics Co.
ROTOBRIDGE
 Communication Measurements Lab., Inc.
ROTO-COUNT
 Automatic Temperature Control Co., Inc.
ROTO-DISPLAY KING
 Gale Dorothea Mechanisms

ROTO FORMER
 Westinghouse Electric Corp.
ROTO-LOCK
 Simmons Fastener Corp.
ROTOMASTER
 Master Appliance Mfg. Co.
ROTOMATIC
 Johnson Co., E. F.
ROTOMOTIVE
 Jack & Heintz, Inc.
ROTOMOUNT
 Premax Products Div.
 Chisholm-Ryder, Inc.
ROTORAC
 Airborne Accessories, Inc.
ROTO RANGER
 Simpson Electric Co. Div., American Gage & Machine Co.
ROTORETTE
 Airborne Accessories Corp.
ROTO-SPEED
 General Devices, Inc.
ROTOSTEPPER
 Giannini & Co., Inc., G. M.
ROTOTROL
 Westinghouse Electric Corp.
ROTO-VISION
 Illinois Wood Products Corp.
RO-TRAN
 Rome Cable Corp.
ROYAL
 General Lead Batteries Co.
ROYAL
 Permoflux Corp.
ROYAL
 U. S. Rubber Co.
ROYAL II
 Electro-Voice, Inc.
ROYAL CORD
 U. S. Rubber Co.
ROYAL GOLD
 U. S. Rubber Co.
ROYAL JEWEL
 Jensen Industries, Inc.
ROYAL MASTER
 U. S. Rubber Co.
ROYALITE
 U. S. Rubber Co.
RO ZONE
 Rome Cable Corp.
R P C
 Resistance Products Co.
R S M C
 Radio Specialty Mfg. Co.
R T L
 Peirce Wire Recorder Corp.
RUBAL
 Ruby Chemical Co.
RUBCORD
 U. S. Rubber Co.
RUB-EROK
 Richardson Co., The
RUBSEC
 U. S. Rubber Co.
RUB-TEX
 Richardson Co., The
RUBYFLUID
 Ruby Chemical Co.
RUCCO
 Ruby Chemical Co.
RUF KOAT
 General Cement Mfg. Co.
RULAN
 du Pont de Demours & Co., Inc., E. I.
RULOM
 Dixon Corp.
RURAX
 Palmer, Inc., M. V.
RUSH
 Eraser Co., Inc.
RUST-BAN
 Esso Standard Oil Co.
R V
 Clarkstan Corp.
RX
 Raytheon Mfg. Co.
RX METER
 Boonton Radio Corp.
RYCOM
 Railway Communications, Inc.
RYERTEX
 Ryerson & Son, Inc., Joseph T.

SEI
 Television Zoomar Corp.
SERC
 Standard Electronics Research Corp.
SIE
 Southwestern Industrial Electronics Co.
SK
 Skottie Electronics, Inc.
SPX
 Technic, Inc.
SRX
 Pioneer Electric & Research Corp.
SAFE-T-GLOW
 Brach Mfg. Corp.
SAFE-T-KLIP
 Industrial Devices, Inc.
SAFE-T-PLUG
 Industrial Devices, Inc.
SAFE-T-PLUG
 Littelfuse Inc.
SAFE-T-SPARKY
 Littelfuse Inc.

SAFETY MARGIN
 Astron Corp.
SAFE-R-WIPE
 Redmond Company, Inc.
SAFE TV GUARD
 JFD Mfg. Co., Inc.
SAFE-T-VOICE
 Z & W Machine Products, Inc.
SAFLEX
 Monsanto Chemical Co.
SAL BRICK
 American Solder & Flux Co.
SALESOMATIC
 West Coast Electronics Co.
SANACOUSTIC
 Johns-Manville Corp.
SAND-MEX
 U. S. Graphite Co. Div. of The Wickes Corp.
SANFORD-BENNET
 Rubicon Co.
SANITEX
 Daniels, Inc., C. R.
SARAN
 Dow Chemical Co.
SARDAP
 Nuclear Research Corp.
SAUCERLINE
 Fretco Inc.
SAUTER
 Cramer Co., Inc., R. W.
SAV-A-SHAFT
 National Union Radio Corp.
SAVOY
 Camburn, Inc.
S/B
 Vaco Products Co.
SCAICO
 Cooper Co., Clark
SCALE-O-MATIC
 Technical Associates
SCANOGRAPH
 Nuclear Research & Development, Inc.
SCHENCK
 Ferner Co., R. Y.
SCINFLEX
 Scintilla Div., Bendix Aviation Corp.
SCINTILLATOR
 Precision Radiation Instruments Inc.
SCINTLOCALIZER
 R-C Scientific Instrument Co., Inc.
SCINTMETER
 R-C Scientific Instrument Co., Inc.
SCINTIMONITOR
 R-C Scientific Instrument Co., Inc.
SCINTISCALER
 R-C Scientific Instrument Co., Inc.
SCINTISCANNER
 R-C Scientific Instrument Co., Inc.
SCINTISCOPE
 R-C Scientific Instrument Co., Inc.
SCINTISTAND
 R-C Scientific Instrument Co., Inc.
SCMATCO
 Stone City Machine & Tool Co.
SCOTCHCAST
 Minnesota Mining & Mfg. Co.
SCOTTIE
 Remler Co., Ltd.
SCOUT
 Sangamo Electric Co.
SCPULUG
 Burndy Engineering Co., Inc.
SCRIBE
 Permoflux Corp.
SCOTCH
 Minnesota Mining & Mfg. Co.
SCOTTIE
 Remler Co., Ltd.
SCREWBALL
 Fretco Inc.
SCRIBE
 Permoflux Corp.
SEAL SILICATE
 Philadelphia Quartz Co.
SEALDOHM
 Daven Co.
SEALEX
 General Ceramics & Steatite Corp.
SEALNUT
 Radio Frequency Labs., Inc.
SEAL-O-FLANGE
 Communication Prods. Co., Inc.
SEALSTIX
 Central Scientific Co.
SEA SCOUT
 Lavoie Laboratories.
SEEZAK
 U M & F Mfg. Corp.
SELECT-A-CALL
 National Inter-Communication Systems, Inc.
SELECT-A-SPEDE
 Allis Co., Louis
SELECTO-CALL
 Federal Telephone & Radio Co., A Div. of IT&T.
SELECT-O-PHONE
 Kellogg Switchboard & Supply Co.
SELECTOVISION
 Communication Measurements Lab. Inc.
SELECTRO-PLATERS
 Green Electric Co., Inc.
SELEKTA
 Associated American Trading Division

SELENIFER
 American Rectifier Corp.
SELETRON
 Radio Receptor Co.
SELF CHECKING
 Sensitive Research Instrument Corp.
SELFUBE
 Keystone Carbon Co., Inc.
SELKAR
 Sprague Electric Co.
SEL-LOK
 Standard Pressed Steel Co.
SEL-REX
 Bart-Messing Corp.
SEMCO
 Southwest Engineering & Mfg. Co.
SEMINOLE
 Sangamo Electric Co.
SEMS
 Lamson & Sessions Co.
SENECA
 Sangamo Electric Co.
SENNTRONIC
 Senn Corp.
SENSATHERM
 Mercoild Corp.
SENSICON
 Motorola Inc.
SENSITROL
 Weston Electrical Instrument Corp.
SENSITRON
 Weston Electrical Instrument Corp.
SEN TER CEL
 Standard Telephones & Cables, Ltd.
SENTINEL
 Johnson-Williams, Ltd.
SENTINEL
 Photobell Company
SENTINEL
 Westinghouse Electric Corp.
SEPIATONE
 Frederick Post Co.
SERCO
 Stockman Electronics Research Co.
SERRASOID
 Radio Engineering Labs., Inc.
SERVATRON
 Raytheon Mfg. Co.
SERVICE-MIKE
 Cornell-Dubilier Electric Corp.
SERVIT
 Burndy Engineering Co., Inc.
SERVE-A-UNIT
 Alden Products Co.
SERVOBOARD
 Servo Corp. of America
SERVOCON
 Servo Corp. of America
SERVOFAX
 Servo Corp. of America
SERVOFLIGHT
 Servo Corp. of America
SERVOGRAPH
 Fielden Electronics Inc.
SERVOGRAPH
 Servo-Tek Products Co.
SERVOSCOPE
 Servo Corp. of America
SERVOSPEED
 Electro Devices, Inc.
SERVOSYNC
 Servo Corp. of America
SERVOSYNTH
 Servo Corp. of America
SERVOTHERM
 Servo Corp. of America
SERVOTRON
 Raytheon Mfg. Co.
SERV-RITE
 Gordon Co., Claud S.
SESCO
 Sessions Clock Co.
SETKO
 Set Screw & Mfg. Co.
SEVEN LEAGUES AHEAD
 Thermador Electric Mfg. Co.
SHADOWCONTROL
 Autotron Co., The
SHADOWCOUNT
 Autotron Co., The
SHADOWMASTER
 Autotron Co., The
SHAKEPROOF
 Illinois Tool Works
SHAWNEE
 Sangamo Electric Co.
SHEARITE
 Aircraft-Marine Products, Inc.
SHELDON
 Allied Electric Products, Inc.
SHELDON-MASTER
 Sheldon Electric Co. Div.,
 Allied Electric Products, Inc.
SHIELD BRAND
 Mitchell-Rand Insulation Co., Inc.
SHOCK-BILT MAILERS
 Corrugated Paper Products, Inc.
SHOCKPROOF
 Industrial Transformer Co.
SHOK-LOK
 Automatic Electric Sales Corp.
SHUFFL-LOK
 Cascade Television Co.
SHURFLO
 Anchor Metal Co.
SHUR GRIP
 Parker-Kalon Corp.

SHURE-STAKE
 Thomas & Betts Co.
SICO
 Superior Instrument Co.
S.I.E.C.O.
 Southwestern Industrial Electronics Co.
S. I. E. C.
 Sherman Industrial Electronics Co.
SIEMENS
 Arnhold Ceramics, Inc.
SIGHT METER
 Weston Electrical Instrument Co.
SIGNALINER
 Feiler Engineering Co.
SIGNALMAX
 Wilmar Mfg. Co., Inc.
SIGNAL-SPLITTER
 McLaughlin Corp., J. L. A.
SIGNA-MATCHER
 Centralab Div. of Globe Union, Inc.
SIGNATURE
 Lansing Sound, Inc., James B.
SILANEAL
 Dow Corning Corp.
SILASTIC
 Dow Corning Corp.
SILBESTOS
 Electro-Technical Products Div. of Sun
 Chemical Corp.
SILCAZ
 Electro Metallurgical Co.
 Unit of Union Carbide & Carbon Corp.
SILCLOTH
 Jensen Industries, Inc.
SILECTRON
 Arnold Engineering Co.
SILENTBLOC
 General Tire & Rubber Co., The
SILENT SENTINEL
 Westinghouse Electric Corp.
SILERTEX
 Erie Resistor Corp.
SILICOHM
 Dale Products, Inc.
SILIC-O-NETIC
 Heinemann Electric Co.
SILFLEX
 Variflex Corp.
SIL-FOS
 Handy & Harman
SILKENITE
 Acme Wire Co.
SIL-THIN-BESTOS
 Electro-Technical Products Div. of Sun
 Chemical Corp.
SIL-THIN-GLASS
 Electro-Technical Products Div. of Sun
 Chemical Corp.
SILVALOY
 American Platinum Works
SILVALOY
 Linde Air Products Co.
 Unit of Union Carbide & Carbon Corp.
SILVERCEL
 Yardney Electric Corp.
SILVERCOTE
 Little Falls Alloys, Inc.
SILVER LINE
 Speedway Mfg. Co.
SILVERLINE
 General Instrument Corp.
SILVERMIKE
 Condenser Corp. of America
SILVER-Q
 Decimeter, Inc.
SILVERSTAT
 Westinghouse Electric Corp.
SIMPAC
 Westinghouse Electric Corp.
SIMPLEX
 Bludworth Marine Div., National-
 Simplex Bludworth, Inc.
SIMPLI-FLEX
 Radiart Corp., The
SIMPLYTROL
 Assembly Products, Inc.
SINCOMAX
 Murex, Ltd.
SINTILON
 National Radfac Inc.
SILOUX
 Sangamo Electric Co.
SITCO
 Simplicity Tool Co.
 649
 Bentley-Harris Mfg. Co.
SIXTY
 Shure Brothers.
SKAN
 G-M Laboratories
SKL
 Spencer-Kennedy Labs., Inc.
S. K. S.
 Paisley Products, Inc.
SKYFONE
 Hallicrafters Co.
SKYGUIDE
 Philco Corp.
SKY-KING
 J. F. D. Mfg. Co., Inc.
SKY-LOK
 J. F. D. Mfg. Co., Inc.
SKY-STREAK
 JFD Mfg. Co., Inc.
SKY-TOP
 JFD Mfg. Co., Inc.
SKY TRAK
 Radio Merchandise Sales, Inc.

SKY-WEIGHT
 Continental Electronics, Ltd.
SLIDEOHM
 Aerovox Corp.
SLIMAIR
 Electro-Voice, Inc.
SLIM-TRIM
 Electro-Voice, Inc.
SLIM-X
 Shure Brothers, Inc.
SLIPSTICK
 Decimeter, Inc.
SLIPSYN
 Westinghouse Electric Corp.
SLO-BLO
 Littelfuse, Inc.
SMC
 St. Marys Carbon Co.
S-M UNITS
 Gorrell & Gorrell
SMALL UNIDYNE
 Shure Brothers, Inc.
SMART SET
 Calbest Engineering & Electronics Co.
SMITH-NATHANIEL BALDWIN
 Consolidated Radio Products Co.
SMOKGAGE
 Ess Specialty Corp.
SMUTBATH
 Special Chemicals Co.
SMZ
 Electro Metallurgical Co.
 Unit of Union Carbide & Carbon Corp.
SNAP-ACTION
 Buchanan Electrical Products Corp.
SNAPIT
 Cable Electric Products Inc.
SNAP-LOCK
 National Acme Co.
SNAP RINGS
 Eaton Mfg. Co.
SNAPPER
 Mueller Electric Co.
SNIFFER
 Johnson-Williams, Ltd.
SNIFFER
 Nuclear Instrument & Chemical Corp.
SNIPPER
 Johnson-Williams, Ltd.
SNOOPER
 Precision Radiation Instruments, Inc.
SNUPEC
 Centralab Div. of Globe Union, Inc.
SNYDERMATIC
 Snyder Mfg. Co.
SODEREZE
 Phelps Dodge Copper Products Co.
SOLARSPOTS
 Mole-Richardson Co.
SOLAVOLT
 Sola Electric Co.
SOLDALOT
 Mallory & Co., Inc., P. R.
SOLDALOY
 Mallory & Co., Inc., P. R.
SOLDERALL
 Brach Mfg. Corp.
SOLDERFORMS
 Kester Solder Co.
SOLDER MASTER
 Hexacon Electric Co.
SOLDERLITE
 Welier Mfg. Co.
SOLDERSEAL
 General Ceramics & Steatite Corp.
SOLISTRAND
 Aircraft-Marine Products Inc.
SOLITAIRE
 Videon Electronic Corp
SOLOTRON
 Modern Hearing Aids Laboratories, The.
SOL-REX
 Herzog Miniature Lamp Works, Inc.
SOLU-BRIDGE
 Industrial Instruments, Inc.
SONACTOR
 Kay Electric Co.
SONAFONE
 Sonar Radio Corp.
SONA-GRAPH
 Kay Electric Co.
SONALATOR
 Kay Electric Co.
SONARMETER
 Raytheon Mfg. Co.
SONA-STRETCHER
 Kay Electric Co.
SONA-SWEEP
 Kay Electric Co.
SONISCAN
 Television Equipment Corp.
SONIZON
 Magnaflex Corp.
SONOCLE
 Sonotone Corp.
SONODYNE
 Shure Brothers, Inc.
SONOGEN
 Branson Instruments, Inc.
SONAX
 Electro-Voice, Inc.
SONO PAD
 Sonotone Corp.
SONO-PROBE
 Advanced Electronics, Inc.
SONO-PROBE
 Aircraft Electronics, Inc.

SONOTONOR
 Sonotone Corp.
SONOWEAR
 Sonotone Corp.
SOUND-ASORB
 Bill Jack Scientific Instrument Co.
SOUND CELL
 Brush Electronics Co.
SOUNDCRAFT
 Reeves Soundcraft Corp.
SOUND ISOLATION BLANKET
 Johns-Manville
SOUNDMIRROR
 Brush Electronics Co.
SOUNDREEL
 Simpson Mfg. Co., Inc., Mark.
SOUNDTRAP
 Miles Reproducer Co., Inc.
SOUNDVIEW
 Tech-Master Products Co.
SOUND-ZORBER
 Finn & Co., Inc., T. R.
SOUTHCAST
 Minnesota Mining & Mfg. Co.
SOUTHCO
 South Chester Corp.
SPACELINE
 Rego Insulated Wire Co.
SPADE-LOK
 Aircraft-Marine Products, Inc.
SPARK PROTRACTOR
 Photocon Research Products
SPARKFLASH
 Triumph Mfg. Co.
SPAULDITE
 Spaulding Fibre Co., Inc.
SPAULDO
 Spaulding Fibre Co., Inc.
SPECIAL SERIES
 United Transformer Co.
SPECO
 Pfanstiehl Chemical Co.
SPECO
 Special Products Co.
SPECORAK
 Special Chemicals Co.
SPECLATER
 Special Chemicals Co.
SPEC-POWER
 National Spectrographic Labs., Inc.
SPECTABLE
 Special Chemicals Co.
SPECTAPHONE
 Sonotone Corp.
SPECTRACORD
 Warren Electronics, Inc.
SPECTRIFIER
 Special Chemicals Co.
SPECTROMETER
 Perkin-Elmer Corporation, The
SPECTROPHOTOMETER
 Central Scientific Co.
SPECTROPHOTOMETER
 Perkin-Elmer Corporation, The
SPEECHMASTER
 Jensen Mfg. Co.
SPEED
 Speedway Mfg. Co.
SPEED CLAMPS
 Tinnerman Products Inc.
SPEED CLIPS
 Tinnerman Products Inc.
SPEE-DEE
 Peck & Harvey
SPEE-DEE
 Radiart Corp.
SPEEDEX
 General Cement Mfg. Co.
SPEED GRIPS
 Tinnerman Products, Inc.
SPEED IRON
 Welier Mfg. Co.
SPEEDMASTER
 Peck & Harvey
SPEEDMOUNT
 Brach Mfg. Corp.
SPEED NUTS
 Tinnerman Products Inc.
SPEEDOMAX
 Leeds & Northrup Co.
SPEEDSORT
 Associated Research, Inc.
SPEED TOOLS
 Speedway Mfg. Co.
SPEED-X
 Johnson Co., E. F.
SPEEDY-CAL
 North Shore Nameplate Co.
SPEEDY-MARX
 North Shore Nameplate Co.
SPEER
 Helwig Co.
SPEKALUMINITE
 Special Chemicals Co.
SPEKLEEN
 Special Chemicals Co.
SPEKWITE
 Special Chemicals Co.
SPEKYELLO
 Special Chemicals Co.
SPENCER
 American Optical Co.
SPERRY DUPLEX
 Sperry Gyroscope Co.
 Div. of The Sperry Corp.
SPERRY REFLECTOGAGE
 Sperry Products, Inc.

BERRY REFLECTSCOPE
 Berry Products, Inc.
BHEREX
 Electro-Voice, Inc.
BICO
 Spiraling Products Co.
BIN-HEX
 Products Co.
BINLAB
 Special Instruments Laboratory, Inc.
BIN-LOCK
 Russell, Burdall & Ward Bolt & Nut Co.
BINTITE
 Stevens-Walden Inc.
BIRALENE
 Surprenant Mfg. Co.
BIRALINE
 Rego Insulated Wire Co.
BIRALOCK
 Product Engineering Co.
BIRALON
 Surprenant Mfg. Co.
BIRALPOT
 Giannini & Co., Inc., G. M.
BIRAL TUBING
 Continental-Diamond Fibre Co.
BIRAMEG
 Sprague Electric Co.
BIRASHIELD
 Wuter Co.
BIRICE CAP
 Buchanan Electrical Products Corp.
BIRONGEX
 Sponge Rubber Products Co., Inc.
BIROT-O-GRAPH
 Audio-Master Corp.
BIRIT-SEAL
 Sherman Paper Products Corp.
BIRACO
 Sprague Electric Co.
BIRAY
 Paisley Products Inc.
BIRING-ACTION
 Sheldon Electric Co.
 Div. of Allied Electric Products, Inc.
BIRING-KING
 Gorrell & Gorrell
BIRING-LIFE
 Cook Electric Co.
BIRING-LOCK
 Simmons Fastener Corp.
BIRING-O-MATIC
 Industrial Electrical Works
BIRINGTITES
 Eaton Mfg. Co.
BIRIEZE-LOCK
 Buchanan Electrical Products Corp.
BIRI-C
 British Radio Electronics Ltd.
BIRIT
 Boston Insulated Wire & Cable Co.
BIRIBELX
 Industrial Condenser Corp.
BIRIBIFLO
 Roxboro Co.
BIRIBILINE
 Superior Electric Co.
BIRIBILOG
 Roxboro Co.
BIRIBILOVOLT
 Marconi Wireless Telegraph Co., Ltd.
BIRIBLOHMS
 Phase Resistor Co.
BIRIBLVOLT
 Magnetic Research Corp.
BIRICO
 Standard Electrical Products Co.
BIRI-KON
 Thomas & Betts Co.
BIRINCOR
 Chicago Standard Transformer Corp.
BIRINDARD
 New York Solder Co.
BIRINDARD
 Shure Bros., Inc.
BIRINDARD ARROW
 Ludworth Marine Div.,
 National-Simplex-Bludworth, Inc.
BIRINDARD BINNACLE
 Ludworth Marine Div.,
 National-Simplex-Bludworth, Inc.
BIRINDARD SIX
 Ludworth Marine Div.,
 National-Simplex-Bludworth, Inc.
BIRINDATROL
 Bailey Meter Co.
BIRINDCO
 Licht Co., Inc., Herman H.
BIRINDEE
 Harostat Mfg. Co., Inc.
BIRINDLAC
 Standard-Toch Chemicals, Inc.
BIRINELCO
 Standard Telephones & Cables Ltd.
BIRIN-GARD
 D Mfg. Co., Inc.
BIRINTEL
 Standard Telephones & Cables Ltd.
BIRINTOX
 Standard-Toch Chemicals, Inc.
BIRIN-TRAN
 Stanwyck Winding Co.
BIRIPUT
 Consolidated Wire & Associated Companies
STAR
 Duotone Co., Inc.
STAR J
 Haynes Stellite Co.
 Unit of Union Carbide & Carbon Corp.
STATI-CLEAN
 Electrovox Co., Inc.
STATIFLUX
 Magnaflex Corp.
STATOMIC
 Motorola Inc.
STA-TRAN
 Stanwyck Winding Co.
STAVOLT
 McColpin-Christie Corp.
STEACAP
 Micamold Radio Corp.
STEELAGE
 Corry Jamestown Mfg. Co.
STEEL-SET
 Paisley Products, Inc.
STEMAG
 Arnhold Ceramics, Inc.
STEMCO
 Stevens Mfg. Co., Inc.
STENAFAX
 Times Facsimile Corp.
STENO
 Crescent Industries, Inc.
STENOVVOX
 Berlant Associates
STERILAMP
 Westinghouse Electric Corp.
STERILZONE
 Dillons Labs.
STERLING CABLES
 Beam Instruments Corp.
STERLINE
 Cossor (Canada) Ltd.
STERLING CABLES
 Cossor (Canada) Ltd.
STETHERTRON
 Maico Co., Inc.
STETHOSCOPE
 Feller Engineering Co.
STEWVOVOX
 Berlant Associates
STIKON
 Ruge-De Forest, Inc.
STILBEST
 Linick Chemical Co.
STIMSONITE
 A'G'A' Division of Elastic Stop Nut Corp. of America
STOLLBERG
 Associated American Trading Division
STOKATIMER
 Mercoid Corp.
STONEHART
 Titeflex, Inc.
STRAIN ANALYZER
 Brush Electronics Co.
STRAINALYZER
 Electronic Tube Corp.
STRATE-LINE
 Radiart Corp.
STRATOGRAPH
 Panoramic Radio Products, Inc.
STRATOLLNET
 Shure Brothers
STRATOPAX
 Cook Electric Co.
STRATO RAY
 Fretco Inc.
STRATOSCOPE
 Panoramic Radio Products, Inc.
STRATOVISION
 Westinghouse Electric Corp.
STREAMLINER
 Ozalid Div.
 General Aniline & Film Corp.
STREAMLINER
 Precision Scientific Co.
STRESSCOAT
 Magnaflex Corp.
STRING-A-LITE
 Joy Mfg. Co.
STRILINE
 Airborne Instruments Lab., Inc.
STRIPMASTER
 Ideal Industries, Inc.
STRIPOHM
 Ward Leonard Electric Co.
STRIPSOL
 Paisley Products, Inc.
STROBOCONN
 Conn. Ltd., C. G.
STROBODYNE
 Sperry Gyroscope Co. Div of
 The Sperry Corp.
STROBOFLASH
 General Radio Co.
STROBOLUX
 General Radio Co.
STROBONAR
 Heiland Research Corp.
STROBOTAC
 General Radio Co.
STROWDER
 Automatic Electric Co.
STRUX
 du Pont de Nemours & Co., Inc., E. I.
STUPALITH
 Stupakoff Ceramic & Mfg. Co.
STURTEVANT
 Westinghouse Electric Corp.
STYCAST
 Emerson & Cuming, Inc.
STYRACON
 Sprague Electric Co.
STYRALOY
 Dow Chemical Co.
STYRAMIC
 Monsanto Chemical Co.
STYROFLEX
 Natvar Corp.
STYROFLEX
 Phelps Dodge Copper Products Co.
STYROFOAM
 Dow Chemical Co.
STYRON
 Dow Chemical Co.
SUB-CYCLE
 Lorain Products Corp.
SUB-MINI-SHIELD
 Staver Co., Inc.
SUBOWNER
 United Transformer Co.
SUBURBAN
 Radion Corp.
SUB SUBOWNER
 United Transformer Co.
SUNFLASH
 Kemlite Labs.
SUNSWITCH
 Ripley Co., Inc.
SUPER
 Union Electric & Mfg. Co.
SUPER AUTOBOOSTER
 Industrial Television, Inc.
SUPER B
 Ozalid Div.,
 General Aniline & Film Corp.
SUPER-BEAM
 JFD Mfg. Co., Inc.
SUPER-CAP
 United Electronic Mfg. Corp.
SUPER DAVOHM
 Daven Co.
SUPER EX.
 Telrex Inc.
SUPER ROYAL
 Permoflux Corp.
SUPER SNIFFER
 Nuclear Instrument & Chemical Corp.
SUPER SURGE
 Condenser Manufacturers, Inc.
SUPERFLAKE
 Superior Flake Graphite Co.
SUPERIOR
 Eagle Electric Mfg. Co., Inc.
SUPERIOR
 Radiart Corp.
SUPERIOR
 Wall Mfg. Co.
SUPERJET
 J F D Mfg. Co., Inc.
SUPERMALLOY
 Arnold Engineering Co.
SUPER PRO
 Hammarlund Mfg. Co.
SUPER Q
 Guthman, Inc., Edwin I.
SUPERSEC
 U S Rubber Co.
SUPERSONIC
 Dzus Fastener Co., Inc.
SUPERSONIC REFLECTSCOPE
 Sperry Products Inc.
SUPER-STRUCTURE
 Radiart Corp.
SUPERTEENNA
 TennaLab
SUPERTESTER
 Color Television, Inc.
SUPER TRACER
 Precision Electronics
SUPERTROL
 Control Corp.
SUPERVAC
 Central Scientific Co.
SUPERVIEW
 Brach Mfg. Corp.
SUPER-VISION
 Davis Electronics
SUPERWIRE
 Audar Inc.
SUPER-X
 Camburn, Inc.
SUPER-X
 Telrex, Inc.
SUPER VEE
 Radiart Corp., The
SUPREME
 Grant Pulley & Hardware Co.
SUPRO
 Valco Mfg. Co.
SURCO
 Surprenant Mfg. Co.
SURFLENE
 Surprenant Mfg. Co.
SURFLON
 Surprenant Mfg. Co.
SURE FLUX
 New York Solder Co.
SURFACE-ANALYZER
 Brush Electronics Co.
SURFLEX
 Surprenant Mfg. Co.
SURGYTHERM, JR.
 Wappler, Inc.
SWEATLESS
 Paisley Products Inc.
SWEEPMASTER
 Manufacturers Engineering & Equipment Co.
SWEET
 Jensen Industries, Inc.
SWELTERPROOF
 Roanwell Corp.
SWIFTOL
 Southwest Products, Inc.
SWING-OVER
 Tel-A-Ray Enterprises, Inc.
SWING-WA
 Trumbull Dept. of General Electric Co.
SWITCH-LITE
 Littelfuse, Inc.
SWITCHMAT
 Recora Co.
SWITCH-O-LITE
 Hoffman Engineering Corp.
SWIVEL BEAM
 Radio Merchandise Sales, Inc.
SWIVEL BOW
 Radio Merchandise Sales, Inc.
SWIVELTOP
 Moody Machine Products Co., Inc.
SYLPHON
 Fulton Syphon Div.,
 Robertshaw-Fulton Controls Co.
SYLVALOY
 Driver Co., Wilbur B.
SYMBOSTAMP
 Griffin Co., John
SYMPHONY MASTER
 Monitor Products Co.
SYNCHRO-METER
 Bailey Meter Co.
SYNCHRO-SPECIAL
 Heiland Research Corp.
SYNCO
 Snyder Chemical Corp.
SYNCO-TIMER
 Pratt & Whitney Div. Niles-Bement-Pond Co.
SYNCHRON
 Hansen Mfg. Co., Inc.
SYNCHROTRON
 Westinghouse Electric Corp.
SYNCHRO-VALVE
 Bristol Co., The
SYNCHROVERTER
 Bristol Co., The
SYNCRGARS
 U S Electrical Motors, Inc.
SYNCHROGEN
 Ampitronix Inc.
SYNCROLL DRIVE
 Fairchild Recording Equipment Co.
SYNCRIO-MARKER
 Electro Products Labs.
SYNCRIMOUNT
 Giannini & Co., Inc., G. M.
SYNCRIPLEX
 Television Equipment Corp.
SYNCRIPRINTER
 Analex Corporation
SYNCRIO TIMER
 Pratt & Whitney Div. Niles-Bement-Pond Co.
SYNCHRO-TUNER
 Short Wave Plastic Forming Co.
SYNCHRO-TUNER
 Woodwelding, Inc.
SYNCHRO-VALVE
 Bristol Co., The
SYNCHROVERTER
 Bristol Co., The
SYNCTRON
 Dormitzer Electric Co., Inc.
SYNKOTE
 Plactoid Corp.
SYNRUB
 U S Rubber Co.
SYNTHINOL
 Consolidated Wire & Associated Companies
SYNTHINOL
 Rome Cable Corp.
SYNTHOGRAPHIC
 Synthane Corp.
SYNTHOLVAR
 Vaplex Corp.
SYROCO
 Syracuse Ornamental Co., Inc.
SYROCOWOOD
 Syracuse Ornamental Co., Inc.
260
 Simpson Electric Co. Div., American
 Gage & Machine Co.
357
 Teleradio Engineering Corp.
T-K
 Tuttle & Kift
TABBY
 Division Lead Co.
TABTRON
 Technical Apparatus Builders
TACO
 Technical Appliance Corp.
TACOPLEX
 Technical Appliance Corp.
TAG
 Weston Electrical Instruments Corp.
TAKK-TRON
 Takk Corp.

TANGLEPROOF
 Hobbs Mfg. Co.
TANNOY
 Beam Instruments Corp.
TANTALEX
 Sprague Electric Co.
TAP
 Continental Screw Co.
TAP-LOK
 Groov-Plin Corp.
TAPE-O-GRAPH
 Audio Industries
TAPE-O-MATIC
 V-M Corp.
TAPE RECORDER
 Ampex Electric Corp.
TAPER-TONE
 Acton Co., H. W.
TAPESONIC
 Premier Electronic Laboratories
TAPE TITE
 Paisley Products Inc.
TAPMASTER
 Sheldon Electric Co.,
 Div. of Allied Electric Products, Inc.
TARRYTRON
 Cook Electric Co.
TATTELITE
 Littelfuse, Inc.
T.C.C.
 Telegraph Condenser Co., Ltd.
TCW
 Tronic Coil Winding Co., Inc.
TEC
 Television Equipment Corp.
TECHNILOG
 University Loudspeakers, Inc.
TECHNILOY
 Technic, Inc.
TECH-TIMER
 Technic Inc.
TECH-TIN
 Technic, Inc.
TECO
 Teleradio Engineering Corp.
TEFLEX
 Boston Insulated Wire & Cable Co.
TEFLON
 du Pont de Nemours & Co., Inc., E. I.
TEFSILON
 Boston Insulated Wire & Cable Co.
T.E.I.
 Thomas Electronics, Inc.
TEKTOLOG
 Fielden Instrument Div., Robertshaw-
 Fulton Controls Co.
TEKTOR
 Fielden Instrument Div., Robertshaw-
 Fulton Controls Co.
TELACOL
 Magnetic Core Corp.
TEL-A-COR
 Magnetic Core Corp.
TELAMP
 Miles Reproducer Co., Inc.
TELCO
 General Cement Mfg. Co.
TELCOARC
 Western Union Telegraph Co.
TELCOHESIVE
 Telegraph Construction &
 Maintenance Co., Ltd.
TELECOMPOUND
 Telegraph Construction &
 Maintenance Co., Ltd.
TELCON
 Telegraph Construction &
 Maintenance Co., Ltd.
TELCONAX
 Telegraph Construction &
 Maintenance Co., Ltd.
TELCONITE
 Telegraph Construction &
 Maintenance Co., Ltd.
TELCONNECTORS
 Telegraph Construction &
 Maintenance Co., Ltd.
TELCONSTAN
 Telegraph Construction &
 Maintenance Co., Ltd.
TELCOSEAL
 Telegraph Construction &
 Maintenance Co., Ltd.
TELCOTHESE
 Telegraph Construction &
 Maintenance Co., Ltd.
TELCOVIN
 Telegraph Construction &
 Maintenance Co., Ltd.
TELCUMAN
 Telegraph Construction &
 Maintenance Co., Ltd.
TELE-ATTEN
 Vidair Electronics Mfg. Co.
TELEBOOSTER
 Television Equipment Corp.
TELECAP
 Sprague Electric Co.
TELECOMMAND
 Flader, Inc., Fredric
TELECONTROL
 Teletronic Laboratories, Inc.
TELECORD
 Whitney Blake Co.
TELECORD SYSTEM
 Dictaphone Corp.
TELECODER
 Telecomputing Corp.
TELECORDEX
 Telecomputing Corp.
TELECOUPLER
 Television Equipment Corp.
TELE-COUPLER
 Vidair Electronics Mfg. Co.
TELECUE
 Telechrome Inc.
TELEDELTO
 Western Union Telegraph Co.
TELEDIPHONE
 Edison, Inc., Thomas A.
TELEDUCER
 Telecomputing Corp.
TELEDUCT
 Whitney Blake Co.
TELEDYNE
 Flader, Inc., Fredric
TELEFAX
 Western Union Telegraph Co.
TELEFLIGHT
 Flader, Inc., Fredric
TELEFRAME
 Whitney Blake Co.
TELEGLAS
 Pittsburgh Plate Glass Co.
TELEHOME
 Webster Electric Co.
TELEKRYPTON
 Western Union Telegraph Co.
TELEMASTER
 Television Equipment Corp.
TELEMETROSCOPE
 Tobe Deutschmann Corp.
TELEMIKE
 Miles Reproducer Co., Inc.
TELEMOBILE
 Tele-Ex-Pand Corp.
TELEPAGE
 Webster Electric Co.
TELEPHOTO
 Acme Electronix Div. of
 NEA Service, Inc.
TELEPLATE
 Whitney Blake Co.
TELE-PLEX
 J F D Mfg. Co., Inc.
TELEPLOTTER
 Telecomputing Corp.
TELEPOT
 Paul & Stein Bros., Inc., F. H.
TELEPRENE
 Whitney Blake Co.
TELEREADER
 Telecomputing Corp.
TELEREADDEX
 Telecomputing Corp.
TELE-ROTOR
 Radiart Corp.
TELESEAL
 Whitney Blake Co.
TELESET
 Telex, Inc.
TELESONIC
 U. S. Television Mfg. Corp.
TELESPATCH
 Webster Electric Co.
TELESPEAKER
 Telex, Inc.
TELESYMPHONIC
 U. S. Television Mfg. Corp.
TELESYN
 Ford Instrument Div.,
 The Sperry Corp.
TELETALK
 Webster Electric Co.
TELE THERM
 Westinghouse Electric Corp.
TELE-THERMOMETER
 Yellow Springs Instrument Co., Inc.
TELETORQUE
 Kollsman Instrument Corp.
TELETRONS
 DuMont Laboratories, Inc.,
 Allen B.
TELETUNER
 Mallory & Co., Inc., P. R.
TELEVAC
 Fredericks Co., Geo. E.
TELEVANES
 Ward Products Corp., Div.
 The Gabriel Co.
TELEVERTER
 James Vibrapowr Co.
TELE-VIDER
 Electro-Voice, Inc.
TELEVOICE
 Edison Inc., Thomas A.
TELEVOLT
 Sola Electric Co.
TELEVOLTER
 Jackson Electrical Instrument Co.
TELEVOX
 Westinghouse Electric Corp.
TELEVIC
 Chase Brass & Copper Co., Inc.
TEL-OHMIKE
 Sprague Electric Co.
TELOJECTOR
 Gray Research & Development Co., Inc.
TELOP
 Gray Research & Development Co., Inc.
TEL-ROD
 Television Laboratories, Inc.
TELSTOR
 Fielden Instrument Div., Robertshaw-
 Fulton Controls Co.
TEL-TENNA
 Television Laboratories, Inc.
TELVAC
 Television Accessories Co.
TELVAR
 Audar, Inc.
TEMCO
 Transmitter Equipment Mfg. Co., Inc.
TEMFLEX 105
 Irvington Varnish & Insulator
 Div. of Minnesota Mining & Mfg. Co.
TEMP COP
 Micro Switch
TEMPERATURE COMPENSATOR "30"
 Carpenter Steel Co., The
TEMPROOF
 Lord Mfg. Co.
TEMP-R-TAPES
 Connecticut Hard Rubber Co.
TEMSTART
 Synchro Start Products, Inc.
TENITE
 Eastman Chemical Products, Inc.
TENITE I
 Eastman Chemical Products, Inc.
TENITE II
 Eastman Chemical Products, Inc.
TENNA-CLAMP
 Mueller Electric Co.
TENNA CLIP
 Industrial Television, Inc.
TENNA COUPLER
 Industrial Television, Inc.
TENNA-ROTOR
 Alliance Mfg. Co.
TENNA-SCOPE
 Alliance Mfg. Co.
TENNA-TOP
 Electro-Voice, Inc.
TENNEYZPHERE
 Tenney Engineering, Inc.
TENSITE
 Driver Co., Wilbur B.
TENSOLEX
 Tensolite Insulated Wire Co.
TENSOLON
 Tensolite Insulated Wire Co., Inc.
TENS-O-TROL
 Dillon & Co., Inc., W. C.
TENSULATED
 Tensolite Insulated Wire Co., Inc.
TERMALINE
 Bird Electronic Corp.
TERMEND
 Buchanan Electrical Products Corp.
TERMIN O SEAL
 Wolfe Co., Inc., Franklin C.
TERRMETER
 Engineering Research Corp.
TERVAN
 Esso Standard Oil Co.
TESCO
 Eastman Specialty Co.
TESTLITE-FUSPUL
 Dante Electric Mfg. Co.
TEST MASTER
 Precision Apparatus Co., Inc.
TEST-MIKE
 Cornell-Dubilier Electric Corp.
TEST-O-LITES
 Brach Mfg. Corp.
TEST-MASTER
 Precision Apparatus Co., Inc.
TEXCEL
 Permacel Tape Corp.
TEXTOLITE
 General Electric Co.
THELCO
 Precision Scientific Co.
THERACOUPLER
 Marconi Instruments Ltd.
THERA-RAY
 Edin Co., Inc.
THERATHERM
 Marconi Instruments Ltd.
THERLO
 Driver-Harris Co.
THERMALARM
 Eastern Specialty Co.
THERM-A-NEERING
 Westinghouse Electric Corp.
THERMATRON
 Radio Receptor Co.
THERMEX
 Girdler Corp., A Div. of National
 Cylinder Gas Co.
THERMOCAP
 Niagara Electron Laboratories
THERMOCONTACT
 Rahm Instruments, Inc.
THERMO-COUSTI
 Thompson Co., H. I.
THERMO-FLEX
 Short Wave Plastic Forming Co.
THERMO-FLEX
 Woodwelding, Inc.
THERMO-GRIP
 Ideal Industries, Inc.
THERMOGUARD
 Westinghouse Electric Corp.
THERMOHM
 Leeds & Northrup Co.
THERMO-HUMIDIGRAPH
 Bristol Co., The
THERMOIL-GRANODINE
 American Chemical Paint Co.
THERMOLAIN
 Star Porcelain Co.
THERMO-LO
 Farrelloy Co.
THERMOMETAL
 Wilson Co., The, H. A.
THER-MONIC
 Induction Heating Corp.
THERMOPATCH
 Cox & Co., Inc.
THERMOPLAX
 Cutler-Hammer, Inc.
THERMOPRENE
 Whitney Blake Co.
THERMOSEN
 Sorensen & Co.
THERMOSHEET
 Cox & Co., Inc.
THERMATOOL
 New Rochelle Tool Corp.
THERMO-SNAP
 Spencer Thermostat Div. Metals &
 Controls Corp.
THERMOLYTIC
 Micamold Radio Corp.
THERMOSTAT
 Fenwal, Inc.
THERMOSWITCH
 Fenwal, Inc.
THERMO-TIP
 Ideal Industries, Inc.
THERM-OTROLS
 Barber-Colman Co.
THERMOVERTER
 Bristol Co., The
THERMOWIRE
 Cox & Co., Inc.
THERMU-TROL
 Mu Switch Div., Arco Switch Co.
THESAURUS
 Radio Corp. of America
3100
 Eberhard Faber Pencil Co.
3110
 Eberhard Faber Pencil Co.
THORDARSON
 Meissner Mfg. Div.,
 Maguire Industries, Inc.
THRED-LOCK
 Continental Screw Co.
THREDMOUNT
 National Union Radio Corp.
3-IN-1
 J F D Mfg. Co., Inc.
THREE-PHASE
 Sciaky Bros., Inc.
THROTTLTROLS
 Barber-Colman Co.
THRULINE
 Bird Electronic Corp.
THRURAY
 Sperry Products, Inc.
THYRITE
 General Electric Co.
THYR-X
 Liebel-Flarsheim Co.
TIDLETRIK
 American Lava Corp.
TIGER
 American Steel & Wire Div.,
 U. S. Steel Corp.
TI-MATCH
 Camburn, Inc.
TI-MATIC
 Westinghouse Electric Corp.
TIME AID
 Paragon Electric Co.
TIMEFAX
 Times Facsimile Corp.
TIME-IT
 Precision Scientific Co.
TIME-MASTER
 Dictaphone Corp.
TIME-O-GRAF
 Borg Equipment Div.,
 George W. Borg Corp.
TIME-O-LITE
 Industrial Timer Corp.
TIME-O-SWITCH
 Minneapolis-Honeywell Regulator Co.
TIM-U-LATOR
 Gorrell & Gorrell
TINOL
 American Solder & Flux Co.
TINY FORMER
 Gramer Transformer Corp.
TINY-GLOW
 Industrial Devices, Inc.
TINYMIKE
 Cornell-Dubilier Electric Corp.
TINYMITE
 Renbrandt, Inc.
TINY TIM
 Shure Brothers
TINYTRAN
 Standard Transformer Corp.
TIOGA
 Sheldon Electric Co., Div.,
 Allied Electric Products, Inc.
TIPS
 Electronic Products Co.
TIREX
 Simplex Wire & Cable Co.
TITAN
 Sonotone Corp.
TITE-BIND
 Thomas & Betts Co.
TITEGRIP
 Dante Electric Mfg. Co.

ITE-TUFF Shoe Form Co., Inc.
ITONE Sonotone Corp.
TRILOG Consolidated Engineering Corp.
TRIMETER Fisher Scientific Co.
TROMETER Precision Scientific Co.
W. Paisley Products Inc.
UBE Tobe Deutschmann Corp.
UCCO Ohio Crankshaft Co.
UCCOTROL Ohio Crankshaft Co.
UCCOTRON Ohio Crankshaft Co.
UKAVOX Cooper Electronics Products Co.
UM THUMB Automatic Radio Mfg. Co., Inc.
UMAHAWK Sangamo Electric Co.
UMAHAWK Stevens-Walden, Inc.
UNEPAK Lee Electric Co.
UNETEX Electro-Voice, Inc.
UNG TEST Columbia Electric Mfg. Co.
UNG TEST Martindale Electric Co.
UP HAT Times Facsimile Corp.
UP-LAY Metals & Controls Corp., General Plate Div.
UPHET Driver Mfg. Co., Wilbur B.
UPPER Camburn, Inc.
URKMASTER Tork Clock Co., Inc.
URKOTHERM Tork Clock Co.
UROYD Associated American Trading Division
URPOT Electro-Mec Laboratory
URQUE DRIVE Electro-Voice, Inc.
URSIOGRAPH Commercial Research Labs., Inc.
RSIOMETER Commercial Research Labs., Inc.
URCH-TIMER Kay Electric Co.
URC-KAHL Sightmaster of California Co.
UR2 ROTOR Radiart Corp.
URADIO Trad Television Corp.
URADIOPHONE Trad Television Corp.
URADIOVISION Trad Television Corp.
URADITION Staedtler Inc., J. S.
URADITION-CHROMA Staedtler, Inc., J. S.
URAFF-O-MATIC Automatic Signal Div., Eastern Industries, Inc.
URAILBLAZER Sangamo Electric Co.
URAIN EAR Maico Co., Inc.
URANCELL Johns-Manville
URAN-COR Armco Steel Corp.
URANCORS Lenkurt Electric Co., Inc.
URANS-TEL Calbest Engineering & Electronics Co.
URANSALYZER Kay Electric Co.
URANSALOID Haloid Co., The
URANSAMP Electronic Research Associates, Inc.
URANSCEMENT Brociner Electronics Laboratory
URANSFAX Eastman Kodak Co.
URANSFILTER Brush Electronics Co.
URANSFLEX Irvington Varnish & Insulator Div. of Minnesota Mining & Mfg. Co.
URANSI-MAG Magnetic Amplifiers, Inc.
URANSIST-EAR Maico Co., Inc.
URANSITE Johns-Manville
URANSITONE Philco Corp.
URANSKOTE Pancro Mirrors, Inc.
TRANSLUCTANCE Remler Co., Ltd.
TRANS-O-METER Westinghouse Electric Corp.
TRANSPAC Electronic Research Associates, Inc.
TRANOLSEAL Johns-Manville
TRANSTAT Standard Electronics Corp.
TRANSTESTER Transistor Products, Inc.
TRANSVERTER Hertner Electric Co.
TRAV-ELECTRIC Terado Co.
TRAVELLER JFD Mfg. Co., Inc.
TRAVERTONE Armstrong Cork Co.
TRAVIS TAPAK Broadcast Equipment Specialties Corp.
TRELCO Transiron Electronic Corp.
TRENTWELD Crucible Steel Co. of America
TRIANGLE T Amalgamated Electronics
TRIAxIAL Jensen Mfg. Co.
TRI-CORE Alpha Metals, Inc.
TRIFLUX Redmond Co., Inc.
TRIG Rostan Corp.
TRIG-R-HEAT Wall Mfg. Co.
TRI-IND-X Triplett & Barton, Inc.
TRI-LOK Boots Aircraft Nut Corp.
TRIM TROL Airborne Accessories, Inc.
TRIMPOT Bourns Laboratories
TRIMTHERM General Controls Co.
TRI-NON Perkin-Elmer Corporation, The
TRI-O-MATIC V-M Corp.
TRIONODE Walkirt Co.
TRIONIZED AIR Trion, Inc.
TRI-O-SPEED V-M Corp.
TRIONIC Clarkstan Corp.
TRIPLAX Plax Corp.
TRI-PLEX Jensen Mfg. Co.
TRIPLOC Pyle-National Co.
TRI-SNAP Westinghouse Electric Corp.
TROLLEYPHONE Farmers Engineering & Mfg. Co.
TROMBONE Ward Products Corp., Div. The Gabriel Co.
TRONEX Wheaton Co., T. C., Electronic Div
TROPICAP Micramold Radio Corp.
TRUARC Waldes Kohinoor Inc.
TRUCOPYPHOTE General Photo Products Co.
TRUE-BRAND Carboneau Industries, Inc.
TRU FIDELITY Meissner Mfg. Div., Maguire Industries, Inc.
TRUFLEX Metals & Controls Corp., General Plate Division
TRU-FLEX Peerless Photo Products
TRU-GRAF Peerless Photo Products
TRU-GROUND Allen Mfg. Co.
TRU-GUIDE Model Engineering & Mfg., Inc.
TRU-LAY American Chain & Cable Co., Inc.
TRULUME Reeves Soundcraft Corp.
TRU-OHM Model Engrng. & Mfg. Co.
TRUSCON Republic Steel Corp.
TRUSHADE Technic, Inc.
TRU-SONIC Stephens Mfg. Corp.
TRU-VAC Continental Electric Co.
TRYLON Wind Turbine Co.,
TUBE-MASTER Precision Apparatus Co., Inc.
TUBE-U-LAR Pyramid Electric Co.
TUBE VISE Precision Plastic Products, Inc.
TUCK-AWAY JFD Mfg. Co., Inc.
TUFFERNELL Westinghouse Electric Corp.
TUFFY Insulation Manufacturers Corp.
TUFLEC Laminated Plastics Inc.
TUF-ON Brooklyn Paint & Varnish Co., Inc.
TUNE-O-MATIC Electro-Voice, Inc.
TUNE-O-MATIC J F D Mfg. Co., Inc.
TURBO Brand & Co., Inc., William
TURBOGLAS Brand & Co., Inc., William
TURBOLAC Brand & Co., Inc., William
TURBOSIL Brand & Co., Inc., William
TURBO PRENE Brand & Co., Inc., William
TURBOTHERM Brand & Co., Inc., William
TURBOTRANS Brand & Co., Inc., William
TURBOTUF Brand & Co., Inc., William
TURQUOISE Eagle Pencil Co.
TWEEZER WELD Federal Tool Engineering Co.
23 CLIPPER Centralab Div. of Globe-Union, Inc.
TWILT Electro-Voice, Inc.
TWIN BLOK United Mfg. & Service Co.
TWIN FAST Blake & Johnson Co.
TWINTACTS Weston Electrical Instrument Co.
TWINTENA Penn Television Products Co.
TWIN-300 Microlab
TWIN-TRAX Amplifier Corp. of America
TWIN-TILT Electro-Voice, Inc.
TWINKLER Television Accessories Co.
TWINKORD Ansonia Wire & Cable Co.
TWINSET Telex, Inc.
TWINSULATION U. S. Rubber Co.
TWIN-VISO Sanborn Co.
TWISTAB National Union Radio Corp.
TWISTAGUIDE Airtron, Inc.
TWIST-LOCK Harvey Hubbell, Inc.
TWIST-LOK Sprague Electric Co.
TWIST-MOUNT Pyramid Electric Co.
TWIST-TITE Harvey Hubbell, Inc.
215 Hartley Co., Inc., H. A.
TWOFOLD Mitchell Industries, Inc.
TWO-TIMER Bristol Motor Div. Vocaline Company of America, Inc.
TY-DOWN Air Associates, Inc.
TYGON U. S. Stoneware Co.
TYGORUST U. S. Stoneware Co.
TYGOTHENE U. S. Stoneware Co.
TY-LOK Air Associates, Inc.
TYNISWITCH Sessions Clock Co.
TYMIT Tork Clock Co.
TYNEE-DRY Pyramid Electric Co.
TYPE-O-WRITER Kellogg Switchboard & Supply Co.
TYPE "R" RESISTOR Telewave Labs., Inc.
TY-PLY Marbon Corp.
TZUCOPY PHOTE General Photo Products Co., Inc.
UBAPOL Union Bay State Chemical Co.
UCINITE United Carr Fastener Corp.
U CON Mucon Corp.
U-GRIP Aircraft-Marine Products, Inc.
ULTRA Camburn, Inc.
ULTRA-BEAM Camburn, Inc.
ULTRABOOSTER Blonder-Tongue Laboratories, Inc.
ULTRA-CAL Cubic Corp.
ULTRACOMPACT United Transformer Co.
ULTRA-FORMER Kay Electric Co.
ULTRA-GEN Alcar Instruments, Inc.
ULTRA LINEAR Acro Products Co.
ULTRA-MARKER Kay Electric Co.
ULTRA-PIX Kay Electric Co.
ULTRASCALER Nuclear Instrument & Chemical Corp.
ULTRASONORATOR Crystal Research Labs., Inc.
ULTRA-SWEEP Kay Electric Co.
ULTRATONE Audio Industries, Inc.
ULTRATUNER B-T Mfg. Corp.
ULTRAVERTER Blonder-Tongue Laboratories, Inc.
ULTRA V-BEAM J F D Mfg. Co., Inc.
ULTRA VISCOSON Rich-Roth Laboratories
ULTRON Monsanto Chemical Co.
UMP Illinois Condenser Co.
UNBRAKO Standard Pressed Steel Co.
UNDARK U. S. Radium Corp.
UNECAP United Electronic Mfg. Corp.
UNIBALLASTS National Union Radio Corp.
UNI-BRIDGE Industrial Electronics, Inc.
UNICAST Redmond Co., Inc.
UNI-CHASSIS Uni-Products Div. of Uni-Science, Inc.
UNICLOSED U. S. Electrical Motors, Inc.
UNICON United Condenser Corp.
UNI-CRIMP Sherman Mfg. Co., H. B.
UNIDYNE Shure Brothers, Inc.
UNIFLARE Scovill Mfg. Co.
UNI-FLEX Dumore Co., The
UNIELECTRIC United Mfg. & Service Co.
UNIFLEX Miskella Infra-Red Co.
UNI-FLO Barber-Colman Co.
UNIFORMITY ANALYZER Brush Electronics Co.
UNILINE Cascade Research Corp.
UNIMATIC Calbest Engineering & Electronics Co.
UNIMATIC Unitek Corp.
UNIMAX Maxson Corp., W. L.
UNION National Union Radio Corp.
UNION Jefferson Electric Co.
UNIONMELT Linde Air Products Co., Unit of Union Carbide & Carbon Corp.
UNIPLEX Burgess Battery Co.
UNIPLEX Shure Brothers, Inc.
UNIPOINT Shure Brothers, Inc.
UNIPOLE Andrew Co.
UNIREG Universal Electronics Co.
UNI-SHAFT Mallory & Co., Inc., P. R.
UNITACT Bristol Co., The
UNITONE Duotone Co., Inc.
UNIVERSAL Johns-Manville

UNIVERSAL
 Mueller Electric Co.
UNIVERSAL
 Brush Electronics Co.
UNIVERSAL BRIDGE SWITCH
 Brush Electronics Co.
UNIVERSAL MASTER
 Hovis Screwlock Co.
UNIVERTER
 Boonton Radio Corp.
UNIVIBES
 National Union Radio Corp.
UNIVIS
 Esso Standard Oil Co.
UNIVOLT
 Esso Standard Oil Co.
UNLIMITET
 Northern-Zaleski, Ltd.
UPPCO
 United Pressed Products Co.
UPSON
 Republic Steel Corp.
URAC
 American Cyanamid Co.
URELITE
 I-T-E- Circuit Breaker Co.
U.S.E.
 U. S. Electronics Corp.
USG
 U. S. Graphite Co. Div. of
 The Wickes Corp.
UST
 U. S. Television Mfg. Corp.
USALITE
 Stupakoff Ceramic & Mfg. Co.
USECO
 U. S. Engineering Co.
USEMENT
 U. S. Rubber Co.
USEX
 U. S. Rubber Co.
USEX ABBOSEALED
 U. S. Rubber Co.
USKORNA
 U. S. Rubber Co.
USPREME
 U. S. Rubber Co.
USRUB
 U. S. Rubber Co.
USS
 United States Steel Corp.
U.S.S. AMERICAN
 American Steel & Wire Co.
UTC
 United Transformer Corp.
UTE
 Sangamo Electric Co.
UTILASTIC
 Paisley Products, Inc.
UTILICON
 Diamond Power Specialty Corp.
UTILIPHONE
 National Electronic Labs., Inc.
UTILISCOPE
 Diamond Power Specialty Corp.
UTILITYURE
 Aluminum Co. of America
UTONE
 Utah Radio Products Co., Inc.
UYCOR
 Corning Glass Works

V-HEAT
 Electric Eye Equipment Co.
V-KING
 Schott Co., Walter L.
VACOMBO
 Vaco Products Co.
VAGABOND
 Shure Brothers, Inc.
VALEN CO.
 Valley Engineering Co.
VALVRATORS
 Fischer & Porter Co.
VALVSEAL
 Richardson Co., The
VAN de GRAAFF
 High Voltage Engineering Corp.
VAPO
 Post Co., Frederick
VAREC
 Vapor Recovery Systems Co.
VARFLO
 Varflex Corp.
VARGLAS
 Varflex Corp.
VARIAC
 General Radio Co.
VARIATEN
 Shalcross Mfg. Co.
VARICELL
 Superior Electric Co., The
VARICON
 Elco Corp.
VARICON
 Variable Condenser Corp.
VARIDRIVES
 U. S. Electrical Motors, Inc.
VARIETY
 Electron Enterprises
VARIFILE
 Photographic Products, Inc.
VARI-LOOPSTICK
 Superex Electronics Corp.

VARIMATCH
 United Transformer Corp.
VARIPLLOTTER
 Electronic Associates, Inc.
VARIPOLE
 Califone Corp.
VARIPOWER
 United Transformer Corp.
VARISPEED
 Audio-Master Corp.
VARI-SPLITTER
 McLaughlin Corp., J. L. A.
VARITONE
 Flader, Inc., Fredric
VARITRAN
 United Transformer Corp.
VARITRON
 Photographic Products, Inc.
VARITRONIC
 Electrons Equipment Corp.
VARITYMER
 Gale Dorothea Mechanisms
VARSIL
 New Jersey Wood Finishing Co.
VARIVOLT
 Halldorson Co., The
VARSLOT
 New Jersey Wood Finishing Co.
VASCO
 Mitchell Industries, Inc.
VARTEX
 New Jersey Wood Finishing Co.
VAW
 Fluke Mfg. Co., Inc., John
VDA "100"
 Eastern Precision Resistor Corp.
VECO
 Victory Engineering Corp.
VECTORLYZER
 Advance Electronics Co.
VECTRONIC
 Vectron, Inc.
VEECO
 Vacuum Electronic Engineering Co.
VEE-D-X
 LaPointe Electronics Inc.
VEGETOL
 Cornell-Dubilier Electric Corp.
VEGIMAL
 Paisley Products, Inc.
VELOMETER
 Illinois Testing Labs, Inc.
VELOUR-BLACK
 Sheldon Electric Co. Div of
 Allied Electric Products, Inc.
VENDLITES
 Drake Mfg. Co.
VENTURI-FLO
 Barber-Colman Co.
VERICON
 Remington Rand, Inc.
VERI-TELL
 West Instrument Corp.
VERITHERM
 Kelk & Co., G. F.
VERITHIN
 Eagle Pencil Co.
VERNIER-SET
 Automatic Temperature Control Co., Inc.
VERNISTAT
 Perkin-Elmer Corporation, The,
VERSACONE
 Radio Merchandise Sales
VERSA-LINER
 Peck & Harvey
VERSALITE
 U. S. Rubber Co.
VERSALEX
 Shure Brothers
VERSA-TOOL
 Phillips Mfg. Co., Inc.
VIBESTON
 U. S. Rubber Co.
VIBRAGLASS
 Glass Fibers, Inc.
VIBRALLOY
 Arnold Engineering Co.
VIBRALYZER
 Kay Electric Co.
VIBRAPAK
 Mallory & Co., Inc., P. R.
VIBRASENDER
 Motorola Inc.
VIBRA-SHOCK
 Robinson Aviation, Inc.
VIBRASPOUNDER
 Motorola Inc.
VIBRATAB
 Teicomputing Corp.
VIBROGROUND
 Associated Research Inc.
VIBROMETER
 Televisio Products, Inc.
VIBROMIKE
 Brush Electronics Co.
VIBROTEST
 Associated Research, Inc.
VICALLOY
 Arnold Engineering Co.
VICTOR
 Radio Corp. of America
VICTROLA
 Radio Corp. of America
VICTRON
 Victor Electric Products, Inc.
VIDECO
 Dresser-Stacey Co.

VIDEO BEAM
 Camburn, Inc.
VIDEO DESIGNS
 Yonkers Industries
VIDEOCOUPLER
 Mallory & Co., Inc., P. R.
VIDEOFILM
 General Precision Laboratory, Inc.
VIDEOGAM
 General Precision Laboratory, Inc.
VIDEOLA
 Tech-Master Products Co.
VIDEOLUX
 Video Corp. of America
VIDEOMETER
 Hickok Electrical Instrument Co.
VIDEOPTICS
 Burke & James, Inc.
VIDEOSET
 Video Corp. of America
VIDEOSTIGMAT
 Burke & James, Inc.
VIDEOTRON
 National Union Radio Corp.
VIDIGAGE
 Branson Instruments, Inc.
VIDI MASTER
 Communication Measurements Lab., Inc.
VIEWLITE
 Viewlex Inc.
VIEWMATIC
 Viewlex Inc.
VIEWTALK
 Viewlex Inc.
VIKANE
 Cornell-Dubilier Electric Corp.
VIKING
 Jensen Mfg. Co.
VIKING
 Johnson Co., E. F.
VIKING I
 Hudson American Corp.
VIKING II
 Hudson American Corp.
VIMLITE
 Celanese Corp. of America
VINALAK
 Reichhold Chemicals, Inc.
VINAPEX
 Apex Coated Fabrics Co.
VINEX
 Union Plastics Corp.
VINPAK
 Protective Coatings Corp.
VINYL
 Alpha Wire Corp.
VINYLITE
 Bakelite Corp. A Div. of Union Carbide
 & Carbon Corp.
VINYLSEAL
 Bakelite Corp. A Div. of Union Carbide
 & Carbon Corp.
VINYON
 Bakelite Corp. A Div. of Union Carbide
 & Carbon Corp.
VIPOWER
 Cornell-Dubilier Electric Corp.
VIPOWER
 Radlart Corp.
VISABLE PROOF
 Electric Heat Control Co., The
VISAFLAME
 Mercold Corp.
VIS-A-GLOW
 Brach Mfg. Corp.
VISCONOL
 Telegraph Condenser Co., Ltd.
VISCOR
 Weston Electrical Instruments Co.
VISICODE
 Westinghouse Electric Corp.
VISIFOCUS
 Paillard Products Inc.
VISITRON
 Rauland Corp.
VISO-CARDIETTE
 Sanborn Co.
VITAMIN Q
 Sprague Electric Co.
VITATRON
 Sheldon Electric Co. Div. of
 Allied Electric Products, Inc.
VITAVOX
 Padionic Transformer Co.
VITREOSIL
 Thermal Syndicate, Ltd., The
VITROHM
 Ward Leonard Electric Co.
VITROLAIN
 Star Porcelain Co.
VITRON
 Glass Fibers, Inc.
VIZ
 Molded Insulation Co
VOCAL-AIRE
 Diks Co., The
VOCATRON
 Bristol Motor Div.
 Vocalline Company of America, Inc.,
VOICE OF MUSIC
 V-M Corp.
VOICE OF THEATRE
 Altec Lansing Corp.
VOICEWRITER
 Edison Inc., Thomas A.

VOLOCITROL
 Barber-Colman Co.
VOLUMETER
 Electronic Measurements Corp.
VOLTALAC
 Standard-Toch Chemicals, Inc.
VOLT-AMP
 Industrial Devices, Inc.
VOLTASCOPE
 Polarad Electronics Corp.
VOLTBOX
 Superior Electric Co.
VOLTBOX A-C
 Superior Electric Co.
VOLTOHMYST
 Radio Corporation of America
VOLTROL
 Acme Electric Corp.
VOLTRON
 Industrial Synthetics Corp.
VOLTSTAT
 Industrial Transformer Co.
VORCO
 Vorac Co., The
VORLAC
 Vorac Co., The
VOYCALL
 Lake Mfg. Co.
V & S
 Volkens & Schaffer Mfg. Corp.
V-2
 Fretco Inc.
VUELITE
 Monsanto Chemical Co.
VUEPAK
 Monsanto Chemical Co.
VULCATEX
 Horn Co., Inc., A. C.
VULCOID
 Continental-Diamond Fibre Co.
VXER
 Eidico of New York, Inc.
VYCOR
 Corning Glass Works

WAHLQUIST
 Nilsson Electrical Laboratory, Inc.
WALCO
 Electrovox Co., Inc.
WALDEN
 Stevens-Walden, Inc.
WALDES TRUARC
 Waldes Kohlnoor, Inc.
WALKIE-RECORDALL
 Miles Reproducer Co., Inc.
WALSCO
 Schott Co., Walter L.
WAMCO
 Walnut Machine Co.
WARRIOR
 Sangamo Electric Co.
WASSCO
 Wasserlein Mfg. Co., Inc.
WATCHMASTER
 American Time Products, Inc.
WATERWITE
 Bache & Co., Semon
WATTERSON
 Davis & Co., J. W.
WAVEFLEX
 Titeflex, Inc.
WAX S 1167
 Glyco Products Co., Inc.
 W. D. C.
 Paisley Products Inc.
WEAREVER
 Daniels, Inc., C. R.
WEBCOR
 Webster-Chicago Corp.
WEDGE-GRIP
 Sherman Mfg. Co., H. B.
WEDGE-ON
 Thomas & Betts Co.
WEDGIE
 Insulation Manufacturers Corp.
WEIGER-WEED
 Fansteel Metallurgical Corp.
WELDMASTER
 Intek Corp.
WELDRAWN
 Superior Tube Co.
WELDOMATIC
 Westinghouse Electric Corp.
WELD-O-TIMER
 Westinghouse Electric Corp.
WELD-O-TROL
 Westinghouse Electric Corp.
WELDPPOWER
 Raytheon Mfg. Co.
WEMCALLOY
 Westinghouse Electric Corp.
WEMPY
 Westfield Metal Products Co., Inc.
WES CO
 West Coast Electrical Mfg. Corp.
WESGO
 Western Gold & Platinum Works
WESGO AL-300
 Western Gold & Platinum Works
WESGO AL-1009
 Western Gold & Platinum Works
WESLAB
 Weston Laboratories, Inc.
WESTACH
 Westberg Mfg. Co.
WEST-CAP
 San Fernando Electric Mfg. Co.

WESTLINE
 Western Lithograph Co.
WEST TEST
 Automatic Electric Sales Corp.
WETOIL
 Farrelloy Co.
WHARFEDALE
 British Industries Corp.
WHC
 Waltham Horological Corp.
WHELOCK
 Signal Engineering & Mfg. Co.
WHIPPET
 JFD Mfg. Co., Inc.
WINCHESTER
 Olin Industries, Inc.
WILCO
 Wilson Co., The, H. A.
WILCOLEC
 Wilcox Electric Co.
WILCOX-GAY
 Garod Radio Corp.
WILKOR
 Aerovox Corp.
WILLIAMSON "HALLMARK"
 British Radio Electronics Ltd.
WINCO
 Hudson Wire Co.
VINCO
 Wincharger Corp.
VIPERMALLOY
 United Transformer Corp.
WIRECOM
 Cook Electric Co.

WIRE-NUT
 Ideal Industries, Inc.
WIRE-OHM
 Phaestron Co.
WIREFHONE
 Molded Insulation Co.
WIRETONE
 Molded Insulation Co.
WIREWATT
 Ohmite Mfg. Co.
WIREWAY
 Land-Air, Inc.
WIRTCO
 Wirt Co.
WONDERFLUX
 American Silver Co., Inc.
WONDERLING
 Rego Insulated Wire Co.
WOOD GLU
 Paisley Products Inc.
WOODITE
 Syracuse Ornamental Co., Inc.
WOOD RAY
 Short Wave Plastic Forming Co.
WOOD-RAY
 Woodwelding, Inc.
WOODWELDER
 Short Wave Plastic Forming Co.
WOODWELDER
 Woodwelding, Inc.
WORK CENTER
 Alden Systems Co.
WRINLAY
 Photo Chemical Products, Inc.

WYD-ANGLE
 Ess Specialty Corp.
XACTEMP
 Gordon Co., Claud S.
XACTLINE
 Gordon Co., Claud S.
XENOFFLASH
 Triumph Mfg. Co.
XEROX
 Haloid Co., The
XPANDIT
 Photo Chemical Products, Inc.
X-PRESS
 Cook Electric Co.
XRD
 X-Ray Dept. of General Electric Co.
XTALATOR
 Kay Electric Co.
XTE
 Irvington Varnish & Insulator
 Div. of Minnesota Mining & Mfg. Co.
X-VAR
 Fidelity Chemical Products Corp.
X-WASHERS
 Standard Locknut & Lockwashers, Inc.

YANKEE
 Stanley Tools Div., Stanley Works
YARDARM
 Radio Merchandise Sales, Inc.
YELLOW HANDLE
 Aircraft-Marine Products, Inc.
YES
 Yates Engineering Services
YORKMESH
 York Co., Inc., Otto H.

Z ANGLE
 Technology Instrument Corp.
ZAHODIAKIN
 Scovill Mfg. Co.
ZENEL
 Bonney Forge & Tool Works
ZENO-KOTE
 Zenith Optical Lab.
ZERO READER
 Sperry Gyroscope Co. Div.
 of The Sperry Corp.
ZERO-START
 Phillips Mfg. Co., Inc.
ZIPCORD
 U. S. Rubber Co.
ZIP-GRIP
 Set Screw & Mfg. Co.
ZIP-IN
 American Phenolic Corp.
ZIPOMMS
 Muter Co.
ZIPPER
 Centralab Div. of Globe-Union, Inc.
ZIRMET
 Foote Mineral Co.
ZOOMAR
 Television Zoomar Corp.
ZOOM UP
 Camburn, Inc.
ZOOM-UP
 JFD Mfg. Co., Inc.
ZYGLO
 Magnaflex Corp.
ZYROX
 Bakelite Co. A Div. of Union Carbide
 & Carbon Corp.

1954-1955 ELECTRONICS BUYERS' GUIDE

MANUFACTURERS INDEX

A listing of the companies engaged in the manufacture of all types of electronic components and complete electronic equipment. They are alphabetically arranged for convenient use and quick reference.

- A B C Radio Laboratories, 3334 N. New Jersey St., Indianapolis 5, Ind.
- A. C. Transformer Corp., 89 Madison St., Newark, N. J.
- A.C.F. Electronics, Inc., Alexandria, Va.
- A'G'A' Div. of Elastic Stop Nut Corp. of America, 1029 Newark Ave., Elizabeth 3, N. J.
- A. P. W. Co., 72 W. Main St., Rockaway, N. J.
- A. R. F. Products, Inc., 7627 Lake St., River Forest, Ill.
- Abalon Precision Mfg. Corp., 540 Casanova St., Bronx 59, N. Y.
- Accurate Electronics Corp., Courtland Bldg., 1312 Ontario St., Cleveland 13, Ohio.
- Accurate Insulated Wire Corp., 23 Fox St., New Haven, Conn.
- Accurate Mfg. Co., 44 Hepworth Place, Garfield, N. J.
- Accurate Paper Tube Co., 801 N. Peoria St., Chicago 22, Ill.
- Accurate Spring Mfg. Co., 3811 W. Lake St., Chicago, Ill.
- Ace Coil & Electronics Co., 912 Lincoln Highway, Metuchen, N. J.
- Ace Electronics Associates, 125-129 Rogers Ave., Somerville 44, Mass.
- Ace Engineering & Machine Co., Inc., 3642 N. Lawrence St., Philadelphia 40, Pa.
- Ace Plastic Co., 91-54 Van Wyck Expressway, Jamaica 35, N. Y.
- Ace Spring Mfg. Co., 77 W. Houston St., New York 12, N. Y.
- Acheson Colloids Co., 1950 Washington Ave., Port Huron, Mich.
- Ackerman Engravers, 458 Broadway, New York, N. Y.
- Ackerman-Gould Co., 92 Blecker St., New York, N. Y.
- Ackerman-Johnson Co., 625 W. Jackson Blvd., Chicago 6, Ill.
- Acme Battery Co., 59 Pearl St., Brooklyn 1, N. Y.
- Acme Electric Corp., 21 Water St., Cuba, N. Y.
- Acme Electric Heating Co., 1217 Washington St., Boston, Mass.
- Acme Electronics, Inc., 300 N. Lake Ave., Pasadena 4, Calif.
- Acme Electronix Div. of NEA Service, Inc., West Third & Lakeside, Cleveland 13, Ohio.
- Acme Tool & Specialties Co., 224 N. Loomis St., Chicago 7, Ill.
- Acme Wire Co., New Haven 14, Conn.
- Acro-Mu Switch Div., Acro Mfg. Co., Columbus, Ohio.
- Acro Products Co., 369 Shurs Lane, Philadelphia 28, Pa.
- Acro Transformer Mfg. Corp., 26-04 Fourth St., Astoria 2, N. Y.
- Acromark Company, The, 9-13 Morrell St., Elizabeth 4, N. J.
- Actioncraft Products, 8 Sagamore Hill Drive, Port Washington, N. Y.
- Adams & Westlake Co., The, Michigan St., Elkhart, Ind.
- Adel Div. of General Metals Corp., 10777 Van Owen St., Burbank, Calif.
- Adler Communications Laboratories, 1 Le Fevre Lane, New Rochelle, N. Y.
- Admiral Corp., 3800 Cortland St., Chicago 47, Ill.
- Advance Electric & Relay Co., 2435-L N. Naomi St., Burbank, Calif.
- Advance Electronics Co., 451 Highland Ave., Passaic, N. J.
- Advanced Electronics, Inc., 94 Silas Deane Highway, Rocky Hill, Conn.
- Aermotive Equipment Corp., 1632-8 Central St., Kansas City 10, Mo.
- Aero Marine Radio Corp., 135 W. 16th St., New York 11, N. Y.
- Aero Specialties, 85 Prescott St., Worcester, Mass.
- Aerocoil Inc., 24 Cliff St., Jersey City, N. J.
- Aerohm Corp., 282 Moody St., Waltham 54, Mass.
- Aerolite Electronics Corp., 507-26th St., Union City, N. J.
- Aerolux Light Corp., 653 Eleventh Ave., New York 36, N. Y.
- Aeronautical Communications Equipment, Inc., 3090 Douglas Rd., Miami 33, Fla.
- Aeronautical Electronics Inc., Raleigh-Durham Airport, P. O. Box 6043, Raleigh, N. C.
- Aerovox Corp., 740 Belleville Ave., New Bedford, Mass.
- Affiliated Products, Inc., 4802 N. Broad St., Philadelphia 41, Pa.
- Ahrendt Instrument Co., 4910 Calvert Rd., College Park, Md.
- Ainslie Electronic Products, Inc., 312 Quincy Ave., Quincy 69, Mass.
- Air Associates, Inc., Teterboro, N. J.
- Air Control Installations, Ltd., Ruislip, Middlesex, England.
- Airborne Accessories Corp., 1414 Chestnut Ave., Hillside, N. J.
- Airborne Instruments Lab., Inc., 160 Old Country Rd., Mineola, N. Y.
- Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg 10, Pa.
- Aircraft-Marine Products, Inc., Chemicals & Dielectrics Div., 155 Park Ave., Elizabethtown, Pa.
- Aircraft Radio Corp., Doonon, N. J.
- Aircraft Transformer Corp., West & Willow Aves., Long Branch, N. J.
- Airdesign, Inc., 241 Fairfield Ave., Upper Darby, Pa.
- Aireco, Inc., 2315-10 Second Ave., Carmen, Schenectady, N. Y.
- Airflyte Electronics Co., 21 Cottage St., Bayonne, N. J.
- Air-Marine Motors, Inc., 369 Bay View Ave., Amityville, N. Y.
- Airmec, Ltd., High Wycombe, Buckinghamshire, England.
- Air-Mite, 4417 W. Carroll Ave., Chicago 24, Ill.
- Airpax Products Co., Middle River, Baltimore 20, Maryland.
- Airtron, Inc., Dept. H, 1117 W. Elizabeth Ave., Linden, N. J.
- Ajax Condenser Corp., 10905 Chandler Blvd., North Hollywood, Calif.
- Alamo Electronic Corp., 1415 N. Brazos St., San Antonio 7, Texas.
- Alcar Instruments, Inc., 20-21 Wagaraw Rd., Fair Lawn, N. J.
- Alco Electronics Mfg. Co., 3 Wolcott Ave., Lawrence, Mass.
- Alden Electronic & Impulse Recording Equipment Co., Box 125, Westboro, Mass.
- Alden Products Co., 112 N. Main St., Brockton 64, Mass.
- Alden Systems Co., 1 Alden Research Center, Westboro, Mass.
- Alfax Paper & Engineering Co., Washington St., P. O. Box 125, Westboro, Mass.
- All American Tool & Mfg. Co., 8027 Lawndale, Skokie, Ill.
- All Metal Products, 206 McWhorter St., Newark 5, N. J.
- All Star Products, Inc., Defiance, Ohio.
- All-Tronics, Inc., 2 Secatoag Ave., Port Washington, N. Y.
- All Weather Springs, 140 Cedar St., New York, N. Y.
- Allegany Instrument Co., Inc., Cumberland, Md.
- Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
- Allen Co., L. B., Inc., 6751 Bryn Mawr Ave., Chicago 31, Ill.
- Allen-Bradley Co., 136 W. Greenfield Ave., Milwaukee 4, Wis.
- Allen Mfg. Co., Hartford 2, Conn.
- Alliance Mfg. Co., Lakewood Park Blvd., Alliance, Ohio.
- Allied Circuit Products Co., 135 W. 41st St., New York 36, N. Y.
- Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.
- Allied Electric Products Inc., 76 Coit St., Irvington 11, N. J.
- Allied Eng. Div., Allied International Inc., South Norwalk, Conn.
- Allied Industries, Inc., 2500 Woodland Ave., Louisville 10, Ky.
- Allied Mfg. Corp., 605-07 61st St., West New York, N. J.
- Allied Products Div., Hamilton Watch Co., Lancaster, Pa.
- Allied Radio Corp., 833 W. Jackson Blvd., Chicago 7, Ill.
- Allied Recording Products Co., 32-32 Greenpoint Ave., Long Island City, N. Y.
- Allied Research & Engineering Co., 1041 N. Las Palmas, Hollywood, Calif.
- Allies Products Corp., 1028 Connecticut Ave., N. W., Washington 6, D. C.
- Allis-Chalmers Mfg. Co., 935 South 70th St., Milwaukee 1, Wis.
- Allis Co., Louis, 427 E. Stewart St., Milwaukee 7, Wis.
- Allison Laboratories, Inc., 14185 Skyline Drive, Puente, Calif.
- Allmetal Screw Products Co., Inc., 821 Stewart Ave., E., Garden City, N. Y.
- Alloy Metal Wire Co., Div. of H. K. Porter Co., Inc., Prospect Park, Pa.
- Alloy Tube Div. of The Carpenter Steel Co., Union, N. J.
- Alpar Mfg. Co., P. O. Box 152, Redwood City, Calif.
- Alpha Metals, Inc., 60 Water St., Jersey City, N. J.
- Alpha Wire Corp., 430 Broadway, New York 13, N. Y.
- Alproco, Inc., Mineral Wells, Texas.
- Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
- Aluminum Co. of America, Alcoa Bldg., Pittsburgh 19, Pa.
- Aluminum Goods Mfg. Co., Manitowoc, Wis.
- Amalgamated Electronics, Electronics Road, Clinton Corners, N. Y.
- Ambrod Co., 305 Franklin St., Boston 10, Mass.
- Amerac, Inc., 116 Topsfield Rd., Wenham, Mass.
- American Aluminum Company, 374 Jelliff Ave., Newark, N. J.
- American Brass Co., 414 Meadow St., Waterbury 20, Conn.
- American Chain & Cable Co., Inc., 601 Stephenson Bldg., Detroit 2, Mich.
- American Chronoscope Corp., 316 W. First St., Mount Vernon, N. Y.
- American Condenser Co., 4410 Ravenswood Ave., Chicago 40, Ill.
- American Cyanamid Co., 38 Rockefeller Plaza, New York 20, N. Y.
- American Diathermy Products, Inc., 11858 Mississippi Ave., Los Angeles 25, Calif.
- American Electric Motors, Inc., 4811 Telegraph Rd., Los Angeles 22, Calif.
- American Electrical Heater Co., 6110 Cass Ave., Detroit 2, Mich.
- American Electro Metal Corp., 320 Yonkers Ave., Yonkers, N. Y.
- American Electronic Labs., Inc., 641 Arch St., Philadelphia 6, Pa.
- American Electronics Co., 1203-05 Bryant Ave., New York 59, N. Y.
- American Elite Inc., 1775 Broadway, New York 19, N. Y.
- American Fused Quartz Co., Inc., 18-20 Salem St., Dover, N. J.
- American Gas Furnace Co., 130 Spring St., Elizabeth, N. J.
- American Gyro Corp., 3030 Nebraska Ave., Santa Monica, Calif.
- American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
- American Hinge Corp., 206 Wallabout St., Brooklyn 6, N. Y.
- American Instrument Co., 8030 Georgia Ave., Silver Spring, Md.
- American Laubscher Corp., 333 W. 52nd St., New York 19, N. Y.
- American Lava Corp., Chattanooga 5, Tennessee.
- American Leonie Mfg. Co., Amber & Hagert Sts., Philadelphia 25, Pa.
- American Machine & Foundry Co., Electronics Div., 1085 Commonwealth Ave., Boston 15, Mass.
- American Mica Insulation Co., Manasquan, N. J.
- American Microphone Co., 370 S. Fair Oaks Ave., Pasadena 1, Calif.
- American Molded Products Co., 1644 N. Honore St., Chicago 22, Ill.
- American Molding Powder & Chemical Corp., 703 Bedford Ave., Brooklyn 6, N. Y.
- American Monomer Corp., 511 Lancaster St., Leominster, Mass.
- American Optical Co., Box A, Buffalo 15, N. Y.
- American Phenolic Corporation, 1830 S. 54th Ave., Chicago 50, Ill.
- American Photocopy Equipment Co., 1920 W. Peterson, Chicago 26, Ill.
- American Platinum Works, N.J.R.R. Ave. at Oliver St., Newark 5, N. J.
- American Products Mfg. Co., Inc., 8127-33 Oleander St., New Orleans 18, La.
- American Radionic Co., Inc., 33 & 55 Flatbush Ave., Brooklyn, N. Y.
- American Radio Hardware Co., Inc., 152 S. MacQuesten Pkway., Mount Vernon, N. Y.
- American Rectifier Corp., 95 Lafayette St., New York 13, N. Y.
- American Relay & Controls Inc., 3621 Howard St., Skokie, Ill.
- American Research Corp., 11 Brook St., Bristol, Conn.
- American Resinous Chemical Co., 103 Foster St., Peabody, Mass.
- American Screw Co., Willimantic, Conn.
- American Silver Co., Inc., 36-07 Prince St., Flushing 54, N. Y.
- American Sisalcraft Corp., 55 Starkey Ave., Attleboro, Mass.
- American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.
- American Speedlight Corp., 480 Lexington Ave., New York 17, N. Y.
- American Steel & Wire Div., U. S. Steel Corp., Rockefeller Bldg., Cleveland 13, Ohio.
- American Television & Radio Co., 300 E. 4th St., St. Paul 1, Minn.
- American Thermo Electric Co., 198-11 Hollis Ave., Hollis 12, N. Y.
- American Time Products, Inc., 580 Fifth Ave., New York 36, N. Y.
- Amersil Co., Inc., Hillside, N. J.
- Anglo Corp., 2037 W. Division St., Chicago 22, Ill.
- Amperex Electronic Corp., 230 Duffy Ave., Hicksville, N. Y.
- Amperite Co., 561 Broadway, New York 12, N. Y.
- Ampex Electric Corp., 934 Charter St., Redwood City, Calif.
- Amplifier Corp. of America, 396 Broadway, New York 13, N. Y.
- Amplitronix Inc., 280 Ninth Ave., New York 1, N. Y.
- Ampro Corp., 2835 North Western Ave., Chicago 18, Ill.
- Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.

Analytical Measurements, Inc., 585 Main St., Chatham, N. J.

Anatran Engineering Corp., 10 Congress St., Pasadena 2, Calif.

Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.

Anchor Plastics Co., Inc., 36-36 36th St., Long Island City 6, N. Y.

Anchor Radio Co., 2215 S. St. Louis Ave., Chicago 23, Ill.

Andersen Laboratories, Inc., 39 Talcott Rd., West Hartford 10, Conn.

Anderson, Arthur R., 517 North I St., Tacoma 3, Wash.

Anderson & Sons, Inc., Westfield, Mass.

Andrea Radio Corp., 27-01 Bridge Plaza North, Long Island City 1, N. Y.

Andrew Corp., 363 E. 75th St., Chicago 19, Ill.

Anelux Corporation, 150 Causeway St., Boston 14, Mass.

Annis Co., R. B., 1101 N. Delaware St., Indianapolis, Ind.

Anslay Mfg. Co., Arthur, Doylestown, Pa.

Ansonia Wire & Cable Co., The, 63 Main St., Ansonia, Conn.

Antara Chemical Div., General Aniline & Film Corp., 435 Hudson St., New York 14, N. Y.

Anti-Corrosive Metal Products Co., Castleton-on-Hudson, N. Y.

Anton Electronics Laboratories, Inc., 1226 Flushing Ave., Brooklyn 37, N. Y.

Anton Machine Works, 1226 Flushing Ave., Brooklyn 37, N. Y.

Apco Mossberg Co., Attleboro, Mass.

Apex Coated Fabrics Co., 12 E. 22nd St., New York 10, N. Y.

Applied Electronics Co., Inc., 1246 Folsom St., San Francisco 3, Calif.

Applied Physics Corp., 362 W. Colorado St., Pasadena 1, Calif.

Applied Research Labs., 3717 Park Place, Glendale 8, Calif.

Applied Science Corp. of Princeton, The, P. O. Box 44, Princeton, N. J.

Approved Electronic Instrument Corp., 928 Broadway, New York 10, N. Y.

Arch Gear Works, Inc., North Quincy, Mass.

Arco Electronics Inc., 103 Lafayette St., New York 13, N. Y.

Arco Transformer & Electric Corp., 1602 S. Hanna St., Fort Wayne, Ind.

Aremac Associates, 329 W. Washington St., Pasadena 3, Calif.

Arenberg Ultrasonic Laboratory, 94 Green St., Jamaica Plain 30, Mass.

Argyle Electronics Co., 8 W. 18th St., New York 11, N. Y.

Ark-Les Switch Corp., 51 Water St., Watertown 72, Mass.

Arkwright Finishing Co., Providence, R. I.

Arma Corp., Old Country Rd., Garden City, N. Y.

Armco Steel Corp., 703 Curtis St., Middletown, Ohio.

Armstrong Cork Co., Lancaster, Pa.

Arnold Ceramics, Inc., 1 E. 57th St., New York 22, N. Y.

Arnold Engineering Co., Marengo, Ill.

Arro Expansion Bolt Co., Boone Ave., Marion, Ohio.

Arrow-Hart & Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn.

Art-Lloyd Metal Products Corp., 2973 Cropsy Ave., Brooklyn 14, N. Y.

Art Wire & Stamping Co., 227 High St., Newark 2, N. J.

Artos Engineering Co., 2737 S. 28th St., Milwaukee, Wis.

Arvin Industries Inc., Radio & Television Div., Columbus, Ind.

Arwood Precision Casting Corp., 75 Washington St., Brooklyn, N. Y.

Asheville-Schoonmaker Mica Co., 900 Jefferson Ave., Newport News, Va.

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill.

Assembly Products, Inc., Chagrin Falls 6, Ohio.

Associated American Trading Division, 8010 Empire State Bldg., New York 1, N. Y.

Associated Engineering Corp. of Boston, 65 Kent St., Brookline 46, Mass.

Associated Engineering & Mfg. Corp., Glen Ridge, N. J.

Associated Industries, 6855 Tujunga Blvd., North Hollywood, Calif.

Associated Research, Inc., 3788 W. Belmont Ave., Chicago 18, Ill.

Associated Specialties Co., 1751 Main St., Orefield, Pa.

Astatic Corporation, The, Conneaut, Ohio.

Astron Corp., 255 Grant Ave., East Newark, N. J.

Atlantic India Rubber Works, Inc., Dept. EL, 571 Polk St., Chicago 7, Ill.

Atlantic & Pacific Wire & Cable Co., Inc., 112-01 Northern Blvd., Corona, N. Y.

Atlantic Research Corp., 901 N. Columbus, Alexandria, Va.

Atlantic Transformer Co., Groton, Conn.

Atlas Coil, Inc., Cottage St., Derby, Conn.

Atlas E-E Corp., Bedford Airport, Bedford, Mass.

Atlas Engineering Co., 3 Edgewood St., Roxbury, Mass.

Atlas Metal Stamping Co., Castor & Kensington Aves., Philadelphia 24, Pa.

Atlas Resistor Co., 24 E. Coulter St., Philadelphia 44, Pa.

Atlas Screw & Specialty Co., 450 Broome St., New York 13, N. Y.

Atlas Sound Corp., 1443 39th St., Brooklyn 18, N. Y.

Atlas Tack Corp., Pleasant St., Fairhaven, Mass.

Atomic Instrument Co., 84 Massachusetts Ave., Cambridge 39, Mass.

Auburn Button Works, Inc., Auburn, N. Y.

Auburn Mfg. Co., Pease Ave. & Stack St., Middletown, Conn.

Audak Co., 500 Fifth Ave., New York, N. Y.

Audar, Inc., P. O. Box 438M, Pasadena 18, Calif.

Audio & Video Products Co., 730 Fifth Ave., New York 19, N. Y.

Audio Development Co., 2833 13th Ave., S., Minneapolis 7, Minn.

Audio Devices, Inc., 444 Madison Ave., New York 22, N. Y.

Audio Equipment Co., Inc., 805 Middle Neck Rd., Great Neck, N. Y.

Audio Industries, Inc., Michigan City, Ind.

Audio Instrument Co., Inc., 133 W. 14th St., New York 11, N. Y.

Audio-Master Corp., 17 E. 45th St., New York 17, N. Y.

Audio Products Corp., 2265 Westwood Blvd., Los Angeles 64, Calif.

Augat Bros., Inc., 33 Perry Ave., Attleboro, Mass.

Aurex Corp., 1117 N. Franklin St., Chicago 10, Ill.

Autel Electronics Co., 1946 Farmingdale Rd., Westfield, N. J.

Authorized Manufacturers Service Co., Inc., 919 Wyckoff Ave., Brooklyn 27, N. Y.

Auto Engraver Co., Ridgefield, Conn.

Autocrat Electronics Co., 5024 Elm St., Skokie, Ill.

Automatic & Precision Mfg. Co., 252 Hawthorne Ave., Yonkers, N. Y.

Automatic Electric Mfg. Co., 62 State St., Mankato, Minn.

Automatic Electric Sales Corp., 1033 W. Van Buren St., Chicago 7, Ill.

Automatic Mfg. Co., 65 Gouverneur St., Newark 4, N. J.

Automatic Metal Products Corp., 315-323 Berry St., Brooklyn 11, N. Y.

Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.

Automatic Signal Division, Eastern Industries, Inc., 100 Regent St., East Norwalk, Conn.

Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.

Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Philadelphia 44, Pa.

Autoscrew Co., 216-222 W. 18th Street, New York, N. Y.

Autotone Co., P. O. Box 722-H, Danville, Ill.

Avco Mfg. Corp., 1329 Arlington St., Cincinnati 25, Ohio.

Avery Adhesive Label Corp., 1616 S. California Ave., Monrovia, Calif.

Avia Products Co., 7266 Beverly Blvd., Los Angeles 36, Calif.

Avien-Knickerbocker, Inc., 58-15 Northern Blvd., Woodside 77, N. Y.

Avion Instrument Corp., Div. of American Car & Foundry Co., 295 State Highway #17, Paramus, N. J.

Avionex Electronics Corp., 2838 N. Naomi St., Burbank, Calif.

Avon Tube Div., Higbie Mfg. Co., Rochester, Mich.

Avor Corp., 450 Broome St., New York 13, N. Y.

B & C Insulation Products, Inc., Lincoln Highway, Iselin, N. J.

B & M Electric Co., 838 Fourth Ave., Brooklyn, N. Y.

B-T Mfg. Corp., 38 N. Second Ave., Mt. Vernon, N. Y.

Babcock Radio Engineering Co., 7942 Woodley Ave., Van Nuys, Calif.

Bace Television Corp., Green & Leuning Sts., South Hackensack, N. J.

Bache & Co., Semon, 636 Greenwich St., New York 14, N. Y.

Baer Co., N. S., 9 Montgomery St., Hillside, N. J.

Bailey Meter Co., 1050 Ivanhoe Road, Cleveland 10, Ohio.

Baird Associates, Inc., 33 University Rd., Cambridge 38, Mass.

Bakelite Co., A Div. of Union Carbide & Carbon Corp., 30 East 42nd St., New York 17, N. Y.

Baker & Co., Inc., 113 Astor St., Newark 5, N. J.

Baker Chemical Co., J. T., Phillipsburg, N. J.

Baker Manufacturing Co., Evansville, Wis.

Balco Research Laboratories, 49-53 Edison Place, Newark 2, N. J.

Ballantine Laboratories, Inc., Boonton, N. J.

Baltic Metal Products Co., 120 Sutton St., Brooklyn, 22, N. Y.

Bamberger Corp., A., 703 Bedford Ave., Brooklyn 6, N. Y.

Banc-Lok Div. of Boots-Aircraft Nut Corp., Newton Ave., Norwalk, Conn.

Barber-Cofman Co., Automatic Controls, Rockford, Ill.

Barber Labs., Alfred W., 32-44 Francis Lewis Blvd., Flushing, N. Y.

Barco Chemical Products Co., 701-703 S. La Salle, Chicago 5, Ill.

Bardwell & McAlister Inc., 2950 Ontario, Burbank, Calif.

Barium & Chemicals, Inc., Willoughby, Ohio.

Barker & Williamson, 235 Fairfield Ave., Upper Darby, Pa.

Barnes Development Co., 213 W. Baltimore Pike, Lansdowne 1, Pa.

Barnes Metal Products Co., 4425 W. 16th St., Chicago 23, Ill.

Barnstead Still & Sterilizer Co., Inc., 2 Lanesville Terrace, Boston 31, Mass.

Bar-Ray Products, Inc., 209 25th St., Brooklyn 32, N. Y.

Barrett Bindery Co., 1332 W. Monroe St., Chicago 7, Ill.

Barrett Co., Leon J., P. O. Box 378, Worcester 1, Mass.

Barrett Division, Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.

Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill.

Barry Corp., The, 711 Pleasant St., Watertown 72, Mass.

Barry Electronics Corp., 136 Liberty St., New York 6, N. Y.

Bart Laboratories Co., Inc., 227 Main St., Belleville 9, N. J.

Bart-Messing Corp., 227 Main St., Belleville 9, N. J.

Basler Electric Co., 601 Fifth St., Highland, Ill.

Bassett Inc., Rex, 1314 N. E. 17th Court, P. O. Box 1759, Fort Lauderdale, Fla.

Bausch & Lomb Optical Co., 614 St. Paul St., Rochester 2, N. Y.

Bayshore Wood Products Co., Inc., 234 Creek Rd., Keansburg, N. J.

Beach-Russ Co., 50 Church St., New York 7, N. Y.

Bead Chain Manufacturing Co., The, 110 Mountain Grove St., Bridgeport 5, Conn.

Beam Instruments Corp., 350 Fifth Ave., New York 1, N. Y.

Beaver Gear Works, Inc., 1034 Parmele St., Rockford, Ill.

Becker Electronics Mfg. Corp., Horton & Rockaway Aves., Valley Stream, N. Y.

Beckman Instruments, Inc., 820 Mission St., South Pasadena 1, Calif.

Beckman & Whitley, Inc., 913 San Carlos Ave., San Carlos, Calif.

Beck's, Inc., 298-300 E. Fifth St., Saint Paul 1, Minn.

Beede Electrical Instrument Co., Inc., Penacook, N. H.

Bel Fuse Inc., 311 Mountain Road, Union City, N. J.

Belco Industrial Equipment Co., 60 Kentucky Ave., Paterson, N. J.

Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.

Bell Sound Systems, Inc., 555 Marion Rd., Columbus 7, Ohio.

Bellaire Electronics, Inc., 30 Prince St., Brooklyn, N. Y.

Bellmore Gear Corp., 2307 Bellmore Ave., Bellmore, N. Y.

Belock Instrument Corp., 13-11 111th St., College Point, N. Y.

Beltone Hearing Aid Co., 2900 W. 36th St., Chicago, 32, Ill.

Belvison, Inc., 265 Greenwich St., New York, N. Y.

Bendix Aviation Corp., Cincinnati Div., 203 W. Third St., Cincinnati 2, Ohio.

Bendix Aviation Corp., Pacific Division, 11600 Sherman Way, North Hollywood, Calif.

Bendix Computer Division Bendix Aviation Corp., 5630 Arbor Vitae St., Los Angeles 45, Calif.

Bendix Radio Division, Bendix Aviation Corp., Baltimore 4, Md.

Bennett Co., Inc., R. P., Frederick, Md.

Bennett Mfg. Co., Alden, N. Y.

Bennett Products Mfg. Co., P. O. Box 1055, Palo Alto, Calif.

Benson-Lehner Corp., 2340 Sawtelle Blvd., Los Angeles 64, Calif.

Bentley-Harris Mfg. Co., Conshohocken, Pa.

Bergen Wire Rope Co., 1-2-3 Gregg St., Lodi, N. J.

Berkeley Division, Beckman Instruments, Inc., 2200 Wright Ave., Richmond, Calif.

Berkshire Laboratories, 580 Beaver Pond Rd., Lincoln, Mass.

Berlant Associates, 4917 W. Jefferson Blvd., Los Angeles 16, Calif.

Berno Engineering Corp., 5232 W. 10th St., Indianapolis 24, Ind.

Berndt-Bach, Inc., Auricon Div., 6914 Romaine St., Hollywood 38, Calif.

Beryllium Corp., The, Reading, Pa.

Best Manufacturing Co., Inc., 1200 Grove St., Irvington 11, N. J.

Beta Electric Corp., 333 E. 103rd St., New York 29, N. Y.

Beva Laboratory, P. O. Box 478, Trenton 9, N. J.

Biddle Co., James G., 1316 Arch St., Philadelphia 7, Pa.

Bigelow Mfg. Corp., 225 W. Bigelow St., Newark 8, N. J.

Biggs Co., Carl H., 2255 Barry Ave., West Los Angeles 64, Calif.

Bill Jack Scientific Instrument Co., P. O. Box C-3, Solana Beach, Calif.

Bingham Mfg. Co., J. F., 69 Bay State Rd., Lawrence, Mass.

Bird Co., Richard H., 1 Spruce St., Waltham, Mass.

Bird Electronic Corp., 1800 E. 38th St., Cleveland 14, Ohio.

Birdsell Mfg. Co., Inc., 750 San Antonio Rd., Palo Alto, Calif.

Birklin Corp., 200 E. Third St., Mt. Vernon, N. Y.

Birmingham Sound Reproducers, Ltd., Clarendon Works, Old Hill, Staffs, England.

Birnbach Radio Co., Inc., 145 Hudson St., New York 13, N. Y.

Birtcher Corp., 4371 Valley Blvd., Los Angeles 32, Calif.

Bishop & Co., J., Platinum Works, Malvern, Pa.

Bishop Mfg. Corp., 10 Canfield Rd., Cedar Grove, N. J.

Biwax Corp., 3445 Howard St., Skokie, Ill.

Blake & Johnson Co., 1495 Thomaston Ave., Waterville 48, Conn.

Blaw-Knox Div. of Blaw-Knox Co., Farmers Bank Bldg., Pittsburgh 22, Pa.

Bliley Electric Co., Union Station Bldg., Erie, Pa.

Bliss Electronic Corp., Box 123, Sussex, N. J.

Bliss Scientific Instruments, 107 Elmwood Ave., Ithaca, N. Y.

Blonder-Tongue Laboratories, Inc., 526-536 North Ave., Westfield, N. J.

Bludworth Marine Div., National-Simplex-Bludworth, Inc., 92 Gold St., New York 38, N. Y.

Bodine Electric Co., Ohio St. & Oakley Blvd., Chicago 12, Ill.

Bodnar Industries, Inc., 19 Railroad Ave., New Rochelle, N. Y.

Boehme Inc., H. O., 915 Broadway, New York 10, N. Y.

Boeing Airplane Co., Seattle Div., Seattle 14, Wash.

Boesch Mfg. Corp., Danbury, Conn.

Bogart Mfg. Co., 315 Siegel St., Brooklyn 6, N. Y.

Bogen Co., Inc., David, 29 Ninth Ave., New York 14, N. Y.

Bogue Electric Mfg. Co., 56 Iowa Ave., Paterson 3, N. J.

Bolta Products Div. of The General Tire & Rubber Co., Lawrence, Mass.

Bomac Laboratories, Inc., Salem Rd., Beverly, Mass.

Bond Electronics Corp., 60 Springfield Ave., Springfield, N. J.

Bone Engineering Corp., 701 W. Broadway, Glendale 4, Calif.

Boonton Electronics Corporation, Boonton, N. J.

Boonton Radio Corp., Boonton, N. J.

Booth Co., Arthur E., 265 S. Alexandria Ave., Los Angeles, Calif.

Boots Aircraft Nut Corp., Norwalk, Conn.

Borden Co., The, Chemical Div., 350 Madison Ave., New York 17, N. Y.

Borg Equipment Division, The George W. Borg Corp., Janesville, Wis.

Borthig Co., Inc., George C., P. O. Box 11A, East Rutherford, N. J.

Boston Insulated Wire & Cable Co., 65 Bay St., Boston 25, Mass.

Boulin Instrument Corp., 65 Madison Ave., New York 16, N. Y.

Bourns Laboratories, 6135 Magnolia Ave., Riverside, Calif.

Bow Solder Products Co., Inc., 251 Freeman St., Brooklyn 22, N. Y.

Bowers Battery & Spark Plug Co., Reading, Pa.

Bowmar Instrument Corp., 2415 Pennsylvania Ave., Fort Wayne, Ind.

Bowser Technical Refrigeration Div., Bowser, Inc., Terryville, Conn.

Boyle Metalcraft Corp., 150 Sullivan St., Brooklyn 31, N. Y.

Bozak Co., R. T., 114 Manhattan St., Stamford, Conn.

Brach Mfg. Corp., 200 Central Ave., Newark 4, N. J.

Bracke-Seib X-Ray Co., Inc., 293 Third Ave., New York 10, N. Y.

Bradford Components, Inc., Bradford, Pa.

Bradley Industries, 1650-58 N. Damen Ave., Chicago 47, Ill.

Bradley Labs., Inc., 170 G Columbus Ave., New Haven 11, Conn.

Brady Co., W. H., 727 W. Glendale Ave., Milwaukee 12, Wis.

Brainin Co., C. S., 320 Washington St., Mt. Vernon, N. Y.

Bram Chemical Co., 820 65th Ave., Philadelphia 26, Pa.

Brand & Co., Inc., William, North & Valley Sts., Williamantic, Conn.

Branson Corp., 113 Cornelia St., Boonton, N. J.

Branson Instruments, Inc., 438 Fairfield Ave., Stamford, Conn.

Braun Tool & Instrument Co., Inc., H., 140 Fifth Ave., Hawthorne, N. J.

Breeze Co., Inc., 41 S. Sixth St., Newark 7, N. J.

Breon Laboratories, 1520 Evergreen Rd., Williamsport, Pa.

Brew & Co., Inc., Richard D., Airport Road, Concord, N. H.

Bridgeport Brass Co., 30 Grand St., Bridgeport, Conn.

Bridgeport Metal Products Mfg. Co., 365 Cherry St., Bridgeport 5, Conn.

Bright Radio Labs., Inc., 24-28 45th St., Long Island City 3, N. Y.

Bright Star Industries Co., 600 Getty Ave., Clifton, N. J.

Brihart Plastics Corp., Old Country Rd., Mineola, N. Y.

Brilmyer Labs., Inc., E. W., 86 Fulton St., New York 38, N. Y.

Brinnell Company, The, Simsbury, Conn.

Bristol Brass Co., 580 Broad St., Bristol, Conn.

Bristol Co., The, Waterbury 20, Conn.

Bristol Engineering Corp., Beaver Dam Rd. & Oak Lane, Bristol 1, Pa.

Bristol Motor Division, Vocaline Company of America, Inc., Old Saybrook, Conn.

British Electronic Sales Co., 23-03 45th Rd., Long Island City 1, N. Y.

British Industries Corp., 164 Duane St., New York 13, N. Y.

British Radio Electronics Ltd., 1833 Jefferson Place, N. W., Washington 6, D. C.

Broadcast Equipment Specialties Corp., 135-01 Liberty Ave., Richmond Hill 19, N. Y.

Brociner Electronics Laboratory, 344 E. 32nd St., New York 16, N. Y.

Brook Electronics, Inc., Box 491, Elizabeth, N. J.

Brookhaven Electronics Corp., Box 931, Sanford, N. C.

Brooklyn Paint & Varnish Co., Inc., 50 Jay St., Brooklyn, N. Y.

Browning Laboratories, Inc., 750 Main St., Winchester, Mass.

Brubaker Mfg. Co., Inc., 9151 Exposition Drive, Los Angeles 34, Calif.

Bruning Co., Inc., Charles, 4700 Montrose Ave., Chicago 41, Ill.

Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y.

Brush Beryllium Co., The, 4301 Perkins Ave., Cleveland 3, Ohio.

Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio.

Buchanan Electrical Products Corp., 223 U. S. Route 24, Hillside, N. J.

Buck Engineering Co., Inc., 37-41 Marcy St., Freehold, N. J.

Buckeye Bobbin Co., 12200 Sprecher Ave., Cleveland 11, Ohio.

Bud Radio, Inc., 2118 E. 55th St., Cleveland 3, Ohio.

Buda Co., The, Harvey, Ill.

Budd-Stanley Co., Inc., 43-01 22nd St., Long Island City 1, N. Y.

Buggie, Inc., H. H., P. O. Box 817, Toledo 1, Ohio.

Buhl Optical Co., 1009 Beech Ave., Pittsburgh 33, Pa.

Bulova Watch Co., Quartz Crystal Div., 630 Fifth Ave., New York 20, N. Y.

Burdick Corp., Milton, Wis.

Burgess Battery Co., Battery Div., Freeport, Ill.

Burke & James Inc., 321 S. Wabash Ave., Chicago 4, Ill.

Burken Lamination Corp., 811 Whittier St., Bronx 59, N. Y.

Burlington Instrument Co., Burlington, Iowa.

Burndy Engineering Co., Inc., Norwalk, Conn.

Burnell & Co., 45 Warburton Ave., Yonkers 2, N. Y.

Burnley Battery & Mfg. Co., Clay St., North East, Pa.

Burroughs Corp., Electronic Instruments Div., 1209 Vine St., Philadelphia 23, Pa.

Bussmann Mfg. Co., St. Louis 7, Mo.

Butler Mfg. Co., Inc., B. B., 3150 Randolph St., Bellwood, Ill.

C & B Manufacturing Co., 4169 Union Pacific Ave., Los Angeles 23, Calif.

CBS-Hytron, a Division of Columbia Broadcasting System, Inc., 100 Endicott St., Danvers, Mass.

C.G.S. Laboratories, Inc., 391 Ludlow St., Stamford, Conn.

Cable Electric Products Inc., Providence, R. I.

Cable Specialists Inc. of Conn., 166 Palisades Ave., Bridgeport, Conn.

Caddell-Burns Mfg. Co., 40 E. Second St., Mineola, N. Y.

Cadre Industries Corp., Box 117, 19 Delaware Ave., Endicott, N. Y.

Calbest Engineering & Electronics Co., 628 N. Highland Ave., Hollywood 38, Calif.

Calidyne Co., The, P. O. Box 72, Winchester, Mass.

Califone Corp., 1041 N. Sycamore Ave., Hollywood, 38, Calif.

California Bent Glass Corp., Torrance, Calif.

California Computer Products, 3927 W. Jefferson Blvd., Los Angeles 16, Calif.

California Magnetic Control Corp., 7245 Atoll Ave., North Hollywood, Calif.

Calresin Corp., 4543 Brazil St., Los Angeles 39, Calif.

Caltron Co., 1406 So. Hobart Blvd., Los Angeles 6, Calif.

Cal-Tronics Corp., 11307 Hindry Ave., Los Angeles 45, Calif.

Calvideo Tube Corp., 5232 W. 104th St., Los Angeles 45, Calif.

Cambridge Instrument Co., Inc., 3035 Grand Central Terminal, New York 17, N. Y.

Cambridge Pattern Works, Inc., 55 First St., Cambridge 41, Mass.

Cambridge Thermionic Corp., 445 Concord Ave., Cambridge 38, Mass.

Camburn, Inc., 32-40 57th St., Woodside, N. Y.

Camcar Screw & Mfg. Corp., 600 18th Ave., Rockford, Ill.

Camfield Mfg. Co., 718 N. Seventh St., Grand Haven, Mich.

Camloc Fastener Corp., 22 Spring Valley Rd., Paramus, N. J.

Campbell Industries, Inc., St. Elmo Station, Chattanooga 9, Tenn.

Canadian Radium & Uranium Corp., 630 Fifth Ave., New York 20, N. Y.

Cannon Co., C. F., Springwater, N. Y.

Cannon Electric Co., 3209 Humboldt St., Los Angeles 31, Calif.

Canoga Corp., 5955 Sepulveda Blvd., Van Nuys, Calif.

Capechart-Farnsworth Corp., 3700 E. Pontiac, Fort Wayne 1, Ind.

Capps & Co., Inc., Frank L., 20 Addison Place, Valley Stream, N. Y.

Carad Corp., 2850 Bay Rd., Redwood City, Calif.

Carboloy Dept. of General Electric Co., 11139 E. Eight Mile Blvd., Detroit 32, Mich.

Carbonneau Industries, Inc., 100 Lexington W., Grand Rapids, Mich.

Cardwell Electronics Productions Corp., Allen D., 97 Whiting St., Plainville, Conn.

Cargo Packers, Inc., 73 Rutledge St., Brooklyn 11, N. Y.

Carling Electric, Inc., 499 New Park Ave., West Hartford 10, Conn.

Carlson & Nicholson, Inc., 497 Maynard Drive, Buffalo 21, N. Y.

Carol Cable Div. of Crescent Co., Inc., 20 Central Ave., Pawtucket, R. I.

Carol Electronics Corp., 141 E. 25th St., New York 10, N. Y.

Carpenter Steel Co., 142 West Bern St., Reading, Pa.

Carpenter Steel Co., Webb Wire Div., New Brunswick, N. J.

Carron Mfg. Co., 415 S. Aberdeen St., Chicago, Ill.

Carter Motor Co., 2644 N. Maplewood Ave., Chicago 47, Ill.

Carter Parts Co., 213 Institute Place, Chicago 10, Ill.

Cascade Research Corp., 53 Victory Lane, Los Gatos, Calif.

Cass Machine Co., 691 Antoinette St., Detroit 2, Mich.

Cast Optics Corp., 1 Post Rd., Riverside, Conn.

Catalin Corp. of America, 1 Park Ave., New York 16, N. Y.

Celanese Corp. of America, 180 Madison Ave., New York 16, N. Y.

Celco Constantine Engineering Laboratories Co., Island Ave., Mahwah, N. J.

Celluuede Products, Inc., Rockford, Ill.

Central Research Laboratories, Inc., Red Wing, Minn.

Central Sales & Mfg. Co., 2 Richwood Place, Denville, N. J.

Central Scientific Co., 1700 Irving Park Rd., Chicago 13, Ill.

Central Screw Co., 3501 Shields Ave., Chicago 9, Ill.

Central Stamping & Mfg. Co., Polo, Ill.

Central Transformer Co., 908 W. Jackson Blvd., Chicago, Ill.

Centralab, Div. of Globe-Union Inc., 914Y E. Keefe Ave., Milwaukee 1, Wis.

Centronics Corp., 21-04 122 St., College Point, N. Y.

Century Electric Co., 1806 Pine St., St. Louis 3, Mo.

Century Geophysical Corp., P. O. Box 6216, Pine Station, Tulsa, Okla.

Century Metalcraft Corp., Electronic Div., 14806 Oxnard St., Van Nuys, Calif.

Cerro de Pasco Corp., 40 Wall St., New York 5, N. Y.

Channel Master Co., Ellenville, N. Y.

Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.

Chassis Trak Corp., 6250 E. Iona Rd., Indianapolis, Ind.

Chatham Electronics Corp., Livingston, N. J.

Chatillon & Sons, John, 85 Cliff St., New York, N. Y.

Cherry Electrical Products Corp., 3080 Skokie Valley Rd., Highland Park, Ill.

Chester Cable Corp., Hill St., Chester, N. Y.

Chicago Condenser Corp., 3255 W. Armitage Ave., Chicago 47, Ill.

Chicago Dial Co., 2919 S. La Salle St., Chicago, Ill.

Chicago Die Mold Div. of U. S. Rubber Co., 4001 Wrightwood Ave., Chicago 39, Ill.

Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill.

Chicago Magnetic Control Co., 1616 Damon Ave., Chicago, Ill.

Chicago Miniature Lamp Works, 1500 N. Ogden Ave., Chicago 10, Ill.

Chicago Rivet & Machine Co., Bellwood, Ill.

Chicago Standard Transformer Corp., 3580 Elston Ave., Chicago 18, Ill.

Chicago Telephone Supply Corp., 1142 W. Beardsley Ave., Elkhart, Ind.

Chicago Tool & Engineering Co., 8380 S. Chicago Ave., Chicago 17, Ill.

Churchill Corp., 344 Franklin St., Melrose 76, Mass.

Ciba Co., Inc., 627 Greenwich St., New York 14, N. Y.

Cima Corp., 119 Braintree St., Allston 34, Mass.

Cinaudagraph Speakers, 7334 N. Clark St., Chicago 26, Ill.

Cinch Mfg. Corp., 1026 S. Homan Ave., Chicago 24, Ill.

Cinema Engineering Co., 1510 W. Verdugo Ave., Burbank, Calif.

Cinema-Television, Ltd., Worsley Bridge Rd., London, S. E. 26, England.

Circon Component Co., 17544 Raymer St., Northridge, Calif.

Circuit Corp. of America, 2448 N. Cicero Ave., Chicago, Ill.

Circuitron, Inc., E. Main St., Rockville, Conn.

Citation Products Co., 233 E. 146th St., New York 51, N. Y.

Clare & Co., C. P., 4719 Sunnyside Ave., Chicago 30, Ill.

Claremont Tube Corp., New York Ave. & Main St., Westbury, N. Y.

Clark-Altken Co., Lee, Mass.

Clark Controller Co., 1146 E. 152nd St., Cleveland 10, Ohio.

Clark Crystal Co., 2 Farm Rd., Marlboro, Mass.

Clark Electronic Corp., Box 165, Palm Springs, Calif.

Clarke Instrument Div., National Electrical Machine Shops, Inc., 919 Jesup-Blair Drive, Silver Spring, Md.

Clarostat Mfg. Co., Inc., Dover, N. H.

Clary Multiplier Corp., Electronics Div., Technical Sales Dept., San Gabriel, Calif.

Clauss Cutlery Co., Fremont, Ohio.

Clear Beam Antenna Co., 100 Prospect Ave., Burbank, Calif.

Clegg Laboratories, Inc., 142 S. Livingston Ave., Livingston, N. J.

Cleveland Container Co., The, 6201 Barberton Ave., Cleveland 2, Ohio.

Cleveland Electronics, Inc., 6611 Euclid Ave., Cleveland, Ohio.

Cleveland Wire Cloth & Mfg. Co., 3573 E. 78th St., Cleveland 5, Ohio.

Clifford Mfg. Co., Grove St., Waltham, Mass.

Clifton Precision Products Co., Inc., Broadway at Marble Ave., Clifton Heights, Pa.

Clippard Instrument Laboratory, Inc., 7390 Colerain Ave., Cincinnati 14, Ohio.

Clought-Bregle Co., 6014 N. Broadway, Chicago, Illinois.

Coast Coil Co., 5332 W. Washington Blvd., Los Angeles 16, Calif.

Coaxial Connector Co., 37 North 2nd Ave., Mt. Vernon, N. Y.

Cockrane Corp., 2107 N. 17th St., Philadelphia, Pa.

Co-Design Corp., 751 Main St., Winchester, Mass.

Codetypewriter Laboratories, 550 Fifth Ave., New York 19, N. Y.

Cohan-Epner Co., Inc., 142 W. 14th St., New York 11, N. Y.

Cohn Corp., Sigmund, 121 S. Columbus Ave., Mt. Vernon, N. Y.

Coil Company of America, Inc., 48 Perry St., Closter, N. J.

Coil Winders, Inc., 100 New York Ave., Westbury, N. Y.

Coil Winding Equipment Co., 109 Audrey Ave., Oyster Bay, N. Y.

Coilcraft, Inc., Cary, Ill.

Cole Radio Works, 86 Westville Ave., Caldwell, N. J.

Cole Steel Equipment Co., 285 Madison Ave., New York 17, N. Y.

Coleman Instruments, Inc., 318 Madison St., Maywood, Ill.

Collectron Corp., 216 E. 45th St., New York 17, N. Y.

Collins Audio Products Co., P. O. Box 368, Westfield, N. J.

Collins Manufacturing Co., Inc., 726 N. Kresson St., Baltimore 5, Md.

Collins Radio Co., Cedar Rapids, Iowa.

Colonial Insulator Co., 907 Grant St., Akron 11, Ohio.

Collyer Insulated Wire Co., 249 Roosevelt Ave., Pawtucket, R. I.

Color Television, Inc., 973 E. San Carlos Ave., San Carlos, Calif.

Colortone Electronics, Inc., 238 William St., New York 38, N. Y.

Columbia Electric Mfg. Co., 4519 Hamilton Ave., N. E., Cleveland 14, Ohio.

Columbia Metal Box Co., 260 E. 143rd St., New York, N. Y.

Columbia Resistors, Inc., 23 W. Washington Ave., Pearl River, N. Y.

Columbia Technical Corp., 5 E. 57th St., New York 22, N. Y.

Columbia Wire & Supply Co., 2850 Irving Park Rd., Chicago 18, Ill.

Columbian Carbon Co., Mapico Color Div., 601 Cass St., Trenton, N. J.

Columbian Rope Co., Auburn, N. Y.

Colvin Laboratories, Inc., 364 Glenwood Ave., East Orange, N. J.

Comar Electric Co., 3349 W. Addison St., Chicago 18, Ill.

Combustion Control Corp., 718 Beacon St., Boston 15, Mass.

Commercial Plastics Co., 282 W. North Ave., Chicago 47, Ill.

Commercial Research Laboratories, Inc., 20 Bartlett Ave., Detroit 3, Mich.

Communication Accessories Co., Red Bridge Rd., Hickman Hills, Mo.

Communication Measurements Lab. Inc., 350 Leland Ave., Plainfield, N. J.

Communication Products Co., Inc., Marlboro, N. J.

Communications Co., Inc., 300 Greco Ave., Coral Gables 34, Fla.

Computer Co. of America, Div. of Bruno-New York Industries Corp., 460 W. 34th St., New York 1, N. Y.

Computer Control Co., Inc., Dept. L4, 92 Broad St., Babson Park 57, Mass.

Computer Instrument Co., 1964 Utica Ave., Brooklyn 34, N. Y.

Computer Research Corp., 3348 W. El Segundo Blvd., Hawthorne, Calif.

Computing Devices of Canada, Ltd., P. O. Box 508, Ottawa, Ontario.

Conant Labs., 6500 O St., Lincoln 5, Nebraska.

Condenser Manufacturers, Inc., 1018 Pearl St., Nashville, Tenn.

Condenser Products Co., 140 Hamilton St., New Haven, Conn.

Conn Ltd., C. G., Electronic Equipment Div., Elkhart, Ind.

Connecticut Hard Rubber Co., 407 East St., New Haven 9, Conn.

Connecticut Telephone & Electric Corp., 70 Britannia St., Meriden, Conn.

Conrac, Inc., Glendora, Calif.

Conrad Inc., 52 W. 4th, Holland, Mich.

Conrad & Moser, 2 Borden Ave., Long Island City 1, N. Y.

ConRay Corp., 1225 Ray St., Dayton 4, Ohio.

Consolidated Engineering Corp., 300 N. Sierra Madre Villa, Pasadena 15, Calif.

Consolidated Molded Products Corp., Scranton 2, Pa.

Consolidated Radio Products Co., 350 W. Erie St., Chicago 10, Ill.

Consolidated Vacuum Corp., Rochester 3, N. Y.

Consolidated Wire & Associated Companies, 1635 S. Clinton St., Chicago 16, Illinois.

Constantin & Co., L. L., Route 6 at Lodi Circle, Lodi, N. J.

Continental Can Co., Inc., 100 E. 42nd St., New York 17, N. Y.

Continental Carbon, Inc., 13900 Lorain Ave., Cleveland 11, Ohio.

Continental Connector Corp., 30-30 Northern Blvd., Long Island City, N. Y.

Continental-Diamond Fibre Co., Newark 100, Delaware.

Continental Electric Co., Geneva, Ill.

Continental Electric Co., Inc., 334 Ferry St., Newark 5, N. J.

Continental Electronics Ltd., 302 Oakland St., Brooklyn 22, N. Y.

Continental Electronics Mfg. Co., 4212-20 S. Buckner Blvd., Dallas 10, Texas.

Continental Screw Co., New Bedford, Mass.

Control Components Co., 46 Walnut St., Brookline 47, Mass.

Control Corp., 718 Central Ave., Minneapolis 14, Minn.

Control Electronics Co., Inc., 1925 New York Ave., Huntington Station, N. Y.

Control Engineering Corp., 560 Providence Highway, Norwood, Mass.

Control Products, Inc., 306 Sussex St., Harrison, N. J.

Cork Ceramic Mfg. Co., 505 Prospect St., Trenton 1, N. J.

Cork-Dunbar-Smith Co., 85 Sprague St., Providence 7, R. I.

Cork Electric Co., 2700 Southport Ave., Chicago 14, Ill.

Cork Laboratories, Inc., 114 Manhattan St., Stamford, Conn.

Cooperative Industries, Inc., 100 Oakdale Rd., Chester, N. J.

Copper Co., Clark, 349 N. Market St., Palmyra, N. J.

Copper Electronic Products Co., 4500 Melrose St., Philadelphia 24, Pa.

Copperweld Steel Co., Wire & Cable Div., Glassport, Pa.

Radio, Inc., 196 Albion Ave., Paterson, N. J.

Coastal Designs Div. of Henry G. Dietz Co., 12-16 Astoria Blvd., Long Island City 2, N. Y.

Coell-Dubilier Electric Corp., South Plainfield, N. J.

Corning Glass Works, Corning, N. Y.

Cornish Wire Co., 50 Church St., New York 7, N. Y.

Cragged Paper Products, Inc., 2233 Utica Ave., Brooklyn 34, N. Y.

Cry-Jamestown Mfg. Co., Corry, Pa.

Crown Electric Mfg. Corp., 540 39th St., Union City, N. J.

Curtland Industries, Inc., 4545 Cortland St., Chicago 39, Ill.

Curtis Corp., 405 Lexington Ave., New York 17, N. Y.

Curtis Radio Corp., 853 Whittier St., New York 59, N. Y.

Curtis (Canada) Ltd., 301-303 Windsor St., Halifax, N. S., Canada.

Cut-Coil Co., Inc., 65 Pavillon Ave., Providence 5, R. I.

Curtis Paper Co., 88 Purchase St., Fall River, Mass.

Curtis Electric Products, Inc., Boyne City, Mich.

Cox & Co., Inc., 115 E. 23rd St., New York 10, N. Y.

Coxhead Co., Ralph C., Newark, N. J.

Cramer Co., Inc., R. W., Box 13, Centerbrook, Conn.

Crane Packing Co., 1800 Cuyler Ave., Chicago 13, Ill.

Cratex Mfg. Co., 81 Natoma St., San Francisco 5, Calif.

Crest Transformer Corp., 1834-36 W. North Ave., Chicago 22, Ill.

Crestwood Recorder Div., Daystrom Electric Corp., 221 N. LaSalle, Chicago 1, Ill.

Crittenden Transformer Co., 1220 Nadeau St., Los Angeles, Calif.

Croname, Inc., 3701 Ravenswood Ave., Chicago, Ill.

Crosby Labs., Inc., Box 233, Robbins Lane, Hicksville, N. Y.

Cross Co., H., 15 Beekman St., New York 38, N. Y.

Crowley & Co., Inc., Henry L., 1 Central Ave., West Orange, N. J.

Crucible Steel Co. of America, Henry W. Oliver Bldg., P. O. Box 88, Pittsburgh 30, Pa.

Cryo, Inc., 1138 Mission St., South Pasadena, Calif.

Crystal Laboratories, 640 N. Main St., Wichita, Kansas.

Crystal Research Labs. Inc., 29 Allyn St., Hartford, Conn.

Cubic Corp., 2841 Canon St., San Diego 6, Calif.

Cunningham Son & Co., Inc., James, 13 Canal St., Rochester, N. Y.

Curtis Development & Mfg. Co., 3226 N. 33rd St., Milwaukee 16, Wis.

Curtiss-Wright Corp., Electronics Div., 631 Central Ave., Carlstadt, N. J.

Custom Components, Inc., 303 Bergen Ave., Kearney, N. J.

Custom Electronics Corp., 738 Speedwell Ave., Morris Plains, N. J.

Custom Gear Co. South Bend, Ind.

Cutler-Hammer, Inc., 411 N. 12th St., Milwaukee 1, Wis.

Cutler Metal Products Co., 1025 Line St., Camden, N. J.

Cycle Electronics Laboratories, 356 Glenwood Ave., East Orange, N. J.

Cyclotron Specialties Co., Moraga 8, Calif.

D & R Ltd., 402 E. Gutierrez St., Santa Barbara, Calif.

DX Radio Products Co. Inc., 2300 Armitage Ave., Chicago 47, Ill.

Daco Machine Tool Co., 202 Tillary St., Brooklyn 1, N. Y.

Dage Electric Co., Inc., 67 N. Second St., Beech Grove, Ind.

Dage Electronics Div. of Thompson Products, Inc., 69 N. Second St., Beech Grove, Ind.

Dahlstrom Metallic Door Co., Jamestown, N. Y.

Dale Products, Inc., Box 136, Columbus, Neb.

Dallons Laboratories, Inc., 5066 Santa Monica Blvd., Los Angeles 29, Calif.

Dalmo Victor Co., 1414 El Camino Real, San Carlos, Calif.

Dalmotron Co., 534 Laurel St., San Carlos, Calif.

Dana, Inc., P. A., 233 Broadway, New York 7, N. Y.

Dane Electronic Labs., Inc., 316 Stuart St., Boston, Mass.

Daniels, Inc., C. R., Box 6908, Baltimore, Md.

Dano Electric Co., Main St., Winsted, Conn.

Dante Electric Mfg. Co., Bantam, Conn.

Davelle Laboratories, Inc., 145-68 228th St., Springfield Gardens 13, N. Y.

Daven Co., 191 Central Ave., Newark 4, N. J.

Davies Laboratories, Inc., 4705 Queensbury Rd., Riverdale, Md.

Davies Molding Co., Harry, 1428 N. Wells St., Chicago 10, Ill.

Davis Electric Co., Cape Girardeau, Mo.

Davis Electronics, Box 1247, Burbank, Calif.

Daystrom Electric Corp., 807 Main St., Poughkeepsie, N. Y.

Daystrom Instrument Co., Archbald, Pa.

Decade Instrument Co., Box 153, Caldwell, N. J.

Decatur Electronic Industries Corp., 203 Orinco Drive, Brightwater, N. Y.

Decca Records, Inc., 50 W. 57th St., New York 19, N. Y.

Decimeter Inc., 1430 Market St., Denver 2, Colorado.

De Coursey Engineering Lab., P. O. Box 235, Los Angeles 25, Calif.

Dee Electric Co., 1101 N. Paulina St., Chicago 22, Ill.

Deitz Co., S. J., 38 River Edge Rd., River Edge, N. J.

DeJure-Amsco Corp., Northern Blvd. at 45th St., Long Island City 1, N. Y.

Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester, N. Y.

Delco Radio Div., General Motors Corp., Kokomo, Ind.

Delmhorst Instrument Co., 601 Cedar St., Boonton, N. J.

Delson Mfg. Corp., 126 Eleventh Ave., New York 11, N. Y.

Delta Electronics, Inc., 255 Green St., Brooklyn 22, N. Y.

Deltron Inc., P. O. Box 192, Glenside, Pa.

DeLuxe Coils, Inc., Wabash, Ind.

De Mornay-Bonardi, Inc., 780 S. Arroyo Parkway, Pasadena, Calif.

Despatch Oven Co., Minneapolis, Minn.

Detectolab, Inc., 6544 N. Sheridan Rd., Chicago 26, Ill.

Detection Corp., 5420 Vineland Ave., North Hollywood, Calif.

De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.

Detroit Diesel Engine Div. of General Motors Corp., Detroit 28, Mich.

Devtronics, Inc., 221 N. Hermitage Ave., Trenton, N. J.

Dewey and Almy Chemical Co., 62 Whittemore Ave., Cambridge 40, Mass.

DeWitt Development Co., 3008 W. 127th St., Blue Island, Ill.

Dexter Machine Products, Inc., Box 328, Chelsea, Mich.

Dialight Corporation, 60 Stewart Ave., Brooklyn 37, N. Y.

Diamond Drill Carbon Co., 244 Madison Ave., New York 16, N. Y.

Diamond Instrument Co., 40 North Ave. at Broadway, Wakefield, Mass.

Diamond Mfg. Corp., 7 North Ave., Wakefield, Mass.

Diamond Microwave Corp., 7 North Ave., Wakefield, Mass.

Diamond Power Specialty Corp., Lancaster, Ohio.

Diamond Union Stamp Works, 81 Washington St., Boston, Mass.

Diamond Wire & Cable Co., Sycamore, Ill.

Dice Co., J. W., Englewood, N. J.

Dictaphone Corp., 420 Lexington Ave., New York 17, N. Y.

Diehl Manufacturing Co., 1129 Funderne Ave., Somerville, N. J.

Dielectric Materials Co., 5315-17 N. Ravenswood Ave., Chicago 40, Ill.

Dielectric Products Co., Inc., 125 Virginia Ave., Jersey City 5, N. J.

Dietz Design & Mfg. Co., Grandview 6, Mo.

Dietzgen Co., Eugene, 2425 Sheffield Ave., Chicago, Ill.

Digital Products, Inc., 7643 Fay Ave., LaJolla, Calif.

Dielctrix Co., 60 Ocean Ave., Lynbrook, N. Y.

Dilectron, Inc., 2661 Myrtle, Monrovia, Calif.

Dilks Co., The, Seymour, Conn.

Dillon & Co., Inc., W. C., 146202 Keswick St., Van Nuys, Calif.

Dilmco-Gray Co., 207 E. Sixth St., Dayton, Ohio.

Dit-Mco Inc., 729 Baltimore Ave., Kansas City 6, Mo.

Division Lead Co., 7742 W. 61st Place, Summit, Ill.

Dixon Corporation, Bristol, R. I.

Do All Co., 254 N. Laurel Ave., Des Plaines, Ill.

Doelcam Corp., 56 Elmwood St., Newton 58, Mass.

Doepke Mfg. Co., Inc., Chas. Wm., Metal Specialties Div., Rossmoyne, Ohio.

Dollin Metal Products, Inc., 315 Lexington Ave., Brooklyn 16, N. Y.

Dollinko & Wilkins, Inc., 1901-7 Summit Ave., Union City, N. J.

Dollar Co., Robert, Communications Equipment Div., 50 Drumm St., San Francisco 11, Calif.

Dollin Corp., 600 S. 21st St., Irvington 11, N. J.

Dondar Devices, 321 E. 6th St., Medford, Ore.

Donham Craft, Inc., Thomaston, Conn.

Donnelly Electric & Mfg. Co., 3050 Washington St., Boston, Mass.

Donner Scientific Co., 2829 Seventh St., Berkeley 10, Calif.

Dormeyer Industries, 3418 N. Milwaukee Ave., Chicago 14, Ill.

Dormitzer Electric Co., Inc., 5 Hadley St., Cambridge, Mass.

Dorne and Margolin, Inc., 30 Sylvester St., Westbury, N. Y.

Douglas Microwave Co., Inc., 11 Beechwood Ave., New Rochelle, N. Y.

Douglas Radio Labs., 176 Norfolk Ave., Boston 19, Mass.

Dow Chemical Co., Midland, Mich.

Dow Corning Corp., Midland, Mich.

Drake Electric Works, 3656 Lincoln Ave., Chicago 13, Ill.

Drake Mfg. Co., 1713 Hubbard St., Chicago 22, Ill.

Dremel Mfg. Co., 2300 18th St., Racine, Wis.

Dressen-Barnes Corp., 250 N. Vinedo Ave., Pasadena 8, Calif.

Dresser Electric Co., 942 E. Larned St., Detroit 7, Mich.

Dresser-Stacey Co., Ideco Div., 875 Michigan Ave., Columbus 8, Ohio.

Driver Co., Willbur B., 1875 McCarter Highway, Newark 4, N. J.

Driver-Harris Co., 201 Middlesex St., Harrison, N. J.

Drubow Development Co., 235 Penn St., Burlington, N. J.

Du-Co Ceramics Co., Box 587, Butler 8, Pa.

Dudek & Bock Spring & Mfg. Co., 2100 W. Fulton, Chicago 12, Ill.

Dukane Corp., 135th & Indiana Sts., St. Charles, Ill.

Dumont-Airplane & Marine Instruments, Inc., 15 William St., New York 5, N. Y.

DuMont Laboratories, Inc., Allen B., Cathode-Ray Tube Div., 750 Bloomfield Ave., Clifton, N. J.

DuMont Laboratories, Inc., Allen B., Communication Products Div., 1500 Main Ave., Clifton, N. J.

DuMont Laboratories, Inc., Allen B., Instrument Div., 760 Bloomfield Ave., Clifton, N. J.

DuMont Laboratories, Inc., Allen B., Television Receiver Div., 35 Market St., East Paterson, N. J.

Dumore Co., The, 1300 Seventeenth St., Racine, Wis.

Dunn Engineering Associates, Inc., 11 Windsor St., Cambridge 39, Mass.

Dunton Co., M. W., 7 Goff St., Providence, R. I.

Duotone Co., Inc., Keyport, N. J.

Diplomat Co. of America, 2 Stone St., New York 4, N. Y.

du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.

Durakool, Inc., 1010 N. Main St., Elkhart, Ind.

Duraloy Co., Scottdale, Pa.

Duramark, Inc., 2 Secatoag Ave., Port Washington, N. Y.

Durant Mfg. Co., 1912 N. Buffum St., Milwaukee 1, Wis.

Durez Plastics & Chemicals, Inc., 1921 Walck Rd., North Tonawanda, N. Y.

Duro Specialty Co., Inc., 8 Bennett St., Lynn, Mass.

Dwyer Engineering Co., Inc., P. O. Box 483, Nashua, N. H.

Dyna Labs., Inc., 1075 Stewart Ave., Garden City, N. Y.

Dynamic Air Engineering Inc., 7412 Male Ave., Los Angeles 1, Calif.

Dynamic Electronics of New York, Inc., 73-39 Woodhaven Blvd., Forest Hills, N. Y.

Dynamic Gear Co., Inc., Amity Harbor, Amityville, N. Y.

Dzus Fastener Co., Inc., Box 185, Babylon, N. Y.

E B Metal Products Co., Inc., 12-14 Bridge Plaza, S., Long Island City 1, N. Y.

ESC Co., 534 Bergen Blvd., Palisades Park, N. J.

Eagle Electric Mfg. Co., Inc., 23-10 Bridge Plaza S., Long Island City, N. Y.

Eagle Pencil Co., 703 E. 13th St., New York, N. Y.

Eagle Signal Corp., Moline, Ill.

Earnshaw-Tharp-Christensen Corp., Box 196, North Las Vegas, Nev.

Eastern Air Devices, Inc., 15 Washington St., Dover, N. H.

Eastern Metals Industries, Inc., 250 W. 54th St., New York, N. Y.

Eastern Mike-Stand Co., 56 Christopher Ave., Brooklyn 12, N. Y.

Eastern Motor & Specialties, Inc., King & Hamsher Sts., Garrett, Ind.

Eastern Precision Resistor Corp., 130-11 90 Ave., Richmond Hill 18, N. Y.

Eastern Smelting & Refining Corp., 107-109 W. Brookline St., Boston 18, Mass.

Eastern Specialty Co., Philadelphia 40, Pa.

Eastern Tool & Mfg. Co., 1 Montgomery St., Belleville 9, N. J.

Eastman Kodak Co., 343 State St., Rochester 4, N. Y.

Eaton Mfg. Co., Reliance Div., Massillon, Ohio.

Eberhard Faber Pencil Co., 37 Greenpoint Ave., Brooklyn 22, N. Y.

Ebert Electronics Co., 212-26 Jamaica Ave., Queens Village 28, N. Y.

Eby Co., Hugh H., 4700 Stenton Ave., Philadelphia 44, Pa.

Ecco High Frequency Corp., 7020 Hudson Blvd., North Bergen, N. J.

Eckstein Radio & Television Co., 3400 E. 42nd St., Minneapolis 6, Minn.

Eclipse Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.

Economy Fuse & Mfg. Co., 2717 Greenview Ave., Chicago 14, Ill.

Electro, Inc., Delaware, Ohio.

Edcliff Instruments, 383 N. Foothill Blvd., Pasadena 8, Calif.

Eder Engineering Co., 219 E. Becher St., Milwaukee 2, Wis.

Edgerton, Germeshausen & Grier, Inc., 160 Brookline Ave., Boston 15, Mass.

Edin Co., Inc., 207 Main St., Worcester, Mass.

Edison, Inc., Thomas A., Ediphone Div., 51 Lakeside Ave., West Orange, N. J.

Edison, Inc., Thomas A., Instrument Div., 81 Lakeside Ave., West Orange, N. J.

Edmund Scientific Co., 502 E. Gloucester Pike, Barrington, N. J.

Edo Corp., College Point, N. Y.

Elicor, Inc., 1501 W. Congress St., Chicago 7, Ill.

Eldson Electronic Co., 1902 N. Third St., Temple, Texas.

Elsler Engineering Co., Inc., 740 S. 13th St., Newark 3, N. J.

Eitel-McCullough, Inc., San Bruno, Calif.

Elastic Stop Nut Corp., 2330 Vauxhall Rd., Union, N. J.

Elco Corporation, 190 W. Glenwood Ave., Philadelphia 40, Pa.

Eldema Corp., 5827 E. Beverly Blvd., Los Angeles 22, Calif.

Eldico of New York, Inc., 44-31 Douglaston Pkwy., Douglaston, N. Y.

Electra Mfg. Co., Resistor Div., 2537 Madison Ave., Kansas City, Mo.

Electralab, Inc., 76 Atherton St., Boston 30, Mass.

Electran Mfg. Co., 1901 N. Clybourn, Chicago 3, Ill.

Electric Design & Mfg. Corp., Burlington, Iowa.

Electric Eye Equipment Co., 16 W. Fairchild St., Danville, Ill.

Electric Furnace Co., Salem, Ohio.

Electric Indicator Co., Inc., Camp Ave., Springdale, Conn.

Electric Machinery Mfg. Co., 1331 N.E. Tyler St., Minneapolis 13, Minn.

Electric Regulator Corp., Pearl St., Norwalk, Conn.

Electric Soldering Iron Co., W. Elm St., Deep River, Conn.

Electric Specialty Co., 300 South St., Stamford, Conn.

Electric Storage Battery Co., 42 S. 15th St., Philadelphia 2, Pa.

Electrical Communications Co., 765 Clementina St., San Francisco, Calif.

Electrical Facilities Inc., 4239 Holden St., Oakland 8, Calif.

Electrical Industries, Inc., 44 Summer Ave., Newark 4, N. J.

Electrical & Physical Instrument Corp., 42-19 27th St., Long Island City 1, N. Y.

Electrical Refractories Co., 50 Clark St., East Palestine, Ohio.

Electrical Service Co., 1271 Mission St., San Francisco, Calif.

Electrical Tower Service, Inc., 206 S. Washington St., Peoria, Ill.

Electrical Windings, Inc., 2015 N. Kolmar Ave., Chicago 39, Ill.

Electrocoil Transformer Corp., Westerly Rd., Ossining, N. Y.

Electro Circuits, Inc., 401 E. Green St., Pasadena, Calif.

Electrochemical Industries, Inc., Jacques St., Worcester, Mass.

Electro-Coatings, Inc., 1662 W. Fullerton Ave., Chicago 14, Ill.

Electro Craft Industries, Inc., 68 Jackson St., Stamford, Conn.

Electro Development Co., 6006 W. Washington Blvd., Culver City, Calif.

Electro Engineering & Mfg. Co., 627 W. Alexandrine Ave., Detroit 1, Mich.

Electro Engineering Products Co., 609 W. Lake St., Chicago, Ill.

Electro Engineering Works, 6021 College Ave., Oakland 18, Calif.

Electro Impulse Labs., 62 White St., Red Bank, N. J.

Electromath Corp., 70 Westmoreland Ave., White Plains, N. Y.

Electro-Measurements, Inc., 4312 S. E. Stark St., Portland 15, Ore.

Electro-Mec Laboratory Inc., 21-09 43rd Ave., Long Island City 1, N. Y.

Electro-Mechanical Div. of General Riveters, Inc., 785 Hertel Ave., Buffalo 7, N. Y.

Electro-Mechanical Research, Inc., Ridgefield, Conn.

Electro-Mechanical Specialties Co., Inc., 6819 Melrose St., Los Angeles 38, Calif.

Electro-Medical Lab., Inc., South Woodstock 8, Vt.

Electro Metallurgical Co., A Div. of Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Electro Motive Mfg. Co., South Park & John St., Willimantic, Conn.

Electro-Nite Carbon Co., 1133 E. Columbia Ave., Philadelphia 25, Pa.

Electro-Physical Laboratories, Inc., 65 Harvard Ave., Stamford, Conn.

Electro Precision Products, Inc., 139-30 34th Rd., Flushing 54, N. Y.

Electro Products Labs., 4501 N. Ravenswood Ave., Chicago 40, Ill.

Electro-Science Industries, Box 10066 International Airport, Los Angeles 45, Calif.

Electro-Seal Corp., 946 North Ave., Des Plaines, Ill.

Electro-Snap Switch & Mfg. Co., 4218-30 W. Lake St., Chicago 24, Ill.

Electro Switch Corp., 167 King Ave., Weymouth 88, Mass.

Electro Tec Corp., South Hackensack, N. J.

Electro-Tech Equipment Co., 308 Canal St., New York 13, N. Y.

Electro-Technical Products Div. of Sun Chemical Corp., 113 E. Centre St., Nutley 10, N. J.

Electro-Voice, Inc., Buchanan, Mich.

Electro-Wire Service, 5 Beekman St., New York 7, N. Y.

Electrodyne Corp., Endicott St., Norwood, Mass.

Electrofax Corp., 30 Burtis Ave., New Canaan, Conn.

Electron Enterprises, 6917-19-21 Stanley Ave., Berwyn, Ill.

Electron-Radar Products, 1041 N. Pulaski Rd., Chicago 51, Ill.

Electronic Associates, Inc., Long Branch, N. J.

Electronic Batteries Inc., Bush Terminal Bldg. No. 4, 28-34 35th St., Brooklyn 32, N. Y.

Electronic Coils, Inc., P. O. Box 1665, 33 Lyman St., Springfield, Mass.

Electronic Components Inc., 55 E. 11th St., Paterson, N. J.

Electronic Computer Div., Component Dept., Underwood Corp., 35-10 36th Ave., Long Island City 6, N. Y.

Electronic Control Corp., 1573 E. Forest St., Detroit, Mich.

Electronic Devices, Inc., Precision Rectifier Div., 429 12th St., Brooklyn, N. Y.

Electronic Engineering Associates, Ltd., 1048 Brittan Ave., San Carlos, Calif.

Electronic Engineering Co. of California, 180 S. Alvarado St., Los Angeles 57, Calif.

Electronic Enterprises, Inc., 65 7th Ave., Newark 4, N. J.

Electronic Fabricators, Inc., 682 Broadway, New York 12, N. Y.

Electronic Instrument Co., Inc., 84 Withers St., Brooklyn 11, N. Y.

Electronic Mfg. Co., 20 Orange St., Newark, N. J.

Electronic Manufacturing Engineers Co., 2410 Beacon St., Seattle 44, Wash.

Electronic Measurements Co., Lewis St. & Maple Ave., Eatontown, N. J.

Electronic Measurements Corp., 280 Lafayette St., New York 12, N. Y.

Electronic Mechanics, Inc., 101 Clifton Blvd., Clifton, N. J.

Electronic Parts Mfg. Co., Inc., 508 25th St., Union City, N. J.

Electronic Processes Corp., 1021 San Antonio Road, Los Altos, Calif.

Electronic Products Co., 111 E. Third St., Mt. Vernon, N. Y.

Electronic Products Corp., 1418 N. Highland Ave., Hollywood 28, Calif.

Electronic Research Associates, Inc., 715 Main St., North Caldwell, N. J.

Electronic Service Corp., 221 W. Lake St., Oak Park, Ill.

Electronic Specialty Products Co., Pleasant Plains Rd., Millington, N. J.

Electronic Transformer Co., 207 W. 25th St., New York, N. Y.

Electronic Tube Corp., 1200 E. Mermaid Ave., Philadelphia 18, Pa.

Electronics of Colorado, Inc., 1026 S. Tejon St., Colorado Springs, Colo.

Electrons, Inc., 127 Sussex Ave., Newark 4, N. J.

Electrovox Co., Inc., 60 Franklin St., East Orange, N. J.

Electyeme Motor Products Corp., Genoa, Ill.

Electro-Serv Co., 480 Johnson Ave., Brooklyn 37, N. Y.

Elx Co., 150-50 Melbourne Ave., Flushing 67, N. Y.

Elgin Metalformer Corp., 901 N. Liberty St., Elgin, Ill.

Ellanar Chemical Co., 2308 Oakton St., Evanston, Ill.

Elly Electronics Corp., P. O. Box 395, Fair Lawn, N. J.

Ellis Associates, Box 77, Pelham, N. Y.

Elm Laboratories, 18 South Broadway, Dobbs Ferry, N. Y.

El Mec Laboratories, Inc., 730 Boulevard Kenilworth, N. J.

Eltran Corp., St. Anne, Ill.

El-Tronics, Inc., 5th & Noble Sts., Philadelphia 23, Pa.

Embassy Engineering Corp., 673 Elton Ave., New York 51, N. Y.

Emeloid Co., Inc., 1239 Central Ave., Hillside 5, N. J.

Emerson & Cuming, Inc., 869 Washington St., Canton, Mass.

Emerson Electric Mfg. Co., The, 8100 Florissant Ave., St. Louis 21, Mo.

Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.

Empire Coil Co., Inc., Beechwood Ave. & Second St., New Rochelle, N. Y.

Empire Develles Products Corp., 38-15 Bell Blvd., Bay-side, N. Y.

Empire Electronics Co., Inc., 166 River St., Paterson 1, N. J.

Empire State Laboratories, 2608 Merrick Rd., Bellmore, N. Y.

Endevco Corp., 689 Fair Oaks Ave., Pasadena 2, Calif.

Engineered Precision Casting Co., Box EL 68, Matawan, N. J.

Engineering Co., 27 Wright St., Newark, N. J.

Engineering Associates, 434 Patterson Rd., Dayton 9, Ohio.

Engineering Research Associates, Div. of Remington Rand Inc., 1902 W. Minnehaha Ave., St. Paul 4, Minn.

Ensign Coil Co., 2516 S. Pulaski Rd., Chicago, Ill.

Enthone, Inc., 442 Elm St., New Haven 2, Conn.

Entwistle Co., James L., 1475 Elmwood Ave., Providence 7, R. I.

Environmental Equipment Corp., 369 Linden St., Brooklyn 27, N. Y.

Epo Products, Inc., 2500 Atlantic Ave., Brooklyn 17, N. Y.

Eppley Lab., Inc., The, Newport, R. I.

Epso, Incorporated, 126 Massachusetts Ave., Boston 15, Mass.

Equipment Laboratory, Rt. 2, Box 407, Morgan Hill, Calif.

Equipment & Service Co., 6815 Oriole Drive, Dallas 9, Texas.

Erca Tool Die & Stamping Co., 19 Ash St., Brooklyn 22, N. Y.

Erco Radio Labs., Inc., East Stewart Ave., Garden City, N. Y.

Ericsson Screw Machine Products Co., 25 Lafayette St., Brooklyn 1, N. Y.

Erie Resistor Corp., 644 W. 12th St., Erie, Pa.

Erwood, Inc., 1782 Berteau Ave., Chicago 13, Ill.

Espey Mfg. Co., Inc., 528 E. 72nd St., New York 21, N. Y.

Esquire Radio Corp., 26 Court St., Brooklyn 19, N. Y.

Ess Specialty Corp., 96 S. Washington Ave., Bergenfield, N. J.

Essex Electronics, Berkeley Heights, N. J.

Essex Wire Corp., 1601 Wall St., Fort Wayne 6, Ind.

Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.

Esterline-Anqus Co., P. O. Box 596, Indianapolis 6, Ind.

Etched Products Corp., 39-01 Queens Blvd., Long Island City, N. Y.

Ethylene Chemical Corp., 245 Broad St., Summit, N. J.

Eureka Television & Tube Corp., 69 Fifth Ave., Hawthorne, N. J.

Eveready Plating Co., 1790 First Ave., New York, N. Y.

Executone, Inc., 415 Lexington Ave., New York 17, N. Y.

Extruders, Inc., 3232 W. El Segundo Blvd., Hawthorne, Calif.

F & M Sales, Inc., 1054 Cahuenga Blvd., Hollywood 38, Calif.

F-R Machine Works Inc., 26-12 Borough Place, Woodside 77, N. Y.

Fada Radio & Electric Co., Inc., 525 Main St., Belleville, N. J.

Fairbanks Wire Co., Inc., 2287 Hollers Ave., New York 69, N. Y.

Fairchild Camera & Instrument Corp., Robbins Lane, Syosset, N. Y.

Fairchild Camera & Instrument Corp., Potentiometer Div., 225 Park Ave., Hicksville, N. Y.

Fairchild Engine & Airplane Corp., Guided Missiles Div., Wyandanch, N. Y.

Fairchild Industries Division, Burlington, Vt.

Fairchild Recording Equipment Corp., 154th St. & 7th Ave., Whitestone, N. Y.

Falstrom Co., 44 Falstrom Court, Passaic, N. J.

Fansteel Metallurgical Corp., 2200 Sheridan Rd., North Chicago, Ill.

Farmer Electric Co., 21 Mossfield Rd., Waban 68, Mass.

Farmers Engineering & Mfg. Co., Irwin, Pa.

Farrand Optical Co., Inc., Bronx Blvd. at 238th St., New York 70, N. Y.

Farrelloy Co., 1245 N. 26th St., Philadelphia 21, Pa.

Fasco Industries, Inc., Rochester 2, N. Y.

Fast & Co., John E., 3179 N. Pulaski Rd., Chicago 41, Ill.

Federal Electric Products Co., 50 Paris St., Newark 5, N. J.

Federal Instrument Corp., 12-10 Broadway, Long Island City 6, N. Y.

Federal Mfg. & Engineering Corp., 211 Steuben St., Brooklyn 5, N. Y.

Federal Screw Products Inc., 224 W. Huron St., Chicago 10, Ill.

Federal Shock Mount Corp., 1077 Intervale Ave., New York 59, N. Y.

Federal Telecommunication Labs., A Div. of IT&T, 500 Washington Ave., Nutley 10, N. J.

Federal Telephone and Radio Co., A Div. of IT&T, 88 Kingsland Rd., Clifton, N. J.

Federal Tool Engineering Co., 1386 Pompton Ave., Cedar Grove, N. J.

Federal Tool & Mfg. Co., 3600 Alabama Ave., St. Louis Park, Minneapolis 16, Minn.

Federated Metals Div., American Smelting & Refining Co., 120 Broadway, New York 5, N. Y.

Feedback Controls, Inc., 503 Rhode Island Ave., N. E., Washington 2, D. C.

Feiler Engineering Co., 8026 Monticello Ave., Skokie, Ill.

Felsenthal & Sons, Inc., G., 4100 W. Grand Ave., Chicago 51, Ill.

Felt Products Mfg. Co., 1504 W. Carroll Ave., Chicago 7, Ill.

Felters Co., 210 South St., Boston, Mass.

Fenwal, Inc., 60 Pleasant St., Ashland, Mass.

Ferner Co., R. Y., 110 Pleasant St., Malden, Mass.

Ferranti Electric, Inc., 30 Rockefeller Plaza, New York 20, N. Y.

Ferricore, Inc., 15 School St., Yonkers 2, N. Y.

Ferris Instrument Co., 110 Cornelia St., Boonton, N. J.

Ferrocube Corp. of America, 125 E. Bridge St., Saugerties, N. Y.

Fidelitone, Inc., 1616 Devon Ave., Chicago 26, Ill.

Fidelity Amplifier Co., 703 Willow St., Chicago 14, Ill.

Fidelity Chemical Products Corp., 472 Frellinghuysen Ave., Newark, N. J.

Fidelity Instrument Corp., 1320 W. Market St., York, Pa.

Field Electrical Instrument Co., 8 N. Manheim Blvd., New Paltz, N. Y.

Fielden Instrument Div. of Robertshaw-Fulton Controls Co., 2920 N. Fourth St., Philadelphia 33, Pa.

Film Capacitors, Inc., 3400 Park Ave., New York 56, N. Y.

Filmwood Corp., 33 N. 23rd St., Camden 5, N. J.

Filters Inc., 30 Sagamore Hill Drive, Port Washington, N. Y.

Filtron Co., Inc., 131-05 Fowler Ave., Flushing, N. Y.

Finn & Co., Inc., T. R., 200 Central Ave., Hawthorne, N. J.

Finney Co., 4612 St. Clair Ave., Cleveland 3, Ohio.

Fireye Corp., 718 Beacon St., Boston 15, Mass.

Fischer & Porter Co., 476 Warmminster Road, Hatboro, Pa.

Fischer & Co., R. A., 517 Commercial St., Glendale 3, Calif.

Fisher Engineering, Inc., 2060 U. S. 24 East, P. O. Box 327, Huntington, Ind.

Fisher-Pierce Co., 170 Pearl St., South Braintree (Boston 85), Mass.

Fisher Radio Corp., 21-21 Forty Fourth Drive, Long Island City 1, N. Y.

Fisher Research Labs., Inc., 1961 University Ave., Palo Alto, Calif.

Five Star Co., West Main St., Plantsville, Conn.

Flexible Shaft Div., Walker Turner Div., Kearney & Trecker Corp., Plainfield, N. J.

Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.

Flockrock Co., 3608 Filbert St., Philadelphia 8, Pa.

Flock Process Co., Inc., 373 Main Ave., Norwalk, Conn.

Fluke Mfg. Co., Inc., John, 1111 W. Nickerson St., Seattle 99, Wash.

Flush Wall Radio Co., 1012 Cleveland St., Clearwater, Fla.

Foot Brothers Gear & Machine Corp., 4545 S. Western Blvd., Chicago 9, Ill.

Foot Mineral Co., 18 W. Chelton Ave., Philadelphia 44, Pa.

Ford Engineering Co., 129 East A St., Upland, Calif.

Ford Instrument Co., Div. of The Sperry Corp., 31-10 Thomson Ave., Long Island City, N. Y.

Ford Radio & Mica Corp., 536 63rd St., Brooklyn, N. Y.

Fordham Mfg. Co., 2220 Pearsall Ave., New York 69, N. Y.

Foredom Electric Co., 27 Park Place, New York 7, N. Y.

Forest Electric Co., 7216 Circle Ave., Forest Park, Ill.

Forest Wadding Co., Inc., 3190 Washington St., Boston 30, Mass.

Forman Co., B. G., 238 William St., New York 38, N. Y.

Formatic Co., 178 Bridge St., Naugatuck, Conn.

Formica Co., 110 K St., South Boston, Mass.

Formica Co., The, 4616 Spring Grove Ave., Cincinnati 32, Ohio.

Fort Wayne Metals, Inc., Fort Wayne 6, Ind.

Forter-Telchmann Co., Clark Bldg., Pittsburgh, Pa.

Fortiphone Ltd., 247 Regent St., W1, London, England.

Forty Niner Co., 5245 Grand River, Detroit 8, Mich.

Foster Transformer Co., 3820 Colerain Ave., Cincinnati 23, Ohio.

Fostoria Pressed Steel Corp., Fostoria, Ohio.

Foxboro Co., The, Foxboro, Mass.

Frankel Connector Co., 27 Vestry St., New York, N. Y.

Franklin Electronics, Inc., 415 W. Pike St., Philadelphia 40, Pa.

Franklin Fibre-Lamitex Corp., 411 E. Front St., Wilmington, Del.

Freed Electronics & Controls Corp., 200 Hudson St., New York 13, N. Y.

Freed Transformer Co., Inc., 1736 Weirfield St., Brooklyn 27, N. Y.

Frenchtown Porcelain Co., Trenton 9, N. J.

Frequency Standards, P. O. Box 604, Ashbury, Park, N. J.

Fretco Inc., 406 N. Craig St., Pittsburgh 13, Pa.

Friez Instrument Div., Bendix Aviation Corp., Baltimore 4, Md.

Fryling Mfg. Co., 639 W. 12th St., Erle, Pa.

Fugle-Miller Laboratories, Inc., 398 Main St., Metuchen, N. J.

Fulton Syphon Div., Robertshaw-Fulton Controls Co., Knoxville 1, Tenn.

Furst Electronics, 3324-A W. Lawrence Ave., Chicago 25, Ill.

Fusite Corp., 6000 Fernview Ave., Cincinnati 13, Ohio.

G & M Equipment Co., Inc., 7309-7327 Varna Ave., North Hollywood, Calif.

G-M Laboratories, Inc., 4336 N. Knox Ave., Chicago, Ill.

G-V Controls Inc., 12 Hollywood Plaza, East Orange, N. J.

G. W. Associates, 108 Standard St., El Segundo, Calif.

Gabriel Electronics Div. of The Gabriel Co., Endicott St., Norwood, Mass.

Gables Engineering, Inc., P. O. Box 751, Coral Gables, Fla.

Gabriel Laboratories, 135 Crescent Rd., Needham Heights, Mass.

Gadgets Inc., 3629 N. Dixie Drive, Dayton 4, Ohio.

Gaertner Scientific Corp., 1201 Wrightwood Ave., Chicago 14, Ill.

Gair Co., Inc., Robert, 155 E. 44th St., New York, N. Y.

Galbraith & Son Electric Corp., C. C., 450 Ave. of the Americas, New York 11, N. Y.

Gale Dorothea Mechanisms, Inc., 81-01 Broadway, Elmhurst, N. Y.

Gamewell Co., The, Newton Upper Falls 64, Mass.

Gamma Instrument Co., Inc., 378 Great Neck Rd., Great Neck, N. Y.

Gar Electrical Instrument Corp., 92-15 172nd St., Jamaica 33, N. Y.

Garde Mfg. Co., 588 Eddy St., Providence 3, R. I.

Gardner Labs., Inc., Henry A., 4723 Elm St., Bethesda 14, Md.

Garfield Wire Div. of The Overlakes Corp., 142 Monroe St., Garfield, N. J.

Garlock Packing Co., Palmyra, N. Y.

Garod Radio Corp., 79 Washington St., Brooklyn 1, N. Y.

Garrard Sales Corp., 164 Duane St., New York 13, N. Y.

Garrett Co., Inc., George K., D & Tioga Sts., Philadelphia 34, Pa.

Garron Aircraft Supply, Inc., 1133 Broadway, New York 10, N. Y.

Gaston Power Tools, Inc., 14829 Loomis St., Harvey, Ill.

Gates Electric Co., 65 W. Broadway, New York, N. Y.

Gates Radio Co., Quincy, Ill.

Gatti, Inc., Aurele M., 524 E. Washington St., Trenton, N. J.

Gear Specialties, Inc., 2635 W. Medill Ave., Chicago 47, Ill.

Gee-Lar Mfg. Co., 919 Elm St., Rockford, Ill.

Gem Ear Phone Co., Inc., 50 W. 29th St., New York 1, N. Y.

Gemloid Corp., 78-01 Queens Blvd., Elmhurst, N. Y.

General Cable Corp., 420 Lexington Ave., New York 17, N. Y.

General Cement Mfg. Co., Electronic Div., 919 Taylor Ave., Rockford, Ill.

General Ceramics & Steatite Corp., Keasbey, N. J.

General Chemical Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.

General Coil Products Corp., 43 Roselle St., Mineola, N. Y.

General Communication Co., 681 Beacon St., Boston 15, Mass.

General Control Company, 1200 Soldiers Field Rd., Boston 34, Mass.

General Controls Co., Glendale 1, Calif.

General Devices, Inc., P. O. Box 253, Princeton, N. J.

General Electric Co., Apparatus Sales Div., 1 River Rd., Schenectady 5, N. Y.

General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.

General Electric Co., Construction Materials Div., 1285 Boston Ave., Bridgeport 2, Conn.

General Electric Co., Electronics Div., Electronics Park, Syracuse, N. Y.

General Electric Co., Lamp Div., Nela Park, Cleveland 12, Ohio.

General Electric Co., Radio & Television Dept., Electronics Park, Syracuse, N. Y.

General Electric Co., Tube Dept., 1 River Rd., Schenectady 5, N. Y.

General Electric Co., Wiring Device Dept., Providence 7, R. I.

General Electronics Div. Arcturus Electronics Corp., 101 Hazel St., Paterson, N. J.

General Hermetic Sealing Corp., 99 E. Hawthorne Ave., Valley Stream, N. Y.

General Industries Co., Taylor and Olive Sts., Elyria, Ohio.

General Instrument Corp., 829 Newark Ave., Elizabeth 3, N. J.

General Insulated Wire Works, Inc., 69 Gordon Ave., Providence 5, R. I.

General Laminated Products, Inc., 2857 S. Halstead St., Chicago 8, Ill.

General Machine & Instrument Co., Caldwell, N. J.

General Magnetic Corp., 10001 Erwin Ave., Detroit 34, Mich.

General Magnetics, Inc., 135 Bloomfield Ave., Bloomfield, N. J.

General Metal Products Co., 1010-14 Centre St., Easton, Pa.

General Mills, Inc., Mechanical Div., 1620 Central Ave., Minneapolis 13, Minn.

General Photo Products Co., Inc., General Photo Bldg., 15 Summit Ave., Chatham, N. J.

General Plastics Corp., P. O. Box 1236, Paterson, N. J.

General Precision Laboratories, Inc., 63 Bedford Rd., Pleasantville, N. Y.

General R-F Fittings Co., Inc., 702 Beacon St., Boston 15, Mass.

General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.

General Tire & Rubber Co., The, Akron, Ohio.

General Transformer Co., 18240 Harwood Ave., Homewood, Ill.

Genisco, Inc., 2233 Federal Ave., Los Angeles 64, Calif.

Georator Corp., Box 463, Manassas, Va.

George Co., P. D., 5200 N. Second St., St. Louis, Mo.

Geotronic Labs., Inc., Dallas 11, Texas.

Gerber Scientific Instrument Co., 89 Spruce St., Hartford 1, Conn.

Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.

Gering Products Inc., N. Seventh St. at Monroe Ave., Kenilworth, N. J.

Germanium Products Corp., 26 Cornellison Ave., Jersey City 4, N. J.

Gertsch Products, Inc., 11846 Mississippi Ave., P. O. Box 13856, Los Angeles 25, Calif.

Giannini & Co., Inc., G. M., Pasadena 1, Calif.

Gibson Electric Co., 8361 Frankstown Ave., Pittsburgh 21, Pa.

Giffilan Bros., Inc., 1815 Venice Blvd., Los Angeles 6, Calif.

Gilmore Industries, 5713 Euclid Ave., Cleveland 3, Ohio.

Girard-Hopkins, 1000 40th Ave., Oakland 1, Calif.

Girdler Company, The, Thermex Div., A Div. of National Cylinder Gas Co., 224 E. Broadway, Louisville 1, Ky.

Gisholt Machine Co., 1245 E. Washington Ave., Madison 3, Wis.

Gits Molding Corp., 4600 W. Huron St., Chicago 44, Ill.

Glaser Lead Co., Inc., 31 Wyckoff Ave., Brooklyn 37, N. Y.

Glaser-Steers Corp., 2 Main St., Belleville 9, N. J.

Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, Ohio.

Glass & Bro., Harry, 10 Van Cortlandt Ave., E., Bronx 68, N. Y.

Glass-Solder Engineering, 300 N. Lake Ave., Pasadena 4, Calif.

Glastic Corp., The, 1823 E. 40th St., Cleveland 3, Ohio.

Gleason-Avery Co., Auburn, N. Y.

Glenco Corp., Metuchen, N. J.

Global Division, Carborundum Co., Niagara Falls, N. Y.

Globe Industries, Inc., P. O. Box 101, North Dayton Station, Dayton 4, Ohio.

Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.

Goat Co., Inc., Fred, 308 Dean St., Brooklyn 17, N. Y.

Godfrey Mfg. Co., 2642 S. Michigan Ave., Chicago, Ill.

Goldsmith Bros. Smelting & Refining Co., 111 N. Wabash Ave., Chicago 2, Ill.

Gombos Co., Inc., John, 103 Montgomery Ave., Irvington 11, N. J.

Gonset Co., 801 S. Main St., Burbank, Calif.

Good-All Electric Mfg. Co., 112 W. First St., Ogallala, Neb.

Good, Inc., Don, 1014 Fair Oaks Ave., South Pasadena, Calif.

Goodmans Industries, Ltd., Axiom Works, Wembley, Middlesex, England.

Goodrich Chemical Co., B. F., Rose Bldg., 2060 E. Ninth St., Cleveland 15, Ohio.

Goodyear Aircraft Corp., 1210 Massillon Road, Akron 15, Ohio.

Goodyear Tire & Rubber Co., Inc., Chemical Div., 1144 E. Market St., Akron 16, Ohio.

Gordon Co., Claud S., 3000 S. Wallace St., Chicago 16, Ill.

Gorham Mfg. Corp., Sub. of International Resistance Co., 2240 Sepulveda Blvd., Los Angeles 64, Calif.

Gorn Electric Co., Gorn Electronics Div., 837 Main St., Stamford, Conn.

Gorrell & Gorrell, Haworth, N. J.

Goslin Electric & Mfg. Co., 2921 W. Olive St., Burbank, Calif.

Gotham Television Corp., 123 W. 64th St., New York 23, N. Y.

Gothard Mfg. Co., 2110 Clear Lake Ave., Springfield, Ill.

Gould-National Batteries, Inc., 35 Neoga St., Depew, N. Y.

Gow-Mac Instrument Co., 100 Kings Rd., Madison, N. J.

Grafo Colloids Corp., Sharon, Pa.

Graham Mfg. Co., Inc., 47 Bridge St., East Greenwich, R. I.

Gramer Transformer Corp., 2734 N. Pulaski Rd., Chicago 31, Ill.

Granco Products, Inc., 36-17 20th Ave., Long Island City, N. Y.

Grand Transformers, Inc., Grand Haven, Mich.

Grant Pulley & Hardware Co., 31-85 Whitestone Pkwy., Flushing, N. Y.

Graphire Corp., 190 W. 237th St., New York 63, N. Y.

Graphite Metallizing Corp., 1041 Nepperhan Ave., Yonkers N. Y.

Grason-Stadler Co., Engineering Service Dept., 106 Hampshire St., Cambridge 39, Mass.

Grass Instrument Co., 101 Old Colony Ave., Quincy, Mass.

Graver Water Conditioner Co., 216 W. 14th St., New York, N. Y.

Gray Radio Co., 501 Forest Hill Blvd., West Palm Beach, Fla.

Gray Research & Development Co., Inc., 658 Hilliard St., Manchester, Conn.

Grayhill, 537 Hillgrove Ave., La Grange, Ill.

Great Lakes Electric Mfg. Co., 17 S. Desplaines St., Chicago 6, Ill.

Green Electric Co., W., 130 Cedar St., New York, N. Y.

Green Instrument Co., 363A Putnam Ave., Cambridge, Mass.

Greenlee Tool Co., 2136 12th St., Rockford, Ill.

Greenwood Packaging Supply Co., 859 Summer Ave., Newark, N. J.

Greibach Instruments Corp., Metuchen, N. J.

Gries Reproducer Corp., 151 Beechwood St., New Rochelle, N. Y.

Grieve-Hendry Co., 1815 W. Lake St., Chicago 12, Ill.

Griffin Co., John, 2157 James Ave., St. Paul 5, Minn.

Grigsby-Allison Co., Inc., 407 N. Salem Ave., Arlington Heights, Ill.

Groov-Pin Corp., 1125 Hendricks Causeway, Ridgefield, N. J.

Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, Ill.

Gudebrod Bros. Silk Co., Inc., Electronics Div., 225 W. 34th St., New York 1, N. Y.

Gudeman Co., 340 W. Huron St., Chicago 10, Ill.

Guideline Associates, 57 State St., Newark, N. J.

Gulton Mfg. Corp., Metuchen, N. J.

Guthman & Co., Inc., Edwin I., 15 S. Throop St., Chicago 7, Ill.

Gyro Electronics Co., 325 Canal St., New York, N. Y.

Gyromechanisms, Inc., Halesite, N. Y.

H. & H. Products Co., 766 Ramsey Ave., Hillside, N. J.

H-Lab., 53 Industrial Rd., Berkeley Heights, N. J.

Hadley Co., Robert M., 5112 S. Hoover St., Los Angeles 37, Calif.

Hagen Mfg. Co., Inc., Baraboc, Wis.

Hafedy Electronics Co., 57 William St., New York 5, N. Y.

Hall, Inc., F. Sumner, Amityville, N. Y.

Haldorson Transformer Co., 4500 Ravenswood Ave., Chicago 40, Ill.

Haller, Raymond & Brown, Inc., State College, Pa.

Hallett Mfg. Co., 1601 W. Florence Ave., Inglewood, Calif.

Hallcrafters Co., 4401 W. Fifth Ave., Chicago 24, Ill.

Halogen Insulator & Seal Corp., 10121 Franklin Ave., Franklin Park, Ill.

Haloid Co., The, 6 Haloid St., Rochester 3, N. Y.

Hamilton Mfg. Co., Two Rivers, Wis.

Hammarlund Mfg. Co., 460 W. 34th St., New York 1, N. Y.

Handy & Harman, 82 Fulton St., New York 38, N. Y.

Hanover Developments, 401 E. 74th St., New York 21, N. Y.

Hanovia Chemical & Mfg. Co., 233 N. J. R.R. Ave., Newark, N. J.

Hansen Mfg. Co., Inc., Princeton, Indiana.

Harber Co., Donald C., 3338 India St., San Diego 1, Calif.

Hardman Co., Inc., H. V., 571 Cortlandt St., Belleville, N. J.

Hardwick Hindle, Inc., 40 Hermon St., Newark 5, N. J.

Harnett Electric Corp., 138 Haven Ave., Port Washington, N. Y.

Harper Co., The, H. M., 8200 Lehigh Ave., Morton Grove, Ill.

Harper Electric Furnace Corp., 39 River St., Buffalo 2, N. Y.

Harrison & Co., Philip H., Matawan, N. J.

Hart Mfg. Co., 110 Bartholomew Ave., Hartford 1, Conn.

Hartford City Paper Co., Hartford City, Ind.

Hartland Plastics, Inc., Hartland, Wis.

Hartley Co., Inc., H. A., 521 E. 162nd St., New York 56, N. Y.

Harvey Hubbell, Inc., State St. & Bostwick Ave., Bridgeport 2, Conn.

Harvey-Wells Electronics, Inc., North St., Southbridge, Mass.

Hassall, Inc., John, P. O. Box 2242, Westbury, N. Y.

Hastings Instrument Co., Inc., Hampton 9, Va.

Hathaway Instrument Co., 1315 S. Clarkson St., Denver 10, Colo.

Hauman Instrument Co., 70 Coolidge Hill Rd., Watertown 72, Mass.

Haver Harness Co., Grand Haven, Mich.

Hawley Products Co., St. Charles, Ill.

Hayden Mfg. Co., 173 N. Peoria, Chicago 7, Ill.

Haydon Co., A. W., The, 232 N. Elm St., Waterbury, Conn.

Haydon Mfg. Co., Inc., 2400 Elm St., Torrington, Conn.

Haydon Switch Co., 232 N. Elm St., Waterbury 20, Conn.

Haydu Brothers, P. O. Box 1226, Plainfield, N. J.

Haynes Stellite Co., Division of Union Carbide & Carbon Corp., 725 S. Lindsay St., Kokomo, Ind.

Hays Mfg. Co., 818 W. 12th St., Erie, Pa.

Heath Co., Benton Harbor, Mich.

Heiland Research Corp., 130 E. 5th Ave., Denver 9, Colo.

Heinemann Electric Co., 97 Plum St., Trenton 2, N. J.

Heintz & Kaufman Equipment Div. of The Robert Dollar Co., 50 Drumm St., San Francisco 11, Calif.

Heinze Electric Co., 685 Lawrence St., Lowell, Mass.

Heldor Mfg. Corp., Heldor Bushing & Terminal Co., Inc., 238 Lewis St., Paterson, N. J.

Heli-Coil Corp., Shelter Rock Rd., Danbury, Conn.

Hellpot Corp., 916 Meridian Ave., South Pasadena, Calif.

Helwig Co., 2544 N. 30th St., Milwaukee 10, Wis.

Heminway & Bartlett Mfg. Co., 500 Fifth Ave., New York 36, N. Y.

Henry and Miller Industries, 45 Rockefeller Plaza, New York, N. Y.

Hepner Mfg. Co., P. O. Box 612, Round Lake, Ill.

Hercules Powder Co., Inc., 900 Market St., Wilmington 99, Del.

Herlec Corp., 6th & Beech St., Grafton, Wis.

Hermaseal Co., Inc., 1101 Lafayette St., Elkhart, Ind.

Hermes Plastics, Inc., 13-19 University Place, New York 3, N. Y.

Hermetic Seal Products Co., 29-37 South 6th St., Newark 7, N. J.

Hertner Electric Co., 12690 Elmwood Ave., Cleveland 11, Ohio.

Herzog Miniature Lamp Works, Inc., 12-23 Jackson Ave., Long Island City 1, N. Y.

Hetherington, Inc., Sharon Hill, Pa.

Hewlett-Packard Co., 395 Page Mill Rd., Palo Alto, Calif.

Hewson Co., Inc., John, 443 Broad St., Newark 2, N. J.

Hexacon Electric Co., 130 W. Clay Ave., Roselle Park, N. J.

Heyer Industries, Inc., 471 Cortlandt St., Belleville 9, N. J.

Heyman Mfg. Co., Kenilworth 2, N. J.

Hickox Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio.

Hi-G Inc., Bradley Field, Windsor Locks, Conn.

High Speed Hammer Co., Rochester, N. Y.

High Voltage Engineering Corp., 7 University Rd., Cambridge 38, Mass.

Highland Engineering Co., Westbury, N. Y.

Hillburn Electronic Products Co., 55 Nassau Ave., Brooklyn 22, N. Y.

Hillyer Instrument Co., Inc., 54 Lafayette St., New York 13, N. Y.

Hinckley Technical Associates, Inc., 75 Orchard St., Belmont 78, Mass.

Hindle & Dauch, Sandusky, Ohio.

Hindle Transformer Co., Inc., Woods Church Rd., Flemington, N. J.

Hitemp Wires, Inc., 26 Windsor Ave., Mineola, N. Y.

Hi-Test Chemical Corp., 722 64th St., Brooklyn 20, N. Y.

Hivolt Ltd., 34A Pottery Lane, London W. 11, England.

Hobbs Mfg. Co., 26 Salisbury St., Worcester, Mass.

Hobson Bros., 4940 W. Lawrence Ave., Chicago 30, Ill.

Hoffman Engineering Corp., Anoka, Minn.

Hoffman Needle Works, Inc., 635 59th St., West New York, N. J.

Hoffman Radio Corp., 3716 S. Hill Street, Los Angeles 7, Calif.

Hofmann Corp., C. L., 643 Liberty Ave., Pittsburgh 22, Pa.

Hogan Laboratories, Inc., 155 Perry St., New York 14, N. Y.

Holl Audio Inc., 5014 N. Enclinta Ave., Temple City, Calif.

Holliston Mills, Inc., Norwood, Mass.

Holub Industries, Inc., 414 DeKalb Ave., Sycamore, Ill.

Holyoke Wire & Cable Co., 720 Main St., Holyoke, Mass.

Home Recording Products Corp., Freeport, N. Y.

Homelite Corp., Port Chester, N. Y.

Hopkins Engineering Co., 2082 Lincoln Ave., Altadena, Calif.

Hopp Press, Inc., 460 W. 34th St., New York, N. Y.

Hopwood Retinning Co., Inc., 198 Pacific Ave., Jersey City, N. J.

Hopwood Retinning Corp., 303 Commercial St., Malden, Mass.

Horn Co., Inc., A. C., 10th St. & 44th Ave., Long Island City 1, N. Y.

Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.

Houghton Laboratories, Inc., 322 Bush St., Olean, N. Y.

Houlihan Company, T. J., 2508-14 W. Lawrence Avenue, Chicago 25, Ill.

Hovis Screwlock Co., 8100 E. Nine Mile Rd., Van Dyke, Mich.

Howard Industries, Inc., Divisions: Cyclohm Motor Corp., Electric Motor Corp., Racine, Wis.

Hoves Engineering Co., Inc., 1594 Hyde Park Ave., Hyde Park, Mass.

Hoyt Electrical Instrument Works, 42 Carleton St., Cambridge 42, Mass.

Huck Mfg. Co., Detroit, Mich.

Hudson American Corp., 25 W. 43rd St., New York 36, N. Y.

Hudson Bay Division, Refrigeration Systems, Inc., 646 W. Washington, Chicago 6, Ill.

Hudson Lamp Co., 528 Elm St., Arlington, N. J.

Hudson Tool & Die Co., Inc., 118 S. 14th St., Newark, N. J.

Hudson Wire Co., Ossining, N. Y.

Hufco Industries, 2815 W. Olive, Burbank, Calif.

Huggins Laboratories, 734 Hamilton Ave., Menlo Park, Calif.

Hughes Aircraft Co., Culver City, Calif.

Hughes & Phillips, Inc., 3300 N. San Fernando Blvd., Burbank, Calif.

Hunt Corp., The, 453 Lincoln St., Carlisle, Pa.

Hunter Spring Co., 21 Spring Ave., Lansdale, Pa.

Huppert Co., K. H., 6830 Cottage Grove Ave., Chicago 37, Ill.

Husite Division of The Huse Liberty Mica Co., 3012 Washington St., Boston 19, Mass.

Hycor Mfg. Co., 2961 E. Colorado St., Pasadena, Calif.

Hycor Company, Inc., 11423 Vanowen St., North Hollywood, Calif.

Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.

Hydro-Aire, Inc., 3000 Winona Ave., Burbank, Calif.

Hy-Lite Antennae, Inc., 242 E. 137th St., New York 51, N. Y.

I. D. E. A., 7900 Pendleton Pike, Indianapolis 26, Ind.

I. E. Manufacturing, 321 N. Hoyle Ave., Chicago 12, Ill.

I-T-E Circuit Breaker Co., 19th & Hamilton Sts., Philadelphia 30, Pa.

Ideal Industries, Inc., 5103 Park & Borden Avenues, Sycamore, Ill.

Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.

Illinois Condenser Co., 1616 N. Throop St., Chicago 22, Ill.

Illinois Electric Porcelain Co., Macomb, Ill.

Illinois Wood Products Corp., 1656 N. Besly Court, Chicago 22, Ill.

Ilco Copper Tube & Products, Inc., Mariemont Ave., Mariemont, Cincinnati 27, Ohio.

Impedance Inc., 9 Alan Court, Farmingdale, N. Y.

Improved Seamless Wire Co., 775 Eddy St., Providence 5, R. I.

Imtra Corp., 58 Charles St., Cambridge 41, Mass.

Indiana Steel Products Company, The, Valparaiso, Indiana.

Indiana Steel & Wire Co., 700 Council St., Muncie, Ind.

Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.

Induction Motors Corp., 55-15 37th Ave., Woodside 77, N. Y.

Industrial Condenser Corp., 3243 N. California Ave., Chicago 18, Ill.

Industrial Control Co., Straight Path & Arlington Ave., Wyandanch, N. Y.

Industrial Development Labs., Inc., 17 Pollack Ave., Jersey City 5, N. J.

Industrial Development & Mfg. Corp., P. O. Box 48, Needham, Mass.

Industrial Devices Inc., 22 State Rd., Edgewater, N. J.

Industrial Electrical Works, 1509 Chicago St., Omaha 2, Nebraska.

Industrial Electronics Co., Inc., Hanover, Mass.

Industrial Electronics, Inc., 8060 Wheeler St., Detroit 10, Mich.

Industrial Engravers, Inc., 4103 Tenth Ave., Brooklyn 19, N. Y.

Industrial Filter & Pump Mfg. Co., 5916 Ogden Ave., Chicago, Ill.

Industrial Hardware Mfg. Co., Inc., 109 Prince St., New York, N. Y.

Industrial Instruments, Inc., 89 Commerce Rd., Cedar Grove, N. J.

Industrial Mica Corp., 223 S. Van Brunt St., Englewood, N. J.

Industrial Products Co., Div. of Danbury-Knudsen, Inc., Danbury, Conn.

Industrial Radio Corp., 428 N. Parkside Ave., Chicago 44, Ill.

Industrial Rectifier Corp., 323 Canal St., New York, N. Y.

Industrial Research Products, Inc., 9400 Belmont Ave., Franklin Park, Ill.

Industrial Retaining Ring Co., 8 W. Sidney Ave., Mount Vernon, N. Y.

Industrial Specialties Corp., 323 Atlantic Ave., Brooklyn 2, N. Y.

Industrial Synthetics Corp., 225 North Ave., Garwood, N. J.

Industrial Television, Inc., 369 Lexington Ave., Clifton, N. J.

Industrial Test Equipment Co., 55 E. 11th St., New York 3, N. Y.

Industrial Timer Corp., 131 Ogden St., Newark 4, N. J.

Industrial Transformer Co., Gouldsboro, Pa.

Inet Div. of Leach Corp., 4441 Santa Fe Ave., Los Angeles 58, Calif.

Infra Electronic Corp., Roseland, N. J.

Ingraham Co., E., Bristol, Conn.

Insl-X Co., Inc., Water St., Ossining, N. Y.

Instron Engineering Corp., 2 Hancock St., Quincy 71, Mass.

Instrument Corp. of America, Blacksburg, Va.

Instrument Development Laboratories, Inc., 163 Highland Ave., Needham Heights, Mass.

Instrument Electronics Corp., 90 Main St., Port Washington, N. Y.

Instrument Laboratories, 315 W. Walton Place, Chicago 10, Ill.

Instrument Motors, Acosta St., Stamford, Conn.

Instrument Parts Corp., P. O. Box 150, Ossining, N. Y.

Instrument Resistors Co., 1036 Commerce Ave., Union, N. J.

Instrument Specialties Co., Inc., 254 Bergen Blvd., Little Falls, N. J.

Instrument Wire Co., Guilford, Conn.

Instruments for Industries, Inc., Old Country Road, Mineola, N. Y.

Insulated Circuits, Inc., 115 Roosevelt Ave., Belleville, N. J.

Insulating Fabricators, Inc., 150 Union Ave., East Rutherford, N. J.

Insulating Fabricators of New England, Inc., 69 Grove St., Watertown 72, Mass.

Insulation Manufacturers Corp., 565 W. Washington Blvd., Chicago 6, Ill.

Insuline Corp. of America, 186 Granite St., Manchester, N. H.

Integrated Mica Corp., 202 Franklin Place, Woodmere, N. Y.

Intelectron, Inc., 1114 3rd St., S. E., Cedar Rapids, Iowa.

Interelectronics Corp., 2432 Grand Concourse, New York 58, N. Y.

International Business Machines, 590 Madison Ave., New York 22, N. Y.

International Crystal Mfg. Co., 18 N. Lee St., Oklahoma City, Okla.

International Electronic Research Corp., 175 W. Magnolia Blvd., Burbank, Calif.

International Electronics Corp., 137 Hudson St., New York 13, N. Y.

International Instruments, Inc., P. O. Box 2954, New Haven 15, Conn.

International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.

International Pump & Machine Works, 11-13 Governor St., Newark 2, N. J.

International Radiant Corp., 40 Matinecock Ave., Port Washington, N. Y.

International Radio & Electronics Corp., Elkhart, Ind.

International Rectifier Corp., 1521 E. Grand Ave., El Segundo, Calif.

International Register Co., 2620 Washington Blvd., Chicago 12, Ill.

International Research Associates, 2221 Warwick Ave., Santa Monica, Calif.

International Resistance Co., 401 N. Broad St., Philadelphia 8, Pa.

International Telemeter Corp., Ampli-Vision Div., 2000 Stoner Ave., Los Angeles 25, Calif.

International Testing Service, 321 N. Hamilton St., Saginaw, Mich.

Investment Casting Co., 60 Brown Ave., Springfield, N. J.

Ippolito & Co., Inc., James, 401 Concord Ave., Bronx 54, N. Y.

Iron Fireman, Electronics Div., 2800 S. E. Ninth Ave., Portland 2, Ore.

Irvington Varnish & Insulator Div. of Minnesota Mining & Mfg. Co., 6 Argyle Terrace, Irvington 11, N. J.

Islip Transformer & Metal Co., Inc., Beech St., Islip, N. Y.

Isocyanate Products, Inc., P. O. Box 1681, Wilmington, Del.

Isolantite Manufacturing Corp., Stirling, N. J.

J-B-L Instrument Co., Sycamore & Mill Rds., Clifton Heights, Pa.

J-B-T Instruments, Inc., 431 Chapel St., New Haven 8, Conn.

D Mfg. Co., Inc., 6101-23 Sixteenth Ave., Brooklyn, N. Y.

& Heintz, Inc., Cleveland 1, Ohio.

Electrical Instrument Co., 16 S. Patterson Blvd., Dayton 1, Ohio.

Instruments Co., 4718 Bethesda Ave., Bethesda, Md.

Mfg. Co., Inc., Kenilworth 2, N. J.

Vibrapowr Co., 4036 N. Rockwell St., Chicago 18, Ill.

Hardware Mfg. Co., Inc., 75 N. 11th St., Brooklyn 1, N. Y.

Corp., 3111 Wilona Ave., Burbank, Calif.

Electric Mfg. Co., Morton Grove, Illinois.

Jel-Ash Co., 26 Farwell St., Newtonville, Mass.

Electronics Corp., 6058 W. Fullerton Ave., Chicago 39, Ill.

P. O. Box 646, Redlands, Calif.

Electronics Div. of Speer Carbon Co., Du Bois, Pa.

Electric Co., Bellwood, Ill.

son, Inc., Ray, 40 E. Merrick Rd., Freeport, N. Y.

Mfg. Corp., C. O., 200 Pequot Ave., Southport, Conn.

Radio Mfg. Co., 970 McLaughlin Ave., P. O. Box 1278, San Jose 8, Calif.

Industries Inc., 329 S. Wood St., Chicago, Ill.

Mfg. Co., 6601 S. Laramie Ave., Chicago 38, Ill.

Electronics Corp., 26th & Dickinson Sts., Philadelphia 46, Pa.

City Technical Laboratory, 880 Bergen Ave., Jersey City 6, N. J.

Specialty Co., Inc., Little Falls, N. J.

Electronics, Inc., 93 Mass Ave., Boston, Mass.

Electronic Enterprises, Menlo Park, Calif.

Plastics Co., 534 Glenmore Ave., Brooklyn 7, N. Y.

Mfg. Co., Boonton, N. J.

Manville, 22 E. 40th St., New York 16, N. Y.

& Hoffman Mfg. Co., 31 E. Second St., Mineola, N. Y.

son Co., E. F., Waseca, Minn.

Electronics Div. of Gramer Transformer Corp., 734 N. Pulaski Rd., Chicago 39, Ill.

Engineering Co., Inc., Welton V., 95 Summit Ave., Summit, N. J.

Mfg. Co., Inc., Mount Vernon, Iowa.

Williams, Ltd., 2526 3rd St., Palo Alto, Calif.

Foil Mfg. Co., 6100 S. Broadway, St. Louis 11, Mo.

Electronics Co., Inc., M. C., 185 N. Main St., Bristol, Conn.

Div., Howard B., Clinch Mfg. Corp., 1026 S. Roman Ave., Chicago 24, Ill.

Electronic Mfg. Co., Inc., Union Bldg., 119 E. Union St., Pasadena 1, Calif.

Electronics Inc., 7945 Germantown Ave., Philadelphia 18, Pa.

Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.

Products, Inc., 115 Edison Place, Newark 5, N. J.

Corp., 462 N. Parkside Ave., Chicago 44, Ill.

Co., J. L., 87 Chambers St., New York 7, N. Y.

Development Co., 2606 Spring St., Redwood City, Calif.

Laboratories, 550 Beverly Rd., Teaneck, N. J.

Transformer Corp., 20 E. Franklin St., Danbury, Conn.

Engineering Co., 2995 Middlefield Road, P. O. Box 1320, Palo Alto, Calif.

Engineering Co., 1307 Seventh St., North Bergen, N. J.

& Co., Inc., 541 Windsor St., Hartford 1, Conn.

Research Labs., Elizabeth Bldg., 22 Pine St., Freeport, N. Y.

Aluminum & Chemical Sales, Inc., 1924 Broadway, Oakland 12, Calif.

Chemical Corp., Amelia Place, Stamford, Conn.

Metal Products Co., Div. of H & B Machine Co., 563rd St., Brooklyn 20, N. Y.

son, Inc., Box 472, Huntington Beach, Calif.

Engineering Co., 1415 First Ave., Mankato, Minn.

Light Corp., 624 Front St., Mankato, Minn.

& Sons, C. B., 32 Newark Way, Maplewood, N. J.

Electric Co., 25 Maple Ave., Pine Brook, N. J.

Lab, Inc., 1090 Morena Blvd., San Diego 10, Calif.

Halbert Corp., 3555 Hayden Ave., Culver City, Calif.

ott Co., Inc., 1150 McBride Ave., Little Falls, N. J.

ley Instruments, 3868 Carnegie Ave., Cleveland 15, Ohio.

& Co., G. F., 1195 Lawrence Ave., W., North York P. Q., Canada.

er Products Co., 41 Union St., Manchester, N. H.

ool Co., Grand Haven, Mich.

gg Co., M. W., P. O. Box 469, Jersey City 3, N. J.

gg Switchboard & Supply Co., 79 W. Monroe St., Chicago 3, Ill.

er Mfg. Corp., 222 Kearny St., San Francisco 8, Calif.

rt Co., A Div. of Union-Carbide & Carbon Corp., Madison Ave. & W. 117th St., Cleveland 1, Ohio

ette Laboratories, 1819 W. Grand Ave., Chicago 22, Ill.

ede Mfg. Co., Inc., 161 W. 18th St., New York 11, N. Y.

ron Electron Products, Inc., 5 Prince Place, Newbury Port, Mass.

edy & Co., D. S., Cohasset, Mass.

el Co., F. C., 64 Howard St., Irvington, N. J.

ood Engineering Co., Inc., 265 Colfax Ave., Kenilworth, N. J.

rn Transformer Co., Inc., 840 Barry St., New York 59, N. Y.

o Labs., 131-38 Sanford Ave., Flushing 55, N. Y.

Kester Solder Co., 4212 Wrightwood Ave., Chicago 39, Ill.

Ketay Mfg. Corp., 555 Broadway, New York 12, N. Y.

Keuffel & Esser Co., Hoboken, N. J.

Keystone Bolt & Nut Corp., 127 Church St., New York 7, N. Y.

Keystone Carbon Co., Inc., Saint Marys, Pa.

Keystone Electronics Co., 114 Manhattan St., Stamford, Conn.

Keystone Electronics Corp., 423 Broome St., New York 12, N. Y.

Keystone Products Co., 904-6 23rd St., Union City, N. J.

Kidde & Co., Inc., Walter, 477 Main St., Belleville 9, N. J.

Kinetix Instrument Div., Ketay Mfg. Corp., 902 Broadway, New York 10, N. Y.

King Electric Equipment Co., 9123 Inman Ave., Cleveland 5, Ohio.

King Laboratories Inc., 127 Solar St., Syracuse 4, N. Y.

Kings Electronics Co., 40 Marbledale Rd., Tuckahoe, N. Y.

Kinney Mfg. Co., 3529 Washington St., Boston, Mass.

Kirchberger & Co., Inc., M., 82-92 W. Forest Ave., Englewood, N. J.

Kirk & Blum Mfg. Co., 2893 Spring Grove Ave., Cincinnati 25, Ohio.

Kirkland Co., H. R., 8 King St., Morristown, N. J.

Klein-Electronics, Leo, 2404 S. La Brea Ave., Los Angeles 16, Calif.

Klein & Sons, Mathias, 3200 Belmont Ave., Chicago 18, Ill.

Klincher Locknut Corp., 2153 Hillside Ave., Indianapolis 18, Ind.

Kling Metal Spinning Co., 174 Centre Street, New York 13, N. Y.

Klipsch & Associates, P. O. Box 64, Hope, Ark.

Knights Co., James, 131 S. Wells St., Sandwich, Ill.

Kobzy Tool Co., 1535 N. Dayton Ave., Chicago 22, Ill.

Koch Fiberglass, Corte Madera, Calif.

Koh-I-Noor Pencil Co., Bloomsbury, N. J.

Kolled Kords, Inc., Box K, New Haven 14, Conn.

Kollman Show Case Corp., Fort Wayne 1, Ind.

Kollman Instrument Corp., 80-08 45th Ave., Elmhurst, N. Y.

Kolton Electric Mfg. Co., 123 New Jersey Railroad Ave., Newark 5, N. J.

Koppers Co., Inc., Koppers Bldg., Pittsburgh 19, Pa.

Kotron Rectifier Corp., 175 Murray St., Newark, N. J.

Krenzel Mfg. Co., Inc., 227 Fulton St., New York 7, N. Y.

Kreutzer Industries, 1835 N. Hoyle Ave., Chicago 47, Ill.

Krohn-Hite Instrument Co., 580 Massachusetts Ave., Cambridge 39, Mass.

Kuhn & Jacob Molding & Tool Co., 1200 Southard St., Trenton, N. J.

Kuljian Corp., Electronics Div., 1200 N. Broad St., Philadelphia 21, Pa.

Kutka Electric Mfg. Co., Inc., 633 S. Fulton Ave., Mount Vernon, N. Y.

Kupfrian Mfg. Co., 398 State St., Binghamton, N. Y.

Kurman Electric Co., Inc., 35-18 37th St., Long Island City 1, N. Y.

Kurz-Kasch, Inc., 1421 S. Broadway, Dayton 1, Ohio.

Kuthe Laboratories, Inc., 730 S. 13th St., Newark 3, N. J.

Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4, Calif.

Kybernetes Co., 1100 Raymond Blvd., Newark, N. J.

L. A. B. Corporation, Skaneateles, N. Y.

L & O Research & Development Corp., 134 N. Wayne Ave., Wayne, Pa.

Labelon Tape Co., 45 Atlantic Ave., Rochester 9, N. Y.

Laboratoire Industriel de Prysique Applique, 67 Rue M.-A.-Colombier, Bagnolet (Seine), France.

Laboratory for Electronics, Inc., 75 Pitts St., Boston 14, Mass.

Lacey Brothers Etched Circuits, 117 S. Lombard, Oak Park, Ill.

Laconia Corp., 37 S. 6th St., Newark 7, N. J.

Lake Chemical Co., 3052 W. Carroll St., Chicago 12, Ill.

Lake Mfg. Co., 2323 Chestnut St., Oakland 7, Calif.

Lambda Electronics Corp., 103-02 Northern Blvd., Corona, N. Y.

Laminated Sheet Products Corp., 449 Neponset St., P. O. Box 390, Norwood, Mass.

La Motte Chemical Products Co., Towson 4, Baltimore, Md.

Lampkin Laboratories, Inc., Bradenton 1, Fla.

Lamson & Sessions Co., 1971 W. 85th St., Cleveland 2, Ohio.

Lancaster Lens Co., Lancaster, Ohio.

Landis & Gyr, Inc., 45 W. 45th St., New York 36, N. Y.

Langevin Mfg. Corp., 37 W. 65th St., New York 23, N. Y.

Lansing Sound Inc., James B., 2439 Fletcher Drive, Los Angeles 26, Calif.

LaPointe Electronics Inc., Rockville, Conn.

Lapp Insulator Co., Inc., Radio Specialties Div., 31 Gilbert St., LeRoy, N. Y.

Laughlin Co., Thomas, 199 Fore, Portland, Me.

Laurehk Radio Mfg. Co., 3931 Monroe Ave., Wayne, Mich.

Lavelle Rubber Co., 424 N. Wood St., Chicago 22, Ill.

Lavoie Laboratories, Morganville, N. J.

Lawn Electronics Co., East Freehold Road, Freehold, N. J.

Leach Relay, Div. of Leach Corp., 5915 Avalon Blvd., Los Angeles 3, Calif.

Lear, Inc., 3171 S. Bundy Drive, Los Angeles 34, Calif.

Lear, Inc., 110 Ionia Ave., N.W., Grand Rapids 2, Mich.

Lecianche S. A., Yverdon, Switzerland.

Lectrohm, Inc., 5561 Northwest Highway, Chicago 30, Ill.

Lee Electric Co., 132 Beckwith Ave., Paterson, N. J.

Lee Electric & Mfg. Co., 2806 Clearwater St., Los Angeles 39, Calif.

Lee Electronics Labs., Inc., 233 Dudley St., Roxbury 19, Mass.

Lee Laboratories, Inc., Genesee, Pa.

Lee Spring Co., Inc., 32 Main St., Brooklyn 1, N. Y.

Leeds & Northrup Co., 444 N. 16th St., Philadelphia 30, Pa.

Lehigh Structural Steel Co., 17 Battery Place, New York 4, N. Y.

Lehigh Valley Electronic Mfg. Co., 215 S. 3rd St., Allentown, Pa.

Leighton Labs., H. W., 26 Herman St., Glen Ridge, N. J.

Lektra Laboratories, 154-11th Ave., New York 11, N. Y.

Leland Electric Co., The Div. of American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio.

Leland, Inc., G. H., 123 Webster St., Dayton 2, Ohio.

Lenk Mfg. Co., The, 30 Cummington St., Boston 15, Mass.

Lenkurt Electric Co., Inc., 1113 County Road, San Carlos, Calif.

Lenz Electric Mfg. Co., 1751 North Western Ave., Chicago 47, Ill.

Leonard Electric Products Co., Inc., 67 Thirty Fourth St., Brooklyn 32, N. Y.

Lepel High Frequency Labs., Inc., 55th St. & 37th Ave., Woodside 77, N. Y.

Lermac, Inc., 5303 Adeline St., Oakland 10, Calif.

Leru Laboratories, Inc., 490 Black Oak Ridge Rd., R. D. 4, Paterson, N. J.

Lesca, Via Bergamo 21, Milan, Italy.

Lettine Radio Mfg. Co., 62 Berkley St., Valley Stream, N. Y.

Lewis Co., E. B., 11 Bragg St., East Hartford 8, Conn.

Lewis Engineering Co., 52 Rubber Ave., Naugatuck, Conn.

Lewis & Kaufman, Ltd., P. O. Box 337, 90 El Rancho Ave., Los Gatos, Calif.

Lewis Spring & Mfg. Corp., 2646 W. North Ave., Chicago 47, Ill.

Librascope, Inc., 1607 Flower St., Glendale 1, Calif.

Liebel-Flarsheim Co., 111 E. Amity Rd., Cincinnati 37, Ohio.

Lindberg Engineering Co., 2450 W. Hubbard St., Chicago, Ill.

Linde Air Products Co., Division of Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

Lindgren & Associates, Erik A., 4515 N. Ravenswood Ave., Chicago 40, Ill.

Linear Equipment Labs., Brightwater Place, Massapequa, N. Y.

Lingo & Son, Inc., John E., 28th St. and Buren Ave., Camden, N. J.

Linick Chemical Co., 59 E. Madison St., Chicago 2, Ill.

Link Aviation, Inc., Binghamton, N. Y.

Lion Fastener, Inc., Honeoye Falls, N. Y.

Lipps, E. A., 5485 W. Washington Blvd., Los Angeles, Calif.

Liston-Becker Instrument Co., Inc., 649 Hope St., Springfield, Stamford, Conn.

Littelfuse Inc., Des Plaines, Ill.

Little Falls Alloys, Inc., 190 Caldwell Ave., Paterson 1, N. J.

Little, Inc., Arthur D., Cambridge, Mass.

Litton Engineering Laboratories, 1049 Brittan Ave., San Carlos, Calif.

Litton Industries, 336 N. Foothill Rd., Beverly Hills, Calif.

Locke, Dept. of General Electric Co., P. O. Box 57, Baltimore 3, Md.

Loge Sound Engineers, J. M., 2171 W. Washington Blvd., Los Angeles 18, Calif.

Logistics Research Inc., 141 S. Pacific Ave., Redondo Beach, Calif.

London Chemical Co., 325 W. 32nd St., Chicago 16, Ill.

Loral Electronics Corp., 794 E. 140th St., New York 54, N. Y.

Lord Mfg. Co., 1635 W. 12th St., Erie, Pa.

Louthan Mfg. Co., East Liverpool, Ohio.

Lowell Insulated Wire Div., The Overlakes Corp., 171 Lincoln Ave., Lowell, Mass.

Luhrs & Co., C. H., 297 Hudson St., Hackensack, N. J.

Lukens Steel Co. & Divisions, By-Products Steel Co. & Lukenweld, 447 Lukens Bldg., Coatesville, Pa.

Luma Electric Equipment Co., P. O. Box 132, Toledo 1, Ohio.

Lumenite Electric Co., 407 S. Dearborn St., Chicago 5, Ill.

Lundey Associates, 694 Main St., Waltham 54, Mass.

Luther Electronic Mfg. Co., 5728 W. Washington Blvd., Los Angeles 16, Calif.

Luzerne Rubber Co., Muirhead Ave., Trenton, N. J.

Lyman Electronic Corp., 12 Cass St., Springfield, Mass.

Lynch Carrier Systems, Inc., 96 Jessie St., San Francisco 5, Calif.

Lynmar Engineers, Inc., 1432 N. Carlisle St., Philadelphia 21, Pa.

Lynn Electronic Research Co., 9 W. Magnolia Blvd., P. O. Box 69, Burbank, Calif.

MB Mfg. Co., 1060 State St., New Haven 11, Conn.

MP Engineering Co., Fairfield 3, Conn.

M-W Laboratories, 1824 N. Milwaukee Ave., Chicago 27, Ill.

McColpin-Christie Corp., 3410 W. 67th St., Los Angeles 43, Calif.

McCoy Electronics Co., Mount Holly Springs, Pa.

McElroy Mfg. Corp., Littleton, Mass.
 McGregor Electronic Industries, McGregor, Iowa.
 McIntosh Laboratory, Inc., 320 Water St., Binghamton, N. Y.
 McLean Engineering Laboratories, Princeton, N. J.
 McLaughlin Corp., J.L.A., 367 Blvd Rock Ave., La Jolla, Calif.
 McMillan Industrial Corp., Brownville Avenue Plant, Ipswich, Mass.
 McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.
 McShan Development Corp., 71 Murray St., New York 7, N. Y.
 Maas & Waldstein Co., 2121 McCarter Highway, Newark 4, N. J.
 Macdonald Co., Inc., W. S., 33 Unlversity Rd., Cambridge 38, Mass.
 Machlett Laboratories, Inc., Springfield, Conn.
 Mack Electric Devices, Inc., 43 Glenside Ave., Wyncote, Pa.
 MacKay Laboratories, 1946 N. Kedzie, Chicago 47, Ill.
 MacLeod & Hanopol, Inc., 10 Roland St., Charlestown 29, Mass.
 Magna Electronics Co., 9810 Anza Ave., Inglewood, Calif.
 Magnasync Manufacturing Co., Ltd., 5517 Satsuma Ave., P. O. Box 707, North Hollywood, Calif.
 Magnatran, Inc., 248 Schuyler Ave., Kearny, N. J.
 Magnavox Co., Component Sales, Industrial & Defense Products, Fort Wayne 4, Ind.
 Magnecord, Inc., 225 W. Ohio St., Chicago 10, Ill.
 Magnecraft Electric Co., 1448 W. Van Buren St., Chicago 7, Ill.
 Magne-Pulse Corp., 140 Nassau St., New York 38, N. Y.
 Magnetic Amplifiers, Inc., 632 Tinton Ave., New York 55, N. Y.
 Magnetic Analysis Corp., 42-44 Twelfth St., Long Island City 1, N. Y.
 Magnetic Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
 Magnetic Core Corp., 2 Croton Ave., Ossining, N. Y.
 Magnetic Devices, Inc., 712 East St., Frederick, Md.
 Magnetic Metals Co., Hayes Ave. at 21st St., Camden, N. J.
 Magnetic Powders Inc., 1000 Fairview Ave., Johnsonburg, Pa.
 Magnetic Precision Controls, Inc., 119 W. 63rd St., New York 23, N. Y.
 Magnetic Research Corp., 318 Kansas St., El Segundo, Calif.
 Magnetic Windings Div., Essex Wire Corp., Freemansburg Ave., at Hobson Blvd., Easton, Pa.
 Magnetics, Inc., P. O. Box 230-E, Butler, Pa.
 Magnetics Research Co., 142 King St., Chappaqua, N. Y.
 Magnex Corp., 90-28 Van Wyck Expressway, Jamaica, N. Y.
 Maico Co., Inc., 21 North 3rd St., Minneapolis, Minn.
 Maida Development Co., 12 E. Howard St., Phoebus, Va.
 Makepeace Co., D. E., Attleboro, Mass.
 Malco Tool & Mfg. Co., 4025 W. Lake St., Chicago 24, Ill.
 Mallinckrodt Chemical Works, Second and Mallinckrodt Sts., St. Louis 7, Mo.
 Mallory & Co., Inc., P. R., 3029 E. Washington St., Indianapolis 6, Ind.
 Mandef Mfg. Co., Inc., 2608 W. 16th St., Chicago 8, Ill.
 Manning, Maxwell & Moore, Inc., Stratford, Conn.
 Mansol Ceramics, 140 Little St., Belleville, N. J.
 Manson Laboratories, 207 Greenwich Ave., Stamford, Conn.
 Manufacturers Engineering & Equipment Corp., York & Mill Rds., Hatboro, Pa.
 Marathon Battery Co., Wausau, Wis.
 Marathon Electric Mfg. Corp., Randolph & Cherry Sts., Wausau, Wis.
 Marblette Corp., 37-21 30th St., Long Island City, N. Y.
 Marbon Corp., Gary, Ind.
 Marchant Research, Inc., 1475 Powell St., Emeryville, Calif.
 Marco Industries Co., 207 S. Helena St., Anaheim, Calif.
 Marconi Instruments, Ltd., 23 Beaver St., New York 4, N. Y.
 Marconi Wireless Telegraph Co., Ltd., 23-25 Beaver St., New York 4, N. Y.
 Marion Electrical Instrument Co., 402 Canal St., Manchester, N. H.
 Mark Products Co., 3547 W. Montrose Ave., Chicago 18, Ill.
 Markel & Sons, L. Frank, School House Lane, Norristown, Pa.
 Markem Machine Co., Keene, N. H.
 Markite Corp., 155 Waverly Place, New York 14, N. Y.
 Markwik Manufacturing Co., Inc., 147-39 18th Ave., Whitestone, N. Y.
 Marma Electronic Co., 703 Willow St., Chicago 14, Ill.
 Marsh Stencil Machine Co., 46 Marsh Bldg., Belleville, Ill.
 Marshall Associates, Inc., John, Box 2463, Bridgeport 8, Conn.
 Martindale Electric Co., Edgewater Branch, Box 617, Cleveland 7, Ohio.
 Maryland Electronic Mfg. Corp., College Park, Md.
 Maryland Lava Co., Bel Air, Md.
 Masco Products Co., 2119 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
 Massa Laboratories, Inc., 5 Fottler Rd., Hingham, Mass.
 Massachusetts Institute of Television, Crow's Nest, South Lee, Mass.
 Master Appliance Mfg. Co., Fourth & Ontario Sts., Racine, Wis.
 Master Etching Corp., 50 Honeck St., Englewood, N. J.
 Matawan Electronics Co., Inc., 236 Creek Rd., Keansburg, N. J.
 Matthews & Co., James H., 3942 Forbes St., Pittsburgh, Pa.
 Mattison Television & Radio Corp., 10 W. 181st St., New York 53, N. Y.
 Maurer Inc., J. A., 37-01 31st St., Long Island City 1, N. Y.
 Maxson Corp., W. L., 460 W. 34th St., New York 1, N. Y.
 May Engineering Co., 6055 Lankershim Blvd., North Hollywood, Calif.
 Measurement Engineering, Ltd., Arnprior, Ontario, Canada.
 Measurements Corp., Boonton, N. J.
 Mechanical Industries Production Co., 217-223 Ash St., Akron 8, Ohio.
 Meissner Mfg. Div., Magulre Industries, Inc., Mt. Carmel, Ill.
 Melody Master Mfg. Co., 2842 N. Cicero Ave., Chicago 41, Ill.
 Melpar, Inc., 452 Swann Ave., Alexandria, Va.
 Meldeishon Speedgun Co., Inc., Fourth Ave., Haskell, N. J.
 Menlo Research Laboratory, Menlo Park, Calif.
 Mepeco, Inc., 35-37 Abbett Ave., Morristown, N. J.
 Mercoird Corporation, The, 4201 Belmont Ave., Chicago 41, Ill.
 Mercury Contacts, Inc., P. O. Box 615-E, Far Hills Station, Dayton 9, Ohio.
 Mercury Electronic Co., Box 450, Red Bank, N. J.
 Meridian Metalcraft, Inc., 213 W. Whittier Blvd., Whittier, Calif.
 Merit Coil & Transformer Corp., 4427 N. Clark St., Chicago 40, Ill.
 Merit Plating Co., 216 E. 141st St., New York 51, N. Y.
 Merit Short Wave Diathermy Co., 2758 Whittier Blvd., Los Angeles 23, Calif.
 Merritt & Zaleski, Inc., 33-66 12th St., Long Island City 6, N. Y.
 Metal Hydrides, Inc., Beverly, Mass.
 Metal Textile Corp., 647 E. First Ave., Roselle, N. J.
 Metalcraft Inc., 86-08 130th St., Richmond Hill 18, N. Y.
 Metals & Controls Corp., General Plate Div., Attleboro, Mass.
 Metaplast Process Inc., 3451 56th St., Woodside, N. Y.
 Meters, Inc., 5353 N. Keystone Ave., Indianapolis 20, Ind.
 Methode Mfg. Corp., 2021 W. Churchill St., Chicago 47, Ill.
 Metro, Inc., R. I., 230 Toronto Ave., Providence, R. I.
 Metro Engineering Associates, Easthampton, Mass.
 Metron Instrument Co., 432 Lincoln St., Denver 9, Colorado.
 Metz Refining Co., 369 Mulberry St., Newark 2, N. J.
 Meyercord Co., 5323 W. Lake St., Chicago 441, Ill.
 Mica Fabricating Co., 53 Central Ave., Rochelle Park, N. J.
 Mica Insulator Co., Schenectady 1, N. Y.
 Micacraft Products Inc., 703 McCarter Highway, Newark 5, N. J.
 Micamold Radio Corp., 1087 Flushing Ave., Brooklyn 6, N. Y.
 Micarta Fabricators, Inc., 5324 Ravenswood Avenue, Chicago 40, Illinois.
 Michel Mfg. Co., 227 N. Water St., Milwaukee 2, Wis.
 Michigan Steel Casting Co., 1999 Guion St., Detroit 7, Mich.
 Mico Instrument Co., 77 Trowbridge St., Cambridge 38, Mass.
 Micro Balancing, Inc., 191 Herricks Rd., Garden City Park, N. Y.
 Micro-Circuits Co., New Buffalo, Mich.
 Microdot Division, Felts Corp., 1826 Fremont Ave., South Pasadena, Calif.
 Microlab, 71 Okner Parkway, Livingston, N. J.
 Micromax Co., 1964 Utica Ave., Brooklyn, N. Y.
 Micro Switch Division of Minneapolis-Honeywell Regulator Co., 7 W. Spring St., Freeport, Ill.
 Microtran Co., 84-13 Rockaway Beach Blvd., Rockaway Beach 93, N. Y.
 Microtone Co., Ford Parkway on the Mississippi, St. Paul 5, Minn.
 Microwave Associates, Inc., 22 Cummington St., Boston 15, Mass.
 Microwave Development Laboratories, Inc., 92 Broad St., Wellesley, Mass.
 Mid-Century Instrument Corp., 611 Broadway, New York 12, N. Y.
 Midco Mfg. & Distributing Co., Inc., 1129 S. 13th St., Sheboygan, Wis.
 Midland Industrial Finishes Co., Waukegan, Ill.
 Midland Mfg. Co., Sunshine & Fiberglass, Kansas City, Kansas.
 Midland Paint & Varnish Co., 9115 Reno Ave., Cleveland 5, Ohio.
 Mid-West Coil & Transformer Co., 1642 N. Halsted St., Chicago 14, Ill.
 Midwest Molding & Mfg. Co., 4630 W. Fullerton Ave., Chicago 39, Ill.
 Midwest Radio & Television Corp., 909 Broadway, Cincinnati 2, Ohio.
 Mid-West Spring Mfg. Co., 4632 S. Western Ave., Chicago 9, Ill.
 Midwestern Geophysical Laboratory, 3440 S. Harvard, Tulsa, Okla.
 Milano Optica, S.P.A., Snow & Union Sts., Brighton 35, Mass.
 Milburn, Inc., Alexander, 1241 Ridgely St., Baltimore 30, Md.
 Miles Reproducer Co., Inc., 812 Broadway, New York 3, N. Y.
 Milford Rivet & Machine Co., Milford, Conn.
 Millen Mfg. Co., James, 150 Exchange St., Malden, Mass.
 Millen Mfg. Co., 90 Summit Ave., Brookline, Mass.
 Miller Labs., August E., 9226 Hudson Blvd., North Bergen, N. J.
 Miller Television Co., 5917 S. Main St., Los Angeles 3, Calif.
 Miller Instruments, Inc., William, 325 N. Halstead Ave., Pasadena 8, Calif.
 Miller Mfg. Co., M. A., 4th & Church Sts., Libertyville, Ill.
 Miller Research Laboratories, 5529 S. Fifth St., Milwaukee 7, Wis.
 Miller Television Co., 2840 Naomi St., Burbank, Calif.
 Millers Falls Co., Greenfield, Mass.
 Millivac Instrument Corp., 444 Second St., Box 997, Schenectady, N. Y.
 Milwaukee Resistor Co., 700 W. Virginia St., Milwaukee 4, Wis.
 Milwaukee Transformer Co., 5231 N. Hopkins St., Milwaukee 9, Wis.
 Miniature Precision Bearings, Inc., Keene, New Hampshire.
 Minneapolis-Honeywell Regulator Co., 2753 Fourth Avenue S., Minneapolis, Minn.
 Minneapolis-Honeywell Regulator Co., Aeronautical Div., 2600 Ridgway Rd., Minneapolis 13, Minn.
 Minneapolis-Honeywell Regulator Co., Industrial Div., Wayne & Windrim Aves., Philadelphia 44, Pa.
 Minnesota Electronics Corp., 47 W. Water St., St. Paul 1, Minn.
 Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
 Minnesota Rubber & Gasket Co., 3630 Wooddale Ave., Minneapolis 16, Minn.
 Minor Rubber Co., 49 Ackerman St., Bloomfield, N. J.
 Minute Man Products, Inc., 430 E. 102nd St., New York, N. Y.
 Misco Precision Casting Co., Gibbs & Larsen Sts., Whitehall, Mich.
 Miskella Infra-Red Co., The, E., 73rd & Grand Ave., Cleveland 4, Ohio.
 Mission-Western Engineers, Inc., 132-134 W. Colorado St., Pasadena 1, Calif.
 Mitchell Industries, Inc., P. O. Box 17, Mineral Wells, Texas.
 Mitchell Rand Insulation Co., Inc., 51 Murray Street, New York 7, N. Y.
 Mitronics Inc., 232 Thirteenth Ave., Newark, N. J.
 Model Engineering & Mfg. Inc., Huntington, Ind.
 Model Rectifier Corp., 557 Rogers Ave., Brooklyn 25, N. Y.
 Modelectric Products Corp., 1500 Bangs Ave., Asbury Park, N. J.
 Modern-Aire Mfg. Co., 4436 W. Roosevelt Rd., Chicago 24, Ill.
 Modern Hearing Aids Laboratory, The, 6805 Fraser St., Vancouver, B. C., Canada.
 Molded Insulation Co., 335 E. Price St., Philadelphia 44, Pa.
 Molded Products Co., Inc., 2820 N. Sylvania St., Fort Worth, Texas.
 Molding Corporation of America, 40 Church St., Pawtucket, R. I.
 Moie-Richardson Co., 937 N. Sycamore Ave., Hollywood 38, Calif.
 Moloney Electric Co., 5590 Bircher Blvd., St. Louis 20, Mo.
 Monitor Products Co., 815 Fremont Ave., South Pasadena, Calif.
 Monsanto Chemical Co., Plastics Div., Springfield, Mass.
 Montgomery Mfg. Co., 204 S. Main St., Owensville, Ind.
 Moody Machine Products Co., Inc., 53 Dudley St., Providence 5, R. I.
 Moog Valve Co., Inc., Proner Airport, East Aurora, N. Y.
 Mooradian High Frequency Labs., 13 E. Fort Lee Rd., Bogota, N. J.
 Moore Co., Howard J., 266 William St., New York 38, N. Y.
 Moran Electronic Components, Inc., 10515 Metropolitan Ave., Kensington, Md.
 Morrow Radio Mfg. Co., 2794 Market St., Salem, Ore.
 Morse Co., Frank W., 1300 Soldiers Field Rd., Boston 35, Mass.
 Moseley, Francis L., 1325 N. Fair Oaks, Pasadena 3, Calif.
 Mosinee Paper Mills Co., Mosinee, Wisconsin.
 Motorayne, Inc., 2661 S. Myrtle Ave., Monrovia, Calif.
 Motoresearch Co., 1600 Junction Ave., Racine, Wis.
 Motorola Inc., Communications & Electronics Div., 4545 Augusta Blvd., Chicago 51, Ill.
 Moulis Specialties Co., 1007 W. Washington St., Bloomington, Ill.
 Mt. Vernon Precision Transformer Co., 201 S. Third Ave., Mt. Vernon, N. Y.
 Moyer, C. P., 8157 Monticello Ave., Skokie, Ill.
 Muckie Mfg. Co., Owatonna 55, Minn.
 Mucon Corp., 9 St. Francis St., Newark 5, N. J.
 Mueller Electric Co., 1583 E. 31st St., Cleveland 14, Ohio.
 Mueller Laboratory, 239 W. Maple Ave., Monrovia, Calif.
 Muirhead & Co., Ltd., Beckenham, Kent, England.
 Mullard Overseas Ltd., Equipment Div., Century House, Shaftesbury Ave., London W. C. 2, England.
 Mullenbach Electrical Mfg. Co., Electronic Div., 2300 E. 27th St., Los Angeles 58, Calif.
 Multicore Sales Corp., 164 Duane St., New York 13, N. Y.
 Multicore Solders Ltd., Multicore Works, Maylands Ave., Hemel Hempstead, Hertfordshire, England.
 Multi Metal Co., 1350 Garrison Ave., New York 59, N. Y.
 Multi-Products Co., 559 E. Ten Mile Rd., Hazel Park, Mich.
 Murex Ltd., Rainham-Essex-England.
 Murphy & Miller Inc., 1322 S. Michigan Ave., Chicago 5, Ill.
 Murray American Corp., 95 Summit Ave., Summit, N. J.

Murray Mfg. Corp., 1250 Atlantic Ave., Brooklyn 16, N. Y.
 Murray Plastics Co., 26 Cottage St., Poughkeepsie, N. Y.
 Uter Co., 1255 S. Michigan Ave., Chicago 5, Ill.
 Ycalex Corporation of America, 125 Clifton Blvd., Clifton, N. J.
 Ycalex Electronics Corp., 30 Rockefeller Plaza, New York 20, N. Y.
 Ycalex Tube Socket Corporation, 125 Clifton Blvd., Clifton, N. J.
 Yers & Sons, Inc., E. A., 306 Beverly Road, Radioear Building, Pittsburgh 16, Pa.
 Ykroy, Inc., Wheeling, Ill.
 Ystic Transformers Inc., 63 Swanton St., Winchester, Mass.
 Zytrom Mfg. Co., 4504 Brazil St., Los Angeles 39, Calif.

R. K. Mfg. & Engineering Co., 4601 W. Addison St., Chicago 41, Ill.
 Ver Corp., 2301 S. Purdue Ave., West Los Angeles 64, Calif.
 Vameplates, Inc., 425 E. 101st St., Brooklyn 12, N. Y.
 Vassau Research & Development Associates, Inc., 66 Main St., Mineola, N. Y.
 Vational Acme Co., 170 E. 131st St., Cleveland 8, Ohio.
 Vational Aeronautical Corp., 180 S. Main St., Ambler, Pa.
 Vational Capacitor Co., 60 Washington Court, Quincy 69, Mass.
 Vational Carbon Co., Division of United Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
 Vational Ceramic Co., 400 Southard St., Trenton 2, N. J.
 Vational Coil Co., P. O. Box 1237, Sheridan, Wyo.
 Vational Company, Inc., 61 Sherman St., Malden 48, Mass.
 Vational Electric Coil Co., Columbus 16, Ohio.
 Vational Electric Controller Co., 7070 Glenwood Ave., Chicago 26, Ill.
 Vational Electric Products Co., 140 Stanwix St., Pittsburgh 22, Pa.
 Vational Electronic Mfg. Corp., 186 Granite St., Manchester, N. H.
 Vational Electronics, Inc., Geneva, Ill.
 Vational Electronics Laboratories, Inc., 1713 Kalorama Rd., N. W., Washington 9, D. C.
 Vational Electronics Mfg. Co., 314 W. 58th St., Los Angeles, Calif.
 Vational Inter-Communication Systems, Inc., 1130 N. Milwaukee Ave., Chicago 22, Ill.
 Vational Lead Co., 111 Broadway, New York 6, N. Y.
 Vational Lock Washer Co., 40 Hermon St., Newark 5, N. J.
 Vational Moldite Co., 1410 Chestnut Ave., Hillside 5, N. J.
 Vational Pneumatic Co., Inc., and Holtzer-Cabot Divisions, 125 Amory St., Boston 19, Mass.
 Vational Radlac, Inc., 10 Crawford St., Newark, N. J.
 Vational Research Corp., 160 Charlemont St., Newton Highlands 61, Mass.
 Vational Screw & Mfg. Co., The, Cleveland 4, Ohio.
 Vational Spectrographic Laboratories, Inc., 6300 Euclid Ave., Cleveland 3, Ohio.
 Vational Tel-Tronics Corp., 35 St. Casmirs Ave., Yonkers, N. Y.
 Vational Union Radio Corp., 237 Jacksonville Rd., Hatboro, Pa.
 Vational Video Corp., 4300 W. 47th St., Chicago 32, Ill.
 Vational Vulcanized Fibre Co., Wilmington, Del.
 Vstar Corp., 211 Randolph Ave., Woodbridge, N. J.
 Vtel Lab., R. E., 1104 Lincoln Place, Brooklyn 13, N. Y.
 Vison Vacuum Pump Co., George F., 2133 Fourth Street, Berkeley 10, Calif.
 Vomatic, Inc., 9010 Bellanca Ave., Los Angeles 45, Calif.
 Vor Alloy Products Co., 282 Halsey St., Newark, N. J.
 Vork Mfg. Corp., 213 W. Fifth St., Bayonne, N. J.
 Vtronlic Associates, 87-16 116th St., Richmond Hill, N. Y.
 W England Electrical Works, Inc., Lisbon, N. H.
 W England Etching & Plating Co., 25 Spring St., Holyoke, Mass.
 W Hampshire Ball Bearings, Inc., Peterborough, N. H.
 W Hermes, Inc., 13-19 University Place, New York 3, N. Y.
 W Jersey Electronics Corp., 196 Waverly Ave., Newark, N. J.
 W Jersey Wood Finishing Co., Amboy Ave., Woodbridge, N. J.
 W Jersey Zinc Co., 160 Front St., New York 7, N. Y.
 W London Instrument Co., P.O. Box 189, New London, Conn.
 W Rochelle Precision Grinding Corp., 162 E. Main St., New Rochelle, N. Y.
 W Rochelle Tool Corp., 320 Main St., New Rochelle, N. Y.
 W York Solder Co., 684 E. 133rd St., New York 54, N. Y.
 W York Transformer Co., Inc., Third Ave., Alpha, N. J.
 Wark Spinning & Stamping Co., 472 Bloy St., Hillside 5, N. J.
 Wcomb Audio Products Co., 6824 Lexington Ave., Hollywood 38, Calif.
 Wcomb Spring Corp., 72 E. Hawthorne Ave., Valley Stream, N. Y.
 Wton Co., 55 Elm St., Manchester, Conn.
 W Co., J. M., 179 Elm St., Hartford, Conn.
 Wgara Electron Laboratories, Andover, N. Y.
 Wkel Cadmium Battery Corp., Easthampton, Mass.
 Wlsen Hardware Corp., 770 Wethersfield Ave., Hartford 14, Conn.
 Wmand Bros., Inc., 37-03 35th Ave., Long Island City, N. Y.

Nilsson Electrical Laboratory, Inc., 103 Lafayette St., New York 13, N. Y.
 Noble & Westbrook Mfg. Co., 27 Westbrook St., East Hartford 8, Conn.
 Noel Mfg. Co., 25 E. 4th St., New York 3, N. Y.
 Nonotuck Mfg. Co., Holyoke, Mass.
 Norrman Laboratories, Ernst, Williams Bay, Wis.
 North American Electric Lamp Co., 1014 Tyler St., St. Louis 6, Mo.
 North American Philips Co., Inc., Elmet Div., Lisbon Rd., Lewiston, Maine.
 North American Philips Co., Inc., 750 S. Fulton Ave., Mt. Vernon, N. Y.
 North American Research Labs., Inc., 725 Lexington Ave., Kenilworth, N. J.
 North Electric Mfg. Co., 501 S. Market St., Gallon, Ohio.
 North Hills Electric Co., Inc., 246-32 54th Ave., Douglaston 62, N. Y.
 Northeast Scientific Co., 1 Gray St., Cambridge 38, Mass.
 Northeastern Engineering, Inc., Manchester, N. H.
 Northern Industrial Chemical Co., 7-11 Elkins St., South Boston 27, Mass.
 Northern Mfg. Co., 38 Spring St., Newark, N. J.
 Northern Metal Products Co., 9597 W. Grand Ave., Franklin Park, Ill.
 Northern Radio Co., Inc., 143-145 W. 22nd St., New York 11, N. Y.
 Northfield-Linden Corp., 4400 Austin Blvd., Island Park, N. Y.
 North Shore Nameplate Co., Bank of Manhattan Bldg., Bayside 61, N. Y.
 Norton Co., 1 New Bond St., Worcester 6, Mass.
 Notherfel Winding Labs., 9 Albemarle Ave., Trenton 3, N. J.
 Nuclear Development Lab., P. O. Box 7034, Kansas City, Mo.
 Nuclear Instrument & Chemical Corp., 223 W. Erie St., Chicago 10, Ill.
 Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 5, Ind.
 Nuclear Research Corp., 2563 Grays Ferry Ave., Philadelphia 46, Pa.
 Nuclear Research & Development Co., 6425 Etzel St., St. Louis 14, Mo.
 Nuclear Specialty Co., Center Moriches, N. Y.
 Nucleonic Company of America, 196 De Graw St., Brooklyn 31, N. Y.
 Numberall Stamp & Tool Co., Huguenot Park, Staten Island 12, N. Y.
 Nylok Corp., Box 341, Elmira, N. Y.

Oak Mfg. Co., 1260 N. Clybourn Ave., Chicago 10, Ill.
 Offer Electronics Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
 Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio
 Ohio Crankshaft Co., Tocco Div., 3800 Harvard Ave., Cleveland 1, Ohio.
 Ohmite Mfg. Co., 3601 Howard St., Skokie, Ill.
 Ohmweve Co., 43 Darcy St., West Hartford 6, Conn.
 Okonite Co., The, Canal Street, Passaic, N. J.
 Olesen Co., Otto K., 1534 Cahuenga, Hollywood 28, Calif.
 Oiln Industries Inc., Electrical Division, 275 Winchester Ave., New Haven 4, Conn.
 Olympic Metal Products Co., Inc., Phillipsburg, N. J.
 Olympic Plastics Co., Inc., 215 E. Washington Blvd., Los Angeles 15, Calif.
 Olympic Radio & Television Co., 34-01 38th Ave., Long Island City, N. Y.
 Omega Laboratories, P. O. Box 33, Arlington 74, Mass.
 Omega Mfg. Co., 40 Hudson St., New York, N. Y.
 Onan & Sons Inc., D. W., University Ave. at 25th St., S. E., Minneapolis 14, Minn.
 O'Neil-Irwin Mfg. Co., 316 Eighth Ave., Lake City, Minn.
 Opad-Green Co., 71-5 Warren St., New York 7, N. Y.
 Optical Film Engineering Co., 2731-37 N. 6th St., Philadelphia 33, Pa.
 Oregon Electronic Mfg. Co., 2232 E. Burnside St., Portland 15, Ore.
 Orradlo Industries, Inc., T-120 Marvyn Rd., Opelika, Ala.
 Orsyd Co., 2421 Smith, Hamtramch 11, Mich.
 Ortho Engineering Corp., Transformer Div., 245 Wallace St., Orange, N. J.
 Ortho Filter Corp., 198 Albion Ave., Paterson 2, N. J.
 Orthon Corp., The, 196 Albion Ave., Paterson 2, N. J.
 Osborn Products, Glen Ellyn, Ill.
 Ossian Mfg. Co., Box 151A, Ossian, Ind.
 Oster Mfg. Co., John, 1 N. Main St., Racine, Wis.
 Otis Elevator Co., Electronic Div., 35 Ryerson St., Brooklyn, N. Y.
 Owen Laboratories, 412 Woodward Blvd., Pasadena 10, Calif.
 Owens-Corning Fiberglass Corp., 598 Madison Ave., New York 22, N. Y.
 Owens-Illinois Closure & Plastics Div., P.O. Box 1035, Toledo 1, Ohio.
 Oxford Electric Corp., 3911 S. Michigan Avenue, Chicago 15, Ill.
 Ozalid Div. of General Aniline & Film Corp., 770 Anasco Rd., Johnson City, N. Y.

P. M. Industries Inc., Stamford, Conn.
 PSP Engineering Co., 8420 Otis St., South Gate, Calif.
 Pace Electrical Instruments Co., Inc., 408 Manhattan Ave., Brooklyn 11, N. Y.
 Pacific Electricord Co., P. O. Box 15805, Crenshaw Sta., Los Angeles 8, Calif.
 Pacific Mercury Television Mfg. Corp., 5955 Van Nuys Blvd., Van Nuys, Calif.
 Pacific Scientific Co., 1430 Grande Vista Ave., Los Angeles 23, Calif.

Pacific Transducer EBG Corp., 11921 S. W. Pico Blvd., Los Angeles 64, Calif.
 Pacific Universal Products Corp., 168 Vista Ave., Pasadena 8, Calif.
 Packard-Bell Co., 12333 W. Olympic Blvd., Los Angeles 64, Calif.
 Paillard Products Inc., 100 Sixth Ave., New York 13, N. Y.
 Palsley Products, Inc., 630 W. 51st St., New York 19, N. Y.
 Palmer, Inc., M. V., 4002 Fruit Valley Rd., Vancouver, Wash.
 Palnut Co., Inc., 77 Cordier St., Irvington 11, N. J.
 Pan American Trade Development Corp., 2 Park Ave., New York 16, N. Y.
 Pan-Electronics Corp., 901 W. Peachtree St., Atlanta, Ga.
 Panelcraft, 8027 S. E. 13th Ave., Portland 2, Ore.
 Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York 17, N. Y.
 Pancro Mirrors Inc., 2958 Los Feliz Blvd., Los Angeles 39, Calif.
 Panoramic Radio Products, Inc., 10 South Second Ave., Mt. Vernon, N. Y.
 Pantek Co., Box 212, El Segundo, Calif.
 Par-Metal Products Corp., 32-62 49th Street, Long Island City 3, N. Y.
 Paragon Electric Co., Two Rivers, Wisconsin.
 Paragon-Revolute Corp., 71 S. Seventh Ave., Rochester 4, N. Y.
 Paramount Paper Tube Co., 614 Lafayette St., Fort Wayne, Ind.
 Paraplegics Mfg. Co., Inc., 10068 Franklin Ave., Franklin Park, Ill.
 Paravox, Inc., 2056 E. 4th St., Cleveland 15, Ohio.
 Parisian Novelty Co., 3510 South Western Ave., Chicago 9, Ill.
 Parisier & Co., Maurice I., 1475 Broadway, New York 36, N. Y.
 Parker-Kalon Division of General American Transportation Corp., 200 Varlick St., New York 14, N. Y.
 Parsons Co., Ralph M., 135 W. Dayton St., Pasadena 5, Calif.
 Partridge Transformers, Ltd., Roebuck Rd., Tolworth, Surrey, England.
 Patton-MacGuyer Co., 17 Virginia Avenue, Providence, R. I.
 Patwin Instruments Div. of The Patent Button Co., 41 Brown St., Waterbury 20, Conn.
 Paul & Beekman, Inc., 1801 Cortland St., Philadelphia 40, Pa.
 Paul & Stein Bros., Inc., F. H. 100 Gold St., New York 38, N. Y.
 Pearce-Simpson, Inc., 3023 Coral Way, Miami 34, Fla.
 Pease Co., C. F., 2601 W. Irving Park Rd., Chicago, Ill.
 Peck & Harvey, 5650 N. Western Ave., Chicago 45, Ill.
 Pedersen Electronics Co., Mount Diablo Blvd., Lafayette, Calif.
 Peeco Corp., 2760 Whittier Blvd., Los Angeles 23, Calif.
 Peerless Electrical Products Div. of Altec Lansing Corp., 9356 Santa Monica Blvd., Beverly Hills, Calif.
 Peerless Photo Products, Shoreham, N. Y.
 Peerless Products Industries, 812 N. Pulaski Ave., Chicago 51, Ill.
 Peirce Wire Recorder Corp., 5900 Northwest Highway, Chicago 31, Ill.
 Penfield Mfg. Co., 19 High School Ave., Meriden, Conn.
 Penn Engineering & Mfg. Corp., Box 311, Doylestown, Pa.
 Penn Fibre & Specialty Co., 2020 E. Westmoreland St., Philadelphia 44, Pa.
 Penn Tran Corp., Bellefonte, Pa.
 Pennsylvania Optical Co., 234 S. 8th St., Reading 2, Pa.
 Pennsylvania Testing Laboratory, Doylestown, Pa.
 Penta Laboratories, Inc., 216 N. Milpas St., Santa Barbara, Calif.
 Pentron Corp., 221 E. Cullerton St., Chicago 16, Ill.
 Perfection Electric Co., 2635 S. Wabash Ave., Chicago 16, Ill.
 Perkin-Elmer Corporation, The, Main Ave., Norwalk, Conn.
 Perkin Engineering Corp., 345 Kansas St., El Segundo, Calif.
 Permacel Tape Corp., U. S. Highway 1, New Brunswick, N. J.
 Permag Corp., 214 Taaffe Place, Brooklyn 5, N. Y.
 Perno Inc., 6415 Ravenswood Ave., Chicago 26, Ill.
 Permoflux Corp., 4900 W. Grand Ave., Chicago 39, Ill.
 Permutit Co., 330 W. 42nd St., New York 36, N. Y.
 Peschel Electronics, Inc., 13 Garden St., New Rochelle, N. Y.
 Peter Partition Corp., 19-21 Heyward St., Brooklyn 21, N. Y.
 Pfanstiel Chemical Co., 104 Lake View Ave., Waukegan, Ill.
 Pfeiffer Products, 3901 W. 54th St., Los Angeles, Calif.
 Phao Plastics Corp., 25 Foster St., Worcester 8, Mass.
 Phoastron Co., 151 Pasadena Ave., South Pasadena, Calif.
 Phebeco, Inc., 3640 Woodland St., Baltimore 15, Md.
 Phelps Dodge Copper Products Corp., 40 Wall St., New York, N. Y.
 Pheoil Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
 Philadelphia Insulated Wire Co., 220 N. 3rd St., Philadelphia, Pa.
 Philadelphia Quartz Co., 1146 Public Ledger Bldg., Philadelphia 6, Pa.
 Philadelphia Scientific Glass Co., 4 Eckard Ave., Abington, Pa.
 Philadelphia Steel & Wire Corp., Penn St. & Belfield Ave., Philadelphia, Pa.
 Philamon Laboratories, Inc., 5717 Third Ave., Brooklyn 20, N. Y.
 Philbrick Researches, Inc., George A., 230 Congress St., Boston 10, Mass.
 Philco Corp., C & Tioga Sts., Philadelphia 34, Pa.

- Philco Corp., Accessory Div., A & Allegheny Ave., Philadelphia 34, Pa.
- Philco Corp., Government & Industrial Div., 4700 Wisconsin Ave., Philadelphia 44, Pa.
- Phillips Control Corp., Dept. EB 1420, Joliet, Ill.
- Phillips & Hiss Co., Inc., 1155 N. McCadden Place, Hollywood 38, Calif.
- Phillips Mfg. Co., Inc., 2816 Aldrich Ave., S., Minneapolis 8, Minn.
- Phillips Petroleum Co., Instruments Div., Bartlesville, Okla.
- Philmore Mfg. Co., Inc., 113 University Place, New York 3, N. Y.
- Philson Mfg. Co., Inc., 60-66 Sackett St., Brooklyn 31, N. Y.
- Phoenix Electronics, Inc., 50 Island St., Lawrence, Mass.
- Phosphor Bronze Corp., 20 Franklin St., Seymour, Conn.
- Photo Chemical Products, Inc., 479 Walton Ave., New York 51, N. Y.
- Photobell Company, 116 Nassau St., New York 38, N. Y.
- Photocircuits Corp., Glen Cove, N. Y.
- Photocon Research Products, 421 N. Foothill Blvd., Pasadena, Calif.
- Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
- Photovolt Corp., 95 Madison Ave., New York 16, N. Y.
- Photron Instrument Co., 6516 Detroit Ave., Cleveland 2, Ohio.
- Physics Research Labs., Inc., 507 Hempstead Turnpike, West Hempstead, N. Y.
- Pickard & Burns, Inc., Needham, Mass.
- Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.
- Pickering & Co., 309 Woods Ave., Oceanside, N. Y.
- Plezo Products Co., Whitney St., Framingham, Mass.
- Pilgrim Screw Co., 259 Dexter St., Providence, R. I.
- Pilot Chemicals, Inc., 47 Felton St., Waltham 54, Mass.
- Pilot Radio Corp., 37-06 36th St., Long Island City, N. Y.
- Pioneer Electric Co., 3700 East Olympic Blvd., Los Angeles 23, Calif.
- Pioneer Electric & Research Corp., 743 Circle Ave., Forest Park, Ill.
- Pioneer Electronics Corp., Santa Monica, Calif.
- Pioneer Electronics Corp., 24 Saunders St., Salem, Mass.
- Pioneer Gen-E-Motor Corp., Dept. EBG, 5841 W. Dickens, Chicago 39, Ill.
- Pioneer Machine Works, 6136 Adam St., West New York, N. J.
- Pioneer Tool Co., 5008 W. Jefferson Blvd., Los Angeles, Calif.
- Piqua Machine & Mfg. Co., Young & College Sts., Piqua, Ohio.
- Pitbar-Garrison Co., Inc., 1 Columbus Ave., Kenilworth, N. J.
- Pittsburgh Plate Glass Co., 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.
- Pittsburgh Plate Glass Co., 2000 Grant Bldg., Pittsburgh 20, Pa.
- Pix Mfg. Co., Inc., 24 Bedford St., Newark, N. J.
- Planet Mfg. Corp., 225 Belleville Ave., Bloomfield, N. J.
- Plastic Capacitors, Inc., 2511 W. Moffat St., Chicago 47, Ill.
- Plastic Metals Division, The National Radiator Co., 169 Bridge Street, Johnston, Pa.
- Plastic Wire & Cable Corp., Jewett City, Conn.
- Plasticraft Products Co., One Statton Plaza, West Nyack, N. Y.
- Plastics & Electronics Co., Inc., P. O. Box 38, Statton J, Buffalo 8, N. Y.
- Plastlight, Inc., Box 214, Stamford, Conn.
- Plastoid Corp., 42-61 24th St., Long Island City 1, N. Y.
- Plastronics, P. O. Box 96, Winter Hill 45, Mass.
- Plax Corporation, 672 Farmington Ave., West Hartford, Conn.
- Plume & Atwood Mfg. Co., 220 Broadway, New York, N. Y.
- Polnsettia Co., Inc., 112 Cedar Ave., Pitman 6, N. J.
- Polan Industries, Huntington 19, W. Va.
- Pollak Corp., Joseph, 75-99 Freeport St., Dorchester 22, Mass.
- Polarad Electronics Corp., 100 Metropolitan Ave., Brooklyn 11, N. Y.
- Polymer Corp., The, Reading, Pa.
- Polyphase Instrument Co., 705 Haverford Rd., Bryn Mawr, Pa.
- Polytech Devices, Inc., 1180 E. Grand St., Elizabeth, N. J.
- Polytechnic Research & Development Co., Inc., 202 Tillary St., Brooklyn 1, N. Y.
- Polytron Corp., 191 Main St., Tarrytown, N. Y.
- Polytron Engineering, Inc., 32 W. Biddle St., Baltimore 1, Md.
- Popper & Sons, Inc., 300 Fourth Ave., New York 10, N. Y.
- Porcelain Products, Inc., Flinday, Ohio.
- Portchester Instrument Corp., 114 Wilkins Ave., Port Chester, N. Y.
- Ports Mfg. Co., 3265 E. Belmont Ave., Fresno 2, Calif.
- Positive Lock Washer Co., 181 Miller St., Newark 5, N. J.
- Post Co., Frederick, 3650 N. Avondale Ave., P. O. Box 803, Chicago 90, Ill.
- Post Machinery Co., Electronics Div., 140 Elliot St., Beverly, Mass.
- Potter Aeronautical Co., Route #22, Union, N. J.
- Potter & Brumfield, Princeton, Indiana.
- Potter Co., 1850 Sheridan Rd., North Chicago, Ill.
- Potter Instrument Co., 115 Cutter Mill Rd., Great Neck, N. Y.
- Power Equipment Co., 5740 Nevada, East, Detroit 34, Mich.
- Power Designs, Inc., 119-22 Atlantic Ave., Richmond Hill 19, N. Y.
- Power Industries Co., 2611 S. Indiana Ave., Chicago 16, Ill.
- Power Transformer Co., Inc., 532 Mulberry St., Newark 5, N. J.
- Pratt & Whitney Div., Niles-Bement-Pond Co., Charter Oak Blvd., West Hartford 1, Conn.
- Precise Development Corp., 2 Neil Court, Oceanside, N. Y.
- Precise Measurements Co., 942 Kings Highway, Brooklyn 23, N. Y.
- Precision Apparatus Co., Inc., 92-27 Horace Harding Blvd., Elmhurst, N. Y.
- Precision Crystal Laboratory, 2223 Warwick Ave., Santa Monica, Calif.
- Precision Electronic Components Ltd., 560 King St. W., Toronto, Ont.
- Precision Electronics, Inc., 643 Milwaukee Ave., Chicago 22, Ill.
- Precision, Inc., 730 Lyndale Ave., N., Minneapolis, Minn.
- Precision Marking Co., 87 Dorsa Ave., Livingston, N. J.
- Precision Metal Products Co. of Malden, 41 Elm St., Stoneham 80, Mass.
- Precision Metal Smiths, Inc., 1087 E. 200 St., Cleveland 17, Ohio.
- Precision Paper Tube Co., 2033 W. Charleston St., Chicago 47, Ill.
- Precision Piezo Service, 427 Mayflower St., Baton Rouge, La.
- Precision Plastic Products Inc., 628-30 W. Lake St., Chicago 6, Ill.
- Precision Radiation Instruments, Inc., 2235 S. La Brea Ave., Los Angeles 16, Calif.
- Precision Resistor Co., 109 U. S. Highway #22, Hillside 5, N. J.
- Precision Scientific Co., 3737 W. Cortland St., Chicago 47, Ill.
- Precision Tube Co., Inc., North Wales, Pa.
- Preis Engraving Machine Co., H. P., 649 Highway 29, Hillside, N. J.
- Premax Products Div., Chisholm-Ryder Co., Inc., Highland & College Aves., Niagara Falls 2, N. Y.
- Premier Electronic Laboratories, 382 Lafayette St., New York 3, N. Y.
- Premier Instrument Corp., 52 W. Houston St., New York 12, N. Y.
- Premier Metal Etching Co., 21-03 Fourth Ave., Long Island City, N. Y.
- Premier Metal Products Co., 3160 Webster Ave., Bronx, N. Y.
- Premier Research Laboratories, Inc., 79-89 Seventh Ave., New York 11, N. Y.
- Prescott Television Co., 7350 Beverly Blvd., Los Angeles 36, Calif.
- Press Wireles Laboratories, Inc., 25 Prospect Place, West Newton 65, Mass.
- Presto Electric Co., Inc., 600 Fulton St., Elizabeth, N. J.
- Presto Recording Corp., Paramus, N. J.
- Price Electric Corp., Frederick, Md.
- Printed Cellophane Tape Co., 521 N. La Brea Ave., Los Angeles 36, Calif.
- Printoid, Inc., 93 Mercer St., New York 1, N. Y.
- Process & Instruments, 15 Stone Ave., Brooklyn 33, N. Y.
- Prodelin, Inc., 307 Bergen Ave., Kearny, N. J.
- Product Associates, Inc., 318 W. Olympic Blvd., Los Angeles, Calif.
- Product Engineering Laboratories Co., Inc., 314 Adams St., Newark 5, N. J.
- Production Engineering Co., 173 Sargent Ave., Clifton, N. J.
- Production Instrument Co., 710 W. Jackson Blvd., Chicago 6, Ill.
- Production Research Corp., Thornwood, N. Y.
- Production Tool & Fixture Co., 37 W. Main St., Oyster Bay, N. Y.
- Progressive Mfg. Co., 1 Norwood St., Torrington, Conn.
- Protective Coatings Corp., 596 River Rd., Clifton, N. J.
- Pulse Techniques, Inc., 1411 Palisade Ave., West Englewood, N. J.
- Pye Ltd., Cambridge, England.
- Pyle-National Co., 1334 N. Kostner Ave., Chicago 51, Ill.
- Pyramid Electric Co., 1445 Hudson Blvd., North Bergen, N. J.
- Pyramid Instrument Corp., 630 Merrick Rd., Lynbrook, N. Y.
- Pyroferic Co., Inc., 621 E. 216th St., New York 67, N. Y.
- QRK Electronic Products, 445 N. Circle Drive, Fresno 4, Calif.
- Q.V.S. Inc., 20 N. 15th St., East Orange, N. J.
- Quaker City Gear Works, Red Lion & Philmont Rd., Bethayers, Pa.
- Quality Components, Inc., St. Marys, Pa.
- Quality Name Plate Inc., Fisher Hill Rd., East Glastonbury, Conn.
- Quality Products Co., 387 Charles St., Providence 4, R. I.
- Quam-Nichols Co., Marquette Rd. & Prairie Ave., Chicago 37, Ill.
- Queens Tool Engineering & Mfg. Co., 15 Front St., Rockville Centre, N. Y.
- R. B. M. Division, Essex Wire Corp., Logansport, Ind.
- R-C Scientific Instrument Co., Inc., 307 Culver Blvd., Playa Del Rey, Calif.
- REF Manufacturing Corp., Jericho Turnpike, Mineola, N. Y.
- R-F Electronics, Inc., 291 N.E. 61st St., Miami 37, Fla.
- R-J Audio Products, Inc., 164 Duane St., New York 13, N. Y.
- Racon Electric Co., 1261 Broadway, New York 1, N. Y.
- Rada Products Co., 2911E W. Carroll Ave., Chicago 12, Ill.
- Radar Engineers, 4528 Fifth Ave., N.E., Seattle 5, Wash.
- Radelco Mfg. Co., 7580 Garfield Blvd., Cleveland 25, Ohio.
- Radell Corp., 7900 Pendleton Pike, Indianapolis 26, Ind.
- Radex Corp., 2076 N. Elston Avenue, Chicago 14, Ill.
- Radiart Corp., The, 3455 Vega Ave., Cleveland 13, Ohio.
- Radiation Counter Laboratories, Inc., 5122 W. Grove St., Skokie, Ill.
- Radiation, Inc., Melbourne, Fla.
- Radiation Instrument Development Labs., 2337 W. 67th St., Chicago 36, Ill.
- Radio Apparatus Corp., 55 N. New Jersey St., Indianapolis 3, Ind.
- Radio City Products Co., Inc., 152 W. 25th St., New York 1, N. Y.
- Radio City Products Co., Inc., Centre & Glendale Sts., Easton, Pa.
- Radio Condenser Co., Camden, N. J.
- Radio Cores, Inc., 9540 Tuttle Ave., Oak Lawn, Ill.
- Radio Corp. of America Engineering Products Div., Camden, N. J.
- Radio Corp. of America, Home Instrument Div., Camden, N. J.
- Radio Corp. of America, Record Dept., New York, N. Y.
- Radio Corp. of America, Tube Dept., Harrison, N. J.
- Radio Craftsmen, Inc., 4401 N. Ravenswood Ave., Chicago 40, Ill.
- Radio Engineering Labs, Inc., 36-40 37th St., Long Island City 1, N. Y.
- Radio Frequency Co., 44 Park St., Medfield, Mass.
- Radio Frequency Labs., Inc., Boonton 2, N. J.
- Radio Industries, Inc., 5225 Ravenswood Ave., Chicago 40, Ill.
- Radio Mfg. Engineers Inc., 300-302 First Ave., Peoria 6, Ill.
- Radio Materials Corp., 3325 N. California Ave., Chicago 18, Ill.
- Radio Merchandise Sales, Inc., 2016 Bronxdale Ave., New York 62, N. Y.
- Radio-Music Corp., 84 S. Water St., Port Chester, N. Y.
- Radio Receptor Co., 251 W. 19th St., New York 11, N. Y.
- Radio Sonic Corp., 111 Bleeker St., New York 12, N. Y.
- Radio Specialty Mfg. Co., 2023 S.E. 6th Ave., Portland 14, Ore.
- Radioactive Products Inc., 443 W. Congress St., Detroit 26, Mich.
- Radiation Corp., 1130 Wisconsin Ave., Chicago 14, Ill.
- Radiation Laboratory, 1111 State Rd., E., Anderson, Ind.
- Radiation Transformer Co., 411 S. Sangamon St., Chicago 7, Ill.
- Radix Wire Co., 26260 Lakeland Blvd., Cleveland 23, Ohio.
- Rae Motor Corp., P. O. Box 291, Racine, Wis.
- Rahm Instruments, Inc., 12 West Broadway, New York 7, N. Y.
- Railway Communications, Inc., Smith Road & Glenwood, Raytown, Mo.
- Ram Electronics, Inc., S. Buckout St., Irvington, N. Y.
- Randall, Inc., Douglas, 102 High St., Westerly, R. I.
- Rangertone, Inc., 73 Winthrop St., Newark 4, N. J.
- Rapid Electric Co., 2881 Middletown Rd., New York 61, N. Y.
- Rapid Specialties Co., 327 W. Huron Street, Chicago 10, Ill.
- Rattray & Co., Inc., George, 116-08 Myrtle Ave., Richmond Hill, N. Y.
- Rauland-Borg Corp., 3515 W. Addison St., Chicago 18, Ill.
- Rawson Electrical Instrument Co., 111 Potter St., Rauland Corp., 4545 N. Knox Ave., Chicago 41, Ill. Cambridge 42, Mass.
- Ray-O-Vac Co., 212 E. Washington Ave., Madison, Wis.
- Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
- Raymond Engineering Laboratory, Inc., Smith St., Middletown, Conn.
- Raypar, Inc., 7800 W. Addison St., Chicago, Ill.
- Raytheon Mfg. Co., Equipment Sales Div., Waltham 54, Mass.
- Raytheon Mfg. Co., Microwave & Power Tube Operations, Waltham 54, Mass.
- Raytheon Mfg. Co., Receiving Tube Div., 55 Chapel St., Newton 58, Mass.
- Raytheon Television & Radio Corp., 5921 W. Dickens Ave., Chicago 39, Ill.
- Raytor Corp., Fifth St. & Cannon Ave., Lansdale, Pa.
- Rea Magnet Wire Co., Inc., E. Pontiac St., Fort Wayne, Ind.
- Ready Power Co., The, Power Plant Div., 11231 Freud Ave., Detroit 14, Mich.
- Recora Co., 56 W. 103rd St., Chicago 28, Ill.
- Recoton Corp., 147 W. 22nd St., New York 11, N. Y.
- Rectifier Engineering Co., Inc., 1803 E. Seventh St., Los Angeles 21, Calif.
- Red Bank Division, Bendix Aviation Corp., Eatontown, N. J.
- Redman Electronics Corp., P. O. Box 72, Thompsonville, Conn.
- Redmond Co., Inc., 201 Monroe St., Owosso, Mich.
- Reeder & Co., Charles M., 173 Victor Ave., Detroit 3, Mich.
- Reeve Electronics, Inc., 609 W. Lake St., Chicago 6, Ill.
- Reeves-Hoffman Corp., 145 Cherry St., Carlisle, Pa.
- Reeves Instrument Corp., 215 E. 91st St., New York, N. Y.
- Reeves Soundcraft Corp., 10 E. 52nd St., New York 22, N. Y.
- Rego Insulated Wire Co., 830 Monroe St., Hoboken, N. J.
- Regulator Equipment Corp., 56 California Ave., Paterson 3, N. J.
- Reichhold Chemicals Inc., 525 N. Broadway, White Plains, N. Y.
- Reid Enterprises, 3715 Santa Fe Ave., Los Angeles 58, Calif.
- Reilly Tar and Chemical Corp., 1615 Merchants Bank Bldg., 11 S. Meridian St., Indianapolis, Ind.
- Reiner Electronics Co., Inc., Centre & Glendale Sts., Easton, Pa.
- Rek-O-Nut Co., 38-01 Queens Blvd., Long Island City 1, N. Y.

Reliable Spring and Wire Forms Co., Fulton Rd. and Paris Ave., Cleveland 9, Ohio.

Reliance Automatic Lighting Co., 1919 Mead St., Racine, Wis.

Reliance Instrument Co., 3027 W. Van Buren St., Chicago 12, Ill.

Reliance Mica Co., Inc., 341 39th St., Brooklyn 32, N. Y.

Rembar Co., The, 117 Main St., Dobbs Ferry, N. Y.

Renbrandt, Inc., 98 Kirkland St., Cambridge 38, Mass.

Remler Co., Ltd., 2101 Bryant St., San Francisco 10, Calif.

Reon Resistor Corp., 117 Stanley Ave., Yonkers, N. Y.

Repath Co., Paul R., 641 E. 61st St., Los Angeles 1, Calif.

Republic Foil & Metal Mills, Inc., 55 Triangle St., Danbury, Conn.

Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.

Resdel Engineering Corp., 2351 Riverside Drive, Los Angeles 39, Calif.

Research Development Manufacture, 429 E. Collom St., Philadelphia 44, Pa.

Research Electronics Laboratory, Roslyn, Pa.

Resin Industries, Inc., Santa Barbara, Calif.

Resinite Corp., Sub. of Precision Paper Tube Co., 2035 W. Charleston St., Chicago 47, Ill.

Resistance Products Co., 714 Race St., Harrisburg, Pa.

Resistoflex Corp., 39 Plansoen St., Belleville 9, N. J.

Resistor Corp. of Nevada, P. O. Box 2502, Reno, Nev.

Resistors, Inc., 5226 W. 26th St., Chicago 50, Ill.

Revere Camera Co., 320 E. 21st St., Chicago 16, Ill.

Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.

Revere Corporation of America, Wallingford 2, Conn.

Rex Corp., The, Hayward Rd., West Acton, Mass.

Rex Rheostat Co., 3 Foxhurst Rd., Baldwin, N. Y.

Reynolds Electric Co., 3000 River Rd., River Grove, Ill.

Reynolds Metals Co., 2500 S. Third St., Louisville 1, Ky.

Rhode Island Insulated Wire Co., 50 Burnham Ave., Cranston, R. I.

Rhodes Inc., M. H., 30 Bartholomew Ave., Hartford, Conn.

Rich-Roth Laboratories, 1240 Main St., Hartford 3, Conn.

Richards Co., Inc., Arklay S., 38 Winchester St., Newton Highlands 61, Mass.

Richardson-Allen Corp., 39-15 Main St., Flushing, N. Y.

Richardson Company, The, 27th Ave. & Lake St., Melrose Park, Illinois.

Richardson Scale Co., Clifton, N. J.

Richmond Engineering Co., Inc., Concord St., South Norwalk, Conn.

Riester & Thesmacher Co., Cleveland 13, Ohio.

Ripley Co., Inc., Middletown, Conn.

Riverbank Laboratories, Dept. of Engineering, Geneva, Ill.

Riverside Mfg. & Electrical Supply Co., 10221 Michigan Ave., Dearborn, Mich.

Riverside Metal Co., The, Riverside, N. J.

Roanwell Corp., 662 Pacific St., Brooklyn 17, N. Y.

Robbins & Myers, Inc., 1345 Lagoda Ave., Springfield 99, Ohio.

Robco Mfg. Div. of Pilot International Corp., 27-01 Bridge Plaza, N., Long Island City 1, N. Y.

Robnette Co., W. C., 802 Fair Oaks Ave., South Pasadena, Calif.

Robinson Aviation, Inc., Teterboro Air Terminal, Teterboro, N. J.

Robinson Inc., Edward E., 95 Park Ave., Nutley 10, N. J.

Robotron Corp., 21300A W. Eight Mile Rd., P. O. Box 4885, Detroit 19, Mich.

Rochester Acoustical Labs., Inc., Rochester, Minn.

Rochester Electronics Co., Inc., Box 227 Penfield, N. Y.

Rockbestos Products Corp., Nicoll & Canner Sts., New Haven 4, Conn.

Rockwell Engineering Co., 4063 N. New Jersey St., Indianapolis 5, Ind.

Roebling's Sons Corp., John A., 640 Broad St., Trenton 2, N. J.

Roffan Co., Corner Route 1 & Camp Meeting Rd., Topsfield, Mass.

Rogan Bros., 8031 N. Monticello Ave., Skokie, Ill.

Rogers Corporation, Goodyear, Conn.

Rohden Manufacturing Company, 4739 Montrose Ave., Chicago 41, Ill.

Rohn Mfg. Co., 116 Limestone, Bellevue, Peoria, Ill.

Rola Co., Inc., The, 2530 Superior Ave., Cleveland 14, Ohio.

Rollan Electric Co., 8020 S. South Park Ave., Chicago 19, Ill.

Roller-Smith Corporation, Bethlehem, Pa.

Rollin Co., 2010 N. Lincoln Ave., Pasadena 3, Calif.

Romac Products Co., 48-01 25th Ave., Long Island City 3, N. Y.

Romar Plastics, Inc., 1309 E. Main St., St. Charles, Ill.

Rome Cable Corp., 330 Ridge St., Rome, N. Y.

Rosen Engineering Products, Inc., Raymond, 32nd & Walnut Sts., Philadelphia 4, Pa.

Rostan Corp., 5660 59th St., Maspeth 78, N. Y.

Rotron Mfg. Co., Inc., 7-9 Schoonmaker Lane, Woodstock, N. Y.

Rowe Industries, 1702 Wayne St., Toledo 9, Ohio.

Royal Electric Co., Inc., Pawtucket, R. I.

Royal Metal Mfg. Co., 175 N. Michigan Ave., Chicago 1, Ill.

Rubicon Co., Ridge Ave. at 35th St., Philadelphia 29, Pa.

Ruby Chemical Co., 68 McDowell St., Columbus, Ohio.

Ruge-de Forest, Inc., 84 Massachusetts Ave., Cambridge 39, Mass.

Runzel Cord & Wire Co., 4723-31 W. Montrose Ave., Chicago 41, Ill.

Rush Wire Stripper Division, The Eraser Co., Inc., 1068 S. Clinton St., Syracuse 4, N. Y.

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

Russell & Stoll Co., Inc., 125-6 Barclay St., New York 7, N. Y.

Rust Industrial Co., 608 Willow St., Manchester, N. H.

Rutherford Electronics Co., 3707 S. Robertson Blvd., Culver City, Calif.

Rutishauser Corp., 490 S. Fair Oaks Ave., Pasadena 1, Calif.

Ryerson & Son, Inc., J. T., Box 8000-A, Chicago, Ill.

Rynel Corp., Miller St., Sterling, Ill.

"S" Corrugated Quenched Gap Co., Scientific Electric Div., 105-119 Monroe St., Garfield, N. J.

S-C Laboratories, Inc., 37 George St., Newark 5, N. J.

S. N. C. Mfg. Co., Inc., Box 277, Oshkosh, Wis.

Sag Harbor Industries, Inc., Bay St., Sag Harbor, N. Y.

St. John X-Ray Laboratory, Califon, N. J.

St. Mary's Carbon Co., State Rd., St. Marys, Pa.

Samarium Electronic Corp., 122 Canal St., Shelton, Conn.

Sanborn Co., 39 Osborn St., Cambridge 39, Mass.

Sanders Associates, Inc., Nashua, N. H.

San Fernando Electric Mfg. Co., 1509 1st St., Box 952, San Fernando, Calif.

Sanford Miller Co., 691 Bedford Ave., Brooklyn 6, N. Y.

Sangamo Electric Co., Capacitor Div., Marlon, Illinois.

Saratoga Industries, Inc., Saratoga Springs, N. Y.

Sargent & Co., New Haven 9, Conn.

Sargent-Raymont Co., The, 1401 Middle Harbor Rd., Oakland 20, Calif.

Sarkes Tarzian, Inc., Tuner Div., Bloomington, Ind.

Sauerelsen Cements Co., Sauerelsen Bldg., Pittsburgh 15, Pa.

Saxonburg Ceramics, Saxonburg, Pa.

Saxton Products, Inc., 2101 Grand Concourse, New York 53, N. Y.

Scala Radio Co., 2814 19th St., San Francisco 10, Calif.

Schaevitz Engineering, P. O. Box 505, Camden 1, N. J.

Schauer Mfg. Corp., 4521 Alpine Ave., Cincinnati 36, Ohio.

Schenectady Varnish Co., Inc., Schenectady, N. Y.

Scherma Mfg. Co., Inc., F. A., 424 Broome St., New York 13, N. Y.

Scherr Co., Inc., George, 200 Lafayette St., New York 12, N. Y.

Schmidt, Inc., Geo. T., 1804 Belle Plaine, Chicago 13, Ill.

Schott Co., Walter L., 3225 Exposition Place, Los Angeles 18, Calif.

Schuco-Brite Div. of Schuler & Co., 75 Cliff St., New York 38, N. Y.

Schutter Co., Carl W., 80 E. Montauk Pkwy., Lindenhurst, N. Y.

Schuttig & Co., Inc., 5005 Calvert Rd., College Park, Md.

Schweltzer Inc., Peter J., 405 Lexington Ave., New York 17, N. Y.

Sclaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.

Science Electronics, Box 237, Huntington, N. Y.

Scientific Electronic Labs., Inc., 866 Bergen St., Newark 8, N. J.

Scientific Radio Products, Inc., 215 South 11th, Omaha, Neb.

Scientific Radio Service, 4301 Sheridan St., University Park, Md.

Scientific Specialties Corp., Snow & Union Sts., Brighton 35, Mass.

Scientific Wood Cabinet Co., 88 Holmes St., Belleville, N. J.

Scintilla Division, Bendix Aviation Corp., Sidney, N. Y.

Scott Inc., Hermon Hosmer, 385 Putnam Ave., Cambridge 39, Mass.

Scovill Manufacturing Co., Waterbury 20, Conn.

Scully Machine Co., 62 Walter St., Bridgeport, Conn.

Seaboard Electric Co., 417 Canal St., New York 13, N. Y.

Sealectro Corp., 181 Union Ave., New Rochelle, N. Y.

Sealor Corporation, 45 Willard Ave., Providence 5, R. I.

Sealtron Corp., Reading Road at Amity, Cincinnati 15, Ohio.

Sears Co., M. J., Delaware County, Roxbury, N. J.

Secon Metals Corp., 7 Intervale St., White Plains, N. Y.

Segal, Edward, 72 Spring St., New York 12, N. Y.

Sel-Rex Precious Metals, Inc., 229 Main St., Belleville 9, N. J.

Selectar Industries, Inc., 3100 Ocean Parkway, Brooklyn 35, N. Y.

Self Lock Fastener Corp., 259 Stephens St., Belleville 9, N. J.

Semler Industries, 6853 Lankershim Blvd., North Hollywood, Calif.

Semimetals Co. of America, 2413 Federal St., Philadelphia 1, Pa.

Sensitive Research Instrument Corp., 9 Elm Ave., Mt. Vernon, N. Y.

Sentinel Radio Corp., 2100 Dempster St., Evanston, Ill.

Sequoia Process Corp., 871 Willow St., P. O. Box 1007, Redwood City, Calif.

Serdex, Inc., 91 Cambridge St., Boston, Mass.

Servo Corp. of America, 20-20 Jericho Turnpike, New Hyde Park, N. Y.

Servo-Tek Products Co., 1086 Goffie Rd., Hawthorne, N. J.

Servomechanisms, Inc., 500 Franklin Ave., Garden City, N. Y.

Servospeed Div. of Electro Devices, Inc., 4 Godwin Ave., Paterson, N. J.

Servotrol Co., 114 W. Illinois St., Chicago 10, Ill.

Sessions Clock Co., Industrial Products Div., Forestville, Conn.

Set Screw & Mfg. Co., 470 Main St., Bartlett, Ill.

Setchell Carlson, Inc., 330 Fifth Ave., New Brighton, Minn.

Shakeproof, Div. of Illinois Tool Wks., 2501 N. Keeler Ave., Chicago 39, Ill.

Shallcross Mfg. Co., 10 Jackson Ave., Collingdale, Pa.

Shannon Luminous Materials Co., 7356 Santa Monica Blvd., Hollywood 46, Calif.

Shaw Insulator Co., 160 Coit St., Irvington 11, N. J.

Sheffco Mfg. Co., 111 W. Ruby Ave., Pallsades Park, N. J.

Sheffield Corp., The, Dayton 1, Ohio.

Sheldon Electric Co., Div. of Allied Electric Products, Inc., 76 Coit St., Irvington 11, N. J.

Shell Chemical Corp., 380 Madison Ave., New York 17, N. Y.

Shepard Laboratories, 430 Morrills Ave., Summit, N. J.

Sheraton Television Corp., 200 River St., Red Bank, N. J.

Sherman Industrial Electronics Co., Inc., 505 Washington Ave., Belleville 9, N. J.

Sherman Mfg. Co., H. B., 22 Barney St., Battle Creek, Mich.

Sherman Paper Products Corp., Newton Upper Falls 64, Mass.

Sherold Crystals, Inc., 1401 Fairfax Trafficway, Kansas City, Kan.

Sherron Electronics Co., 1201 Flushing Ave., Brooklyn 6, N. Y.

Shielding, Inc., Box 217, Dept. E, Riverside, N. J.

Shields Laboratories, Inc., 810 N. Lincoln Ave., Pittsburgh 12, Pa.

Shoe Form Co., Inc., Auburn, N. Y.

Shore Engineering Inc., 232 West Ave., Long Branch, N. J.

Short Wave Plastic Forming Co., 2921 W. Alameda St., Burbank, Calif.

Shure Brothers, Inc., 225 W. Huron St., Chicago 10, Ill.

Shurite Meters, 35-B Hamilton St., New Haven 8, Conn.

Sickles, F. W., Div., General Instrument Corp., 165 Front St., Chicopee, Mass.

Sierra Electronic Corp., San Carlos, Calif.

Sightmaster of California Co., Gillespie Airport, Santee, Calif.

Sigma Instruments, Inc., 180 Pearl St., South Braintree 85, Mass.

Signal Engineering & Mfg. Co., 273 Branchport Ave., Long Branch, N. J.

Signalite Inc., 37-41 Neptune Highway, Neptune, N. J.

Sillcocks-Miller Co., 10 Parker Ave., West, South Orange, N. J.

Simmons Fastener Corp., 1752 N. Broadway, Albany 1, N. Y.

Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.

Simplicity Tool Co., 2850 N. Mississippi Ave., P. O. Box 3723, Portland 8, Ore.

Simpson Electric Co., Div. of American Gage & Machine Co., 5218 W. Kinzie St., Chicago 44, Ill.

Simpson Mfg. Co., Inc., Mark, 32-28 49th St., Long Island City 3, N. Y.

Sinclair Mfg. Co., Chartley, Mass.

Sittler Corp., 18 N. Ada St., Chicago 7, Ill.

Skinner Electric Valve Div., The Skinner Chuck Co., Edgewood Ave., New Britain, Conn.

Skottle Electronics, Inc., 1106 Myers St., Peckville, Pa.

Skyline Antennae Corp., 200 Silver St., Sharon, Pa.

Slepian Co., Arthur, 2 Burroughs St., Bridgeport, Conn.

Slip Ring Co. of America, 2038 Broadway, Santa Monica, Calif.

Small Motors, Inc., 2076 Elston Ave., Chicago 14, Ill.

Smith, Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N. Y.

Snyder Chemical Corp., Bethel, Conn.

Snyder Mfg. Co., Philadelphia 40, Pa.

Soia Electric Co., 4633 W. 16th St., Chicago 50, Ill.

Solar Mfg. Corp., E. 46th & Seville Ave., Los Angeles 58, Calif.

Soldering Specialties Co., 19 Chatham Rd., Summit, N. J.

Sommer & Maca Glass Machine Co., 3600 Oakley Ave., Chicago 9, Ill.

Sonar Radio Corp., 3050 W. 21st St., Brooklyn 24, N. Y.

Sonic Recording Products, Inc., 58 Mill Rd., Freeport, N. Y.

Sonotone Corp., Saw Mill River Road, P. O. Box 200, Elmsford, N. Y.

Soreng Products Corp., 9555 Soreng Ave., Schiller Park, Ill.

Sorensen & Co., Inc., 375 Fairfield Ave., Stamford, Conn.

Sorensen Industrial Electronic Co., 87 N. Day St., Orange, N. J.

Sorenson Industries, Fifth St., Darby 1, Pa.

Sorgel Electric Co., 838 W. National Ave., Milwaukee 4, Wis.

SOS Cinema Supply Corp., 602 W. 52nd St., New York 19, N. Y.

Sound Apparatus Co., Stirling, N. J.

Soundscribe Corp., 146 Munson St., New Haven 4, Conn.

South River Metal Products Co., Inc., 377-379 Turnpike, South River, N. J.

Southco Division, South Chester Corp., 1417 Finance Bldg., Philadelphia 2, Pa.

Southern Electronics Co., 239 W. Orange Grove Ave., Burbank, Calif.

Southwest Engineering & Mfg. Co., P. O. Box 3325, San Diego 3, Calif.

Southwest Products, Inc., Alamo Downs, Box 85-D, San Antonio, Rt. 4, Texas.

Southwestern Industrial Electronics Co., 2831 Post Oak Rd., P. O. Box 13058, Houston 19, Texas.

Spar Engineering & Development Inc., S & Paxson Aves., Wyncote, Pa.

Spaulding Fibre Co., Inc., 310 Wheeler St., Tonawanda, N. Y.

Speak-O-Phone Recording & Equipment Co., 23 W. 60th St., New York, N. Y.

Special Chemicals Corp., 100 S. Water St., Ossining, N. Y.

Special Products Co., 9118 Brookville Road, Silver Spring, Md.

Specialties, Inc., Skunks Misery Rd., Syosset, N. Y.

Specialty Automatic Machine Corp., 88 Gerrish Ave., Chelsea, Mass.

Specialty Battery Co., Madison 4, Wisconsin.

Specialty Engineering Div. of Specialty Assembling & Packing Co., 79 Clifton Place, Brooklyn 38, N. Y.

Specific Products, 14515 Dickens St., Sherman Oaks 13, Calif.

Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero 50, Ill.

Speer Carbon Co., St. Marys, Pa.

Speer Resistor Division, Speer Carbon Co., St. Marys, Pa.

Spellman Television Co., Inc., 3029 Webster Ave., New York 67, N. Y.

Spencer-Kennedy Labs., Inc., 186 Massachusetts Ave., Cambridge 39, Mass.

Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.

Sperry Gyroscope Co., Div. of The Sperry Corp., Great Neck, N. Y.

Sperry Products, Inc., Danbury, Conn.

Sperti-Farraday, Inc., Cincinnati Div., Cincinnati 2, Ohio.

Sphere Co., Inc., P. O. Box 557, Short Hills, N. J.

Spiraling Products Co., 60 Grand St., New York, N. Y.

Sponge Rubber Products Co., Texform Div., Shelton, Conn.

Sprague Electric Co., 125 Marshall St., North Adams, Mass.

Square D Co., 4041 N. Richards, Milwaukee 12, Wis.

Square Root Mfg. Corp., 391 Saw Mill River Rd., Yonkers, N. Y.

Stackpole Carbon Co., St. Marys, Pa.

Staedler Inc., J. S. 25 Dicarolls Court, Hackensack, N. J.

Stahl, Inc., Michael, 215 Fulton St., New York 7, N. Y.

Stainless, Inc., Third St., North Wales, Pa.

Stamford Metal Specialty Co., 429 W. Broadway, New York 12, N. Y.

Stanat Manufacturing Co., 47-32 37th St., Long Island City 1, N. Y.

Stancil-Hoffman Corp., 1016 N. Highland Ave., Hollywood 38, Calif.

Standard Cabinet Co., 57 Washington Ave., Carlstadt, N. J.

Standard Coil Products Co., 2329 N. Pulaski Rd., Chicago 39, Ill.

Standard Crystal Co., 1714 Locust St., Kansas City, Mo.

Standard Electric Time Co., The, 89 Logan St., Springfield, Mass.

Standard Electrical Products Co., 2239 E. Third St., Dayton, Ohio.

Standard Electronics Corp., 287 Emmet St., Newark 5, N. J.

Standard Electronics Research Corp., 2 East End Ave., New York 21, N. Y.

Standard Locknut & Lockwasher Inc., 510 N. Capitol Ave., Indianapolis 4, Ind.

Standard Metals Corp., Broad & Whiting St., North Attleboro, Mass.

Standard Piezo Co., 127 Cedar St., Carlisle, Pa.

Standard Pressed Steel Co., Box 775, Jenkintown 10, Pa.

Standard Telephones & Cables Ltd., Connaught House, Aldwych, London, W. C. 2, England.

Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N. Y.

Standard Winding Corp., 44-62 Johnes St., Newburgh, N. Y.

Stanley Works, The, 195 Lake St., New Britain, Conn.

Stanwyck Winding Co., 137 Walsh Ave., Newburgh, N. Y.

Star Expansion Products Co., 147 Cedar St., New York 6, N. Y.

Star Porcelain Co., 61 Mulrhead Ave., Trenton 9, N. J.

Star Stainless Screw Co., 206 Union Ave., Paterson 2, N. J.

States Co., 19 New Park Ave., Hartford 6, Conn.

Statham Laboratories, Inc., 12401 W. Olympic Blvd., Los Angeles 64, Calif.

Staver Co., Inc., Box 431, Bay Shore, N. Y.

Sta-Warm Electric Co., Ravenna, Ohio.

Steel Co., Herman D., Lafayette Bldg., Philadelphia 6, Pa.

Steel Products Co., 1420 W. Galer St., Seattle 99, Wash.

Steel Protection & Chemical Co., Inc., Mooresville, Ind.

Steger Furniture Mfg. Co., Steger, Ill.

Stelmen Mfg. Co., Wm., 43 Bruen St., Newark 5, N. J.

Stelmer-Ives Co., Springfield Rd., Union, N. J.

Stelma, Inc., 389 Ludlow St., Stamford, Conn.

Stephens Mfg. Corp., 8538 Warner Drive, Culver City, Calif.

Sterling Bolt Co., 363-405 W. Erie St., Chicago 10, Ill.

Sterling Engineering Co., Inc., 54 Mill St., Laconia, N. H.

Sterling Instruments Co., 15310 W. McNichols, Detroit 35, Mich.

Sterling Mfg. Co., 7201 Wentworth, Cleveland, Ohio.

Sterling Television Inc., 15 W. Lake St., Chicago 1 III.

Sterling Transformer Corp., 297 N. Seventh St., Brooklyn 11, N. Y.

Stevens-Arnold Inc., 22 Elkins St., South Boston 27, Mass.

Stevens Mfg. Co., Inc., 69 S. Walnut St., Mansfield, Ohio.

Stevens Mfg. Co., Inc., Geo., 6022 N. Rogers Ave., Pulaski & Peterson, Chicago 30, Ill.

Stevens Paper Mills, Inc., Windsor, Conn.

Stevens Products Inc., 86-88 Main St., East Orange, N. J.

Stevens-Walden, Inc., 475 Shrewsbury St., Worcester 4, Mass.

Stevenson Bro. & Co., 110 Race St., Philadelphia 6, Pa.

Steward Mfg. Co., D. M., 3600 Jerome Ave., Chattanooga 1, Tenn.

Stewart Mfg. Corp., F. W., 4311 Ravenswood Ave., Chicago 13, Ill.

Stewart-Speller Associates, Soquel, Calif.

Stewart Stamping Co., 630 Central Park Ave., Yonkers 4, N. Y.

Stewart-Warner Electric Div., Stewart-Warner Corp., 1826 Diversey Parkway, Chicago 14, Illinois.

Sticht Co., Inc., Herman H., 27 Park Place, New York 7, N. Y.

Stimpson Co., Inc., Edwin B., 74 Franklin Ave., Brooklyn 5, N. Y.

Stockman Electronics Research Co., 543 Lexington St., Waltham 54, Mass.

Stoddart Aircraft Radio Co., 6644 Santa Monica Blvd., Hollywood 38, Calif.

Stokes Machine Co., F. J., 5850 Tabor Road, Olney Post Office, Philadelphia 20, Pa.

Stolper Steel Products Corp., 308 Pilgrim Rd., Menomonee Falls, Wis.

Stone City Machine & Tool Co., Inc., P. O. Box 351, 1206 Seventh St., Bedford, Ind.

Stone Paper Tube Co., Inc., 900 Franklin St., N. E., Washington 17, D. C.

Stonite Coil Corp., Route 25, Yardville, N. J.

Stow Manufacturing Co., 101 Shear St., Binghamton, N. Y.

Streeter-Amet Corp., 4101 N. Ravenswood Ave., Chicago 13, Ill.

Stromberg-Carlson Co., Rochester 3, N. Y.

Stronghold Screw Products, Inc., 1801 W. Winnemac St., Chicago 40, Ill.

Struthers-Dunn, Inc., Lamb's Road, Pitman, N. J.

Stueck, Inc., W. Whitney, Old Saybrook, Conn.

Stupakoff Ceramic & Mfg. Co., Latrobe, Pa.

Sturtevant Co., P. A., Addison, Ill.

Summit Coil Co., 4 Claremont Rd., Bernardsville, N. J.

Summit Electronics, Inc., 7 Industrial Place, Summit, N. J.

Super Ear Products Co., 675 Merrick Rd., Lynbrook, N. Y.

Superev Electronics Corp., 23 Atherton St., Yonkers, N. Y.

Superior Carbon Products Co., 9115 George Ave., Cleveland 5, Ohio.

Superior Electric Co., The, 4000 Mae Ave., Bristol, Conn.

Superior Electronics, 295-297 Crooks Ave., Clifton, N. J.

Superior Flake Graphite Co., 33 S. Clark St., Chicago 3, Ill.

Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio.

Superior Instrument Co., 2435 White Plains Rd., New York 67, N. Y.

Superior Steatite & Ceramic Corp., 83-91 W. Forest Ave., Englewood, N. J.

Superior Tube Co., 2504 Germantown Pike, Norristown, Pa.

Supreme, Inc., Greenwood, Miss.

Suprenant Mfg. Co., 199 Washington St., Boston 8, Mass.

Swift & Sons, M., 10 Love Lane, Hartford 1, Conn.

Swiss Jewel Co., Lafayette Bldg., Philadelphia 6, Pa.

Switchcraft, Inc., 1320 N. Halsted St., Chicago 22, Ill.

Sylvania Electric Products, Inc., 1740 Broadway, New York 19, N. Y.

Sylvania Electric Products, Inc., Radio & Television Div., 254 Rano St., Buffalo 7, N. Y.

Symphony Radio & Television Co., 925 South Western Ave., Los Angeles 6, Calif.

Synchro Start Products, Inc., 8151 N. Ridgeway Ave., Skokie, Ill.

Syncor Products Co., Malden, Mass.

Synthane Corp., Oaks, Pa.

Syntroon Co., 243 Lexington, Homestead City, Pa.

Syracuse Ornamental Co., Inc., 581 S. Clinton St., Syracuse, N. Y.

T. L. G. Electric Corp., 31 W. 27th St., New York 1, N. Y.

T V Products Corp., 1057 Summit Ave., Jersey City, N. J.

Tablet & Ticket Co., 1021 W. Adams St., Chicago 7, Ill.

Takk Corp., The, Newark, Ohio.

Talk-A-Phone Co., 1512 S. Pulaski Rd., Chicago 23, Ill.

Talk-O Products, Inc., 163 St. Paul St., Rochester 6, N. Y.

Taller & Cooper Co., 75 Front St., Brooklyn 1, N. Y.

Tally Register Co., 5300 W. 14th, N. W., Seattle, Wash.

Tartak Electronics, Inc., 2979 N. Ontario St., Burbank, Calif.

Taylor Fibre Co., Norristown, Pa.

Taylor Tubes, Inc., 2312 Wabansia Ave., Chicago 47, Ill.

Tech Laboratories, Inc., Bergen & Edsall Bldvs., Pallsades Park, N. J.

Techalloy Co., Inc., Rahns, Pa.

Tech-Master Products Co., 443-445 Broadway, New York 13, N. Y.

Technic, Inc., P.O. Box 965, Providence 1, R. I.

Technical Apparatus Builders, 109 Liberty St., New York 6, N. Y.

Technical Appliance Corp., Sherburne, N. Y.

Technical Associates, 140 W. Providencia Ave., Burbank, Calif.

Technical Instrument Co., Inc., 3732 Westheimer Rd., Houston 6, Texas.

Technical Materiel Corp., The, P. O. Box 142, Mamaroneck, N. Y.

Technical Measurement Corp., P. O. Box 1947, New Haven, Conn.

Technical Operations, Inc., 6 Schouler Court, Arlington 74, Mass.

Technical Service Corp., 3116 Michigan Drive, Louisville 5, Ky.

Technicraft Co., 1156 Commonwealth Ave., Boston 34, Mass.

Technicraft Laboratories, Inc., Thomaston-Waterbury Rd., Thomaston, Conn.

Technitrol Engineering Co., 2751 N. 4th St., Philadelphia 33, Pa.

Technograph Printed Electronics Inc., 191 Main St., Tarrytown, N. Y.

Technology Instrument Corp., 533 Main St., Acton, Mass.

Techron Co., 254-256 Friend St., Boston 14, Mass.

Tecnifax Corp., 276 High St., Holyoke, Mass.

Teiner Co., Inc., Roland, 134 Tremont St., Everett 49, Mass.

Tektronix, Inc., P. O. Box 831, Portland 7, Ore.

Tel-A-Ray Enterprises Inc., Box 332, Henderson, Ky.

Teichrome, Inc., 88 Merrick Rd., Amityville N. Y.

Telectron Dept. of General Electric Co., Ashland, Mass.

Tele-Clear Corp., 185 N. Wabash Ave., Chicago 1, Ill.

Telectro Industries Corp., 35-18 37th St., Long Island City 1, N. Y.

Telectron Co., The, 4019 Prospect St., Cleveland 3, Ohio.

Telecomputing Corp., 133 E. Santa Anita Ave., Burbank, Calif.

Telegraph Condenser Co., Ltd., Wales Farm Rd., Acton, London, W. 3, England.

Telegraph Construction & Maintenance Co., Ltd., Telcon Works, Greenwich, London, S. E. 10, England.

Telemetering Associates, 494C Pine Forest Drive, Marlatta, Ga.

Telephonics Corp., Park Ave., Huntington, N. Y.

Telegrip Radio Co., 2559 W. 21st St., Chicago 8, Ill.

Teledadio Engineering Corp., 99 Wall St., New York 5, N. Y.

Tele-Register Corp., 157 Chambers St., New York, N. Y.

Teletronic Laboratories, Inc., 1835 W. Rosecrans Ave., Gardena, Calif.

Teletronics Laboratory, Inc., Kinkel St., Westbury, N. Y.

Television Accessories Co., P.O. Box 6001, Arlington 6, Va.

Television Utilities Corp., 1315 Jericho Turnpike, New Hyde Park, N. Y.

Television Zoomer Corp., Room 2223, 500 Fifth Avenue, New York, N. Y.

Tevisco Corp., 7466 W. Irving Park Road, Chicago 34, Ill.

Televac Laboratories, Inc., 100 Metropolitan Ave., Brooklyn 11, N. Y.

Tel-Ex-Pand Corp., Fourth & Pine Sts., P. O. Box 392, Berwick, Pa.

Telex Inc., Telex Park, St. Paul 1, Minn.

Tel-Instrument Co., 728 Garden St., Carlstadt, N. J.

Tel-O-Tube Corp. of America, 180 Van Riper Ave., East Paterson, N. J.

Telonic Industries, 444 S. Ruqal St., Indianapolis 1, Ind.

Tel-Rad Mfg. Co., Inc., 7th & Madison St., Fennimore, Wis.

Telrex, Inc., Asbury Park, N. J.

Tel-Tronics Mfg. Co., Inc., Burnt Hills, N. Y.

Television Laboratories, Inc., Mill St., Wauconda, Ill.

Tempel Mfg. Co., 1939 Bryn Mawr Ave., Chicago 26, Ill.

Tennalab, Quincy, Ill.

Tenney Engineering Inc., 1090 Springfield Rd., Union, N. J.

Tensitron, Inc., Harvard, Mass.

Tensolite Insulated Wire Co., Inc., 198 Main St., Tarrytown, N. Y.

Terado Co., 1059 Raymond Ave., St. Paul 8, Minn.

Terpening Co., L. H., 16 W. 61st St., New York, N. Y.

Tetrad Co., Inc., 62 St. Mary St., Yonkers 2, N. Y.

Texas Instruments Incorporated, 6000 Lemmon Ave., Dallas, Texas.

Textolid Products Co., 81 Rumford Ave., Waltham, Mass.

Ther Electric & Machine Works, 17 South Jefferson St., Chicago, Ill.

Thermador Electric Mfg. Co., 2000 S. Camfield Ave., Los Angeles 22, Calif.

Thermal Syndicate, Ltd., 14 Blixley Heath, Lynbrook, N. Y.

Thermo Instrument Co., Box 335, Belmont, Calif.

Thermosen, Inc., 361 W. Main St., Stamford, Conn.

Thomas & Betts Co., 36 Butler St., Elizabeth 1, N. J.

Thomas & Skinner Steel Products Co., 1122 E. 23rd St., Indianapolis, Ind.

Thomas & Sons, Inc., William, Slocum Ave., Ridgefield, N. J.

Thomas Electronics, Inc., 118 Ninth St., Passaic, N. J.

Thompson-Bremer Co., 1644 W. Hubbard St., Chicago 22, Ill.

Thompson-Fiberglass Co., H. I., 1733 Cordova St., Los Angeles 7, Calif.

Thompson Corp., The, George S., South Pasadena, Calif. Chicago 49 III.

Thompson Products, Inc., Electronics Div., 2196 Clarkwood Rd., Cleveland 3, Ohio.

Thor Ceramics, Inc., 225 Belleville Ave., Bloomfield, N. J.

Thor Transformer & Electronics Co., 750 San Antonio Rd., Palo Alto, Calif.

Thordarson-Meissner Mfg. Divisions, Mt. Carmel, Ill.

Thwing-Albert Instrument Co., 5351 Pulaski Avenue, Philadelphia 44, Pa.

Tibbetts Industries, Inc., Camden, Maine.

Times Facsimile Corp., 540 W. 58th St., New York 19, N. Y.

Timetrol Co., 2919 Gladstone St., Rockford, Ill.

Timken Roller Bearing Co., Canton 6, Ohio.

Tinnerman Products Inc., P. O. Box 6688, Dept. No. 16, Cleveland 1, Ohio.

Titan Metal Mfg. Co., Bellefonte, Pa.

Titflex, Inc., 500 Frelinghuysen Ave., Newark 5, N. J.

Tobe Deutschmann Corp., 921 Providence Highway, Norwood, Mass.

Todd Products, 156 Gramatan Ave., Mt. Vernon, N. Y.

Todd-Tran Corp., 156 Gramatan Ave., Mt. Vernon, N. Y.

Tomore Electric Corp., 131 Gould St., Rochester 10, N. Y.

Topflight Tape Co., 160 E. 9th Ave., York, Pa.
 Topper Mfg. Co., P. O. Box 198, Great Neck, N. Y.
 Torit Mfg. Co., Walnut & Exchange Sts., St. Paul 2, Minn.
 Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
 Torngren Co., Inc., C. W., 236 Pearl St., Somerville 45, Mass.
 Torocoil Co., 1374 Mobile Court, St. Louis, Mo.
 Torwico Electronics, Inc., 965 Frelinghuysen Ave., Newark 5, N. J.
 Towaco Electronics, Pine Brook Rd., Towaco, N. J.
 Tracerlab Inc., 130 High St., Boston 10, Mass.
 Trad Television Corp., 1001 First Ave., Asbury Park, N. J.
 Trans-American Precision Instrument Corp., 34-17 Lawrence St., Flushing 54, N. Y.
 Transco Products, Inc., 12210 Nebraska Ave., Los Angeles 25, Calif.
 Transformer Engineers, 161 E. California St., Pasadena 1, Calif.
 Transformer Metal Products Corp., 343 W. 26th St., New York, N. Y.
 Transformer Specialty Co., Inc., Bala Cynwyd, Pa.
 Transformers, Inc., 532 North St., Endicott, N. Y.
 Transcoil Corp., 107 Grand St., New York 13, N. Y.
 Transistor Components Co., 301 Oakwood Ave., East Aurora, N. Y.
 Transistor Products, Inc., Snow & Union Sts., Brighton 35, Mass.
 Transiron Electronic Corp., 403-407 Main St., Melrose 76, Mass.
 Transiron, Inc., 154 Spring St., New York 12, N. Y.
 Transonic, Inc., 808 Sixteenth St., Box 96A, Bakersfield, Calif.
 Transradio, Ltd., 138A Cromwell Rd., London SW 7, England.
 Trans-Sonics, Inc., 5 Forrest St., Bedford, Mass.
 Transvision Inc., 460 North Ave., New Rochelle, N. Y.
 Trav-Ler Radio Corp., 571 W. Jackson Blvd., Chicago, Ill.
 Trent Tube Co., East Troy, Wis.
 Trenton Transformer Corp., Box 568B, Trenton, N. J.
 Fresco, 3824 Terrace St., Philadelphia 28, Pa.
 Triad Portable Case Corp., 310-314 W. Lincoln Ave., Mount Vernon, N. Y.
 Triad Transformer Corp., 4055 Redwood Ave., Venice, Calif.
 Trico Fuse Mfg. Co., 2948 N. Fifth, Milwaukee 12, Wis.
 Tricon Mfg. Co., 8012 S. Wallace St., Chicago 20, Ill.
 Tricraft Products Co., 1535 N. Ashland Ave., Chicago 22, Ill.
 Tri-Dex Co., Dept. EBG, P. O. Box 1207, Lindsay, Calif.
 Trimm Inc., 400 W. Lake St., Libertyville, Ill.
 Trimont Instrument Co., 3119 W. Lake St., Chicago 12, Ill.
 Trlmount Plastic Co., 71 Dudley St., Arlington, Mass.
 Trio Laboratories, P. O. Box 143, Wantagh, N. Y.
 Trio Mfg. Co., Griggsville, Ill.
 Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.
 Triplett & Barton, Inc., 831 N. Lake St., P. O. Box 3128, Burbank, Calif.
 Triplett Electrical Instrument Co., Harmon Road, Bluffton, Ohio.
 Tri-Point Mfg. & Developing Co., 401 Grand St., Brooklyn 11, N. Y.
 Triton Mfg. Co., Inc., East Haddam, Conn.
 Tronic Coil Winding Co., Inc., 161 Fairfield Ave., Waterbury, Conn.
 Tru-Connector Corp., 416 Union St., Lynn, Mass.
 Tru-Ohm Products Div., Model Engineering & Mfg. Co., 2800 Milwaukee Ave., Chicago 18, Ill.
 Trumbull Components Dept., General Electric Co., 41 Woodford Ave., Plainville, Conn.
 Truscon Steel Division of Republic Steel Corp., Youngstown, Ohio.
 Trutone Electronics, Inc., 812-14 N. Highland Ave., Los Angeles 38, Calif.
 Tubular Rivet & Stud Co., Linden St., Quincy, Mass.
 Tung-Sol Electric Inc., 95 Eighth Ave., Newark 4, N. J.
 Turner Co., The, 909 17th St., N. E., Cedar Rapids, Iowa.
 Tuttle & Kift, 1823 N. Monitor St., Chicago 39, Ill.
 Twentieth Century Electronics, Ltd., Centronics Works, King Henry's Drive, New Addington, Surrey, England.

U M & F Manufacturing Corp., 10929 Vanowen St., North Hollywood, Calif.
 Ucinite Co. Division, United-Carr Fastener Corp., 459 Watertown St., Newtonville, Mass.
 Ulanet Co., George, 413 Market St., Newark 5, N. J.
 Ultradyne Engineering Labs., Inc., P. O. Box 8007, Albuquerque, N. M.
 Ultrasonic Corp., 640 Memorial Drive, Cambridge 39, Mass.
 Ultrasonic Engineering Co., P. O. Box 46, Maywood, Ill.
 Underwood Corp., 1 Park Ave., New York, N. Y.
 Ungar Electric Tools, Inc., P. O. Box 312, Venice, Calif.
 Uniform Tubes, Level Rd., Collegetown 2, Pa.
 Unimax Switch Div. of W. L. Maxson Corp., 460 W. 34th St., New York 1, N. Y.
 Union Bay State Chemical Co., Inc., 491 Main St., Cambridge 42, Mass.
 Union Electric & Mfg. Co., 1057 Summit Ave., Jersey City, N. J.
 Union Electric Products Co., 24 Edison Place, Newark 2, N. J.
 Union Plastics Corp., 1630 Paterson Plankroad, Secaucus, N. J.
 Union Switch & Signal Div. of Westinghouse Air Brake Co., General Apparatus Sales, Pittsburgh 18, Pa.
 Uni-Products Div. of Uni-Science, Inc., P. O. Box 64, Rockville, Md.
 United-Carr Fastener Corp., Cambridge 42, Mass.
 United Condenser Corp., 337 E. 139th St., New York 54, N. Y.
 United Electric Controls Co., 85 School St., Watertown 72, Mass.

United Electronic Mfg. Corp., 542 39th St., Union City, N. J.
 United Electronics Co., 42 Spring St., Newark 4, N. J.
 United Manufacturing & Service Co., 405 S. Sixth St., Milwaukee 4, Wis.
 United Mineral & Chemical Corp., 16 Hudson St., New York 13, N. Y.
 United Pressed Products Co., 741 W. Harrison St., Chicago 7, Ill.
 United Screw & Bolt Corp., 2513 W. Cullerton St., Chicago 8, Ill.
 United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.
 United Specialties Co., 9765 S. Cottage Grove Ave., Chicago 28, Ill.
 U. S. Components, Inc., 454 E. 148th St., New York 55, N. Y.
 U. S. Electronic Co., 262 Canner St., New Haven 11, Conn.
 U. S. Electronics Corp., 276 Warren St., Lyndhurst, N. J.
 U. S. Engineering Co., 521 Commercial St., Glendale 3, Calif.
 U. S. Gasket Co., P. O. Box 93, Camden, N. J.
 U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
 U. S. Gear Corp., 71 Broadway, Wakefield, Mass.
 U. S. Graphite Co. Div. of The Wickes Corp., 1621 Holland Ave., Saginaw, Mich.
 U. S. Instrument Corp., 409 Broad St., Summit, N. J.
 U. S. Motors Corp., Oshkosh, Wis.
 U. S. Plywood Corp., Electrical Structures Dept., 55 W. 44th St., New York 17, N. Y.
 U. S. Radium Corp., 535 Pearl St., New York 7, N. Y.
 U. S. Rubber Co., 1230 Avenue of the Americas, New York 20, N. Y.
 U. S. Steel Corp., 525 William Penn Place, Pittsburgh 30, Pa.
 U. S. Stoneware Co., The, P. O. Box 350, Akron 9, Ohio.
 U. S. Time Corp., 500 Fifth Ave., New York 36, N. Y.
 U. S. Wire & Cable Corp., Progress & Monroe Sts., Union, N. J.
 United Technical Laboratories, Box 425-V, Morristown, N. J.
 United Transformer Co., 150 Varick St., New York 13, N. Y.
 United Wood Specialty Mfg. Co., 951 Broadway, Fall River, Mass.
 Unitek Corp., 275 N. Halstead Ave., Pasadena 8, Calif.
 Unitrronics, Inc., 472 Park Ave., Ferguson Station, St. Louis 21, Mo.
 Universal Aviation Equipment, Inc., 362 Fifth Ave., New York 1, N. Y.
 Universal Chain Co., 92 Burnett Ave., Maplewood, N. J.
 Universal Drafting Machine Corp., 7960 Lorain Ave., Cleveland 2, Ohio.
 Universal Electric Co., 300 E. Main St., Owosso, Mich.
 Universal Electronics Co., 2012 S. Sepulveda Blvd., Los Angeles 25, Calif.
 Universal Mfg. Co., Inc., 410 Hillside Ave., Hillside, N. J.
 Universal Microphone Co., 424 Warren Lane, Inglewood, Calif.
 Universal Microwave Corp., 380 Hillside Ave., Hillside, N. J.
 Universal Motor Co., 456 Universal Drive, Oshkosh, Wis.
 Universal Winding Co., P. O. Box 1605, Providence 1, R. I.
 University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y.
 Utah Radio Products Co., Inc., 1123 E. Franklin St., Huntington, Ind.

V-M Corp., Benton Harbor, Mich.
 Vaco Products Co., 317 E. Ontario St., Chicago 11, Ill.
 Vacuum Electronic Engineering Co., 86 Denton Ave., New Hyde Park, N. Y.
 Vacuum Metals Corp., 70 Memorial Drive, Cambridge 42, Mass.
 Vacuum Tube Products, 506 S. Cleveland St., Ocean-side, Calif.
 Valco Mfg. Co., 4700 W. Walton St., Chicago 51, Ill.
 Valley Engineering Co., P. O. Box 2, Los Alamos, N. M.
 Vallorbs Jewel Co., Lancaster, Pa.
 Valpey Crystal Corp., 1244 Highland St., Holliston, Mass.
 Van Cleef Bros. Inc., Div. of Johns-Manville, 7800 Wood-lawn Ave., Chicago 19, Ill.
 Van Dyke Instruments, Inc., 1927 First Ave., S., P. O. Box 355, St. Petersburg 1, Fla.
 Vanguard Electronics Co., 3384 Motor Ave., Los Angeles 34, Calif.
 Vapor Recovery Systems Co., 2820 N. Alameda, P. O. Box 231, Compton, Calif.
 Varflex Corp., 308 N. Jay St., Rome, N. Y.
 Variable Condenser Corp., 65 Hope St., Brooklyn, N. Y.
 Varian Associates, 611 Hansen Way, Palo Alto, Calif.
 Vari-L Co., Inc., 432 Fairfield Ave., Stamford, Conn.
 Varo Mfg. Co., Inc., 1801 Walnut St., Garland, Texas.
 Vector Electronic Co., 3352 San Fernando Rd., Los Angeles 65, Calif.
 Vectron, Inc., 404 Main St., Waltham 54, Mass.
 Veeder-Root, Inc., Hartford 2, Conn.
 Vendo Co., 7400 E. 12th St., Kansas City 8, Mo.
 Vesto Co., Inc., 20th & Clay, North Kansas City, Mo.
 Vibracorp, 425 Bush St., San Francisco 8, Calif.
 Vibration Research Labs., Inc., 97 Lake Ave., Tuckahoe, N. Y.
 Vibro Ceramics Corp., Metuchen, N. J.
 Vibroplex Co., Inc., 833 Broadway, New York, N. Y.
 Vickers Electric Division, Vickers, Inc., 1825 Locust St., St. Louis 3, Mo.
 Victor Electric Wire & Cable Corp., 8 Ackerman Ave., Clifton, N. J.
 Victoreen Instrument Co., Component Div., 3800 Perklns Ave., Cleveland 14, Ohio.
 Victory Engineering Corp., Springfield Rd., Union, N. J.

Vidaire Electronics Mfg. Co., 576 W. Merrick Rd., Lynbrook, N. Y.
 Videon Electronic Corp., 222 E. Ohio St., Indianapolis 4, Ind.
 Viewlex Inc., 35-01 Queens Blvd., Long Island City 1, N. Y.
 Vitramon, Inc., Box 544, Bridgeport, Conn.
 Vitroscop Corp., 6325 Guilford Ave., Box 6048, Indianapolis 20, Ind.
 Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Vocatron Mfg. Div. of Vocaline Co. of America, Inc., Old Saybrook, Conn.
 Vokar Corp., 7300 Huron River Drive, Dexter, Mich.
 Volkers & Schaffer Mfg. Corp., P. O. Box 996, Schenectady, N. Y.
 Volkert Metal Stampings, Inc., John, 222-34 96th Ave., Queens Village 8, N. Y.
 Vorac Co., The, 147 Meadow Rd., Rutherford, N. J.
 Voron & Co., George, 835 N. 19th St., Philadelphia 30, Pa.
 Vulcan Electric Co., 88 Holten St., Danvers, Mass.
 Vulcanized Rubber Products Co., Morrisville, Pa.

Waage Electric, Inc., 720 Colfax Ave., Kenilworth, N. J.
 Wade Electric Products Co., 400 Jacob St., Sturgis, Mich.
 Wagner Electric Corp., 6400 Plymouth Ave., St. Louis 14, Mo.
 Waldes Kohinoor Inc., 47-16 Austel Place, Long Island City 1, N. Y.
 Walker Co., George, 118 Amsterdam Ave., Passaic, N. J.
 Walkirt Co., 145 W. Hazel St., Inglewood 3, Calif.
 Wall Mfg. Co., Grove City, Pa.
 Wallace & Tiernan Co., Inc., Belleville 9, N. J.
 Walland-Pierce Corp., 1928 Pacific Coast Highway, Lomita, Calif.
 Walnut Machine Co., 1529 S. Walnut St., South Bend 14, Ind.
 Waiser Automatic Timer Corp., Graybar Bldg., New York 17, N. Y.
 Walter Co., Inc., S., 1400 Atlantic Ave., Brooklyn 16, N. Y.
 Waltham Horological Corp., 711 Broad St., Lynn, Mass.
 Waltham Screw Co., Waltham, Mass.
 Wang Laboratories, 296 Columbus Ave., Boston 16, Mass.
 Wappler, Inc., 27-10 Astoria Blvd., Long Island City 2, N. Y.
 Ward Leonard Electric Co., 31 South St., Mt. Vernon, N. Y.
 Ward Products Corp., Div. of The Gabriel Co., 1148 Euclid Ave., Cleveland 15, Ohio.
 Warren Electronics, Inc., Bound Brook, N. J.
 Warren Plastics Corp., Warren, Pa.
 Warren Wire Co., Pownal, Vt.
 Warrick Co., Charles F., 1964 W. Eleven Mile Rd., Berkley, Mich.
 Warrick Co., Frederick P., Clarkson, Mich.
 Wassco Electric Products Corp., 126 W. Cass St., Joliet, Ill.
 Waterman Products Co., Inc., 2445-63 Emerald St., Philadelphia 25, Pa.
 Waters Conley Co., 501 First St. N. W., Rochester, Minn.
 Waters, Inc., Robert A., 4 Gordon St., Waltham 54, Mass.
 Waters Manufacturing, Inc., 4 Gordon St., Waltham 54, Mass.
 Watlow Electric Mfg. Co., 1376 Ferguson Ave., St. Louis 14, Mo.
 Waveforms, Inc., 333 Sixth Ave., New York 14, N. Y.
 Waveguide, Inc., P. O. Box 486, 14845 Oxnard St., Van Nuys, Calif.
 Waveline, Inc., Box 470, Caldwell, N. J.
 Weathers Industries, Inc., 66 E. Gloucester Pike, Barrington, N. J.
 Webber Mfg. Co., Inc., 2745 Madison Ave., Indianapolis 3, Ind.
 Webhart Corp., 33 W. Union St., Pasadena 1, Calif.
 Webster-Chicago Corp., 5610 Bloomingdale Ave., Chicago 39, Ill.
 Webster Electric Co., 1900 Clark St., Racine, Wis.
 Weckesser Co., 5261 Avondale Ave., Chicago 30, Ill.
 Weingarten Electronic Labs., Inc., 7556 Melrose Ave., Los Angeles 46, Calif.
 Weinschel Engineering Co., Inc., 10503 Metropolitan Ave., Kensington, Md.
 Welch Allyn, Inc., Skaneateles Falls, N. Y.
 Welch Scientific Co., W. M., 1515 Sedgwick St., Chicago 10, Ill.
 Weller Electric Corp., 808 Packer St., Easton, Pa.
 Wells & Co., Inc., A. H., 181 E. Aurora St., Waterbury, Conn.
 Wells-Gardner & Co., 2701 N. Kildare Ave., Chicago 39, Ill.
 Wells & Winegard, 3000 Scotten Blvd., Burlington, Iowa.
 Weltronic Co., 19500 W. Eight Mile Rd., Detroit 19, Mich.
 Wen Products, Inc., 5806 Northwest Highway, Chicago 31, Ill.
 Wenco Mfg. Co., 1133 W. Hubbard St., Chicago 22, Ill.
 West Coast Electrical Mfg. Corp., 233 W. 116th Place, Los Angeles 61, Calif.
 West Coast Electronics Co., 5873 W. Jefferson Blvd., Los Angeles 16, Calif.
 West Instrument Corp., 525 N. Noble St., Chicago 22, Ill.
 West Virginia Pulp & Paper Co., 230 Park Ave., New York 17, N. Y.
 Westberg Mfg. Co., 144 S. Coombs St., Napa, Calif.
 Westbury Electronics, Inc., 40 Urban Ave., Westbury, N. Y.
 Western Coil Products Co., 2993 Middlefield Rd., Palo Alto, Calif.

Western Electro-Acoustic Labs., 204 S. Beverly Drive, Beverly Hills, Calif.

Western Felt Works, 4029 Ogden Ave., Chicago, Ill.

Western Gear Works, 2600 E. Imperial Highway, Los Angeles, Calif.

Western Gold & Platinum Works, 589 Bryant St., San Francisco, Calif.

Western Insulated Wire Co., 2425 E. 30th St., Los Angeles 58, Calif.

Western Sound & Electric Labs, Inc., 805 S. Fifth St., Milwaukee 4, Wis.

Western Union Telegraph Co., 60 Hudson St., New York 13, N. Y.

Westfield Metal Products Co., Inc., Elm & Burton Sts., Westfield, Mass.

Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.

Westinghouse Electric Corp., Electronic Tube Div., EB-500, P. O. Box 284, Elmira 1, N. Y.

Westline Products Div. of Western Lithograph Co., 600 E. Second St., Los Angeles 54, Calif.

Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N. J.

Weston Laboratories, Inc., Harvard, Mass.

Westrex Corp., 111 Eighth Ave., New York 11, N. Y.

Weymouth Instrument Co., 1440 Commercial St., East Weymouth 89, Mass.

Wheeler Insulated Wire Co., Inc., 150 E. Aurora St., Waterbury 91, Conn.

Wheeler Laboratories, Inc., Great Neck, N. Y.

Whistler & Sons, Inc., S. B., 752 Military Rd., Buffalo 23, N. Y.

Whitaker Cable Corp., Kansas City 16, Mo.

White Dental Mfg. Co., S. S., Industrial Div., 10 E. 40th St., New York 16, N. Y.

White Electron Devices, Inc., Roger, 12 W. Island Rd., Ramsey, N. J.

White Industries, Inc., 421 W. 54th St., New York 19, N. Y.

White Instrument Laboratories, 203 Riverside Drive, Austin, Texas.

Whitehead Stamping Co., 1691 W. Lafayette Blvd., Detroit 16, Mich.

White-Rodgers Electric Co., Armament Dept., 1209 Cass Ave., St. Louis 6, Mo.

Whitney Blake Co., New Haven 14, Conn.

Whitso, Inc., 2037 Church III St., Chicago 47, Ill.

Whittington Pump & Engineering Corp., 1126 Prospect St., Indianapolis 3, Ind.

Wickes Engineering & Construction Co., P. O. Box 590, Camden 1, N. J.

Wiedemann Machine Co., 4272 Wissahickon Ave., Philadelphia 32, Pa.

Wiegand Co., Edwin L., 7606 Thomas Blvd., Pittsburgh 8, Pa.

Wilcox Electric Co., 1400 Chestnut St., Kansas City, Mo.

Wilcox-Gay Corp., Charlotte, Mich.

Wildberg Bros. Smelting & Refining Co., 742 Market St., San Francisco 2, Calif.

Willard Storage Battery Co., 200 Carnegie Hall, Cleveland 15, Ohio.

Williams & Co., C. K., 640 N. 13th St., Easton, Pa.

Willson Camera Co., Inc., 1395 Lawrence, Havertown, Pa.

Willys Electronics Div. of Willys Motors, Inc., Toledo, Ohio.

Wilmax Glass Co., Inc., Landisville, N. J.

Wilmar Mfg. Co., Inc., 2715 E. 14th St., Kansas City 27, Mo.

Wilmington Fibre Specialty Co., P. O. Drawer 1028, Wilmington 99, Del.

Wilson & Co., G. C., 1950 Eighth Ave., Huntington, W. Va.

Wilson Co., H. A., The, 2655 U. S. Hwy. 22, Union, N. J.

Wilton Tool Mfg. Co., 925 Wrightwood Ave., Chicago 14, Ill.

Wincharger Corp., E. 7th & Division Sts., Sioux City, Iowa.

Winchester Electronics, Inc., 15 Crescent St., Glenbrook, Conn.

Wind Turbine Co., E. Market St. & Penna. R. R., West Chester, Pa.

Winslow Co., Inc., 9 Liberty St., Newark 5, N. J.

Winsted Division of Hudson Wire Co., Winsted, Conn.

Winterburn Mfg. Co., P. O. Box 386, Putnam, Conn.

Winzler Mfg. & Tool Co., 1716 W. Arcade Place, Chicago 12, Ill.

Wire Stripper Co., 1730 Eastham Ave., Cleveland, Ohio.

Wirt Co., 5221 Greene St., Philadelphia 44, Pa.

Wisconsin Porcelain Co., Sun Prairie, Wis.

Wolfe Co., Inc., Franklin C., 3644 Eastham Drive, Culver City, Calif.

Wood Counter Laboratory, N. 5491 Blackstone, Chicago 37, Ill.

Woodcraft Corp., 501 Salzburg Ave., Bay City, Mich.

Woodwelding, Inc., 3000 W. Olive, Burbank, Calif.

Worcester Pressed Aluminum Corp., 13-15 Hope Ave., Worcester 3, Mass.

Worcester Pressed Steel Co., 101 Barber Ave., Worcester 6, Mass.

Workman TV, Inc., 309 Queen Anne Road, Teaneck, N. J.

World Radio Laboratories, 3415 W. Broadway, Council Bluffs, Iowa.

Worner Electronic Devices, Rankin, Ill.

Wright Electronic Development Co., 1519 McGee St., Kansas City 7, Mo.

Wright-Hepp Associates, Inc., 251 West St., South Hackensack, N. J.

Wright & Sons Co., William E., West Warren, Mass.

Wright-Zimmerman, Inc., New Brighton, Minn.

Wrought Washer Mfg. Co., 2264 S. Bay St., Milwaukee 7, Wis.

Wunderlich Radio Co., 2 Fifth Ave., New York 11, N. Y.

Wurlitzer Co., Rudolph, The, North Tonawanda, N. Y.

Xcellite, Inc., 28 Bank St., Orchard Park, N. Y.

X-Ray Dept. of General Electric Co., 4855 Electric Ave., Milwaukee 1, Wis.

Yale & Towne Mfg. Co., Powdered Metal Products Div., 9333 Belmont Ave., Franklin Park, Ill.

Yale Industries Corp., 82-09 251st St., Bellrose 26, N. Y.

Yardney Electric Corp., Dept. EBG, 40 Leonard St., New York 13, N. Y.

Yellow Springs Instrument Co., Inc., P. O. Box 106, Yellow Springs, Ohio.

Yonkers Industries, Inc., 28 School St., Yonkers, N. Y.

York Co., Inc., Otto, 69 Glenwood Place, East Orange, N. J.

Young Brothers Co., 1829 Columbus Rd., Cleveland, Ohio.

Z & W Machine Products Inc., Electronics Div., 5100-16 St. Clair Ave., Cleveland 3, Ohio.

Zell Products Corp., 276-280 Main St., P. O. Box 590, Norwalk, Conn.

Zenith Aircraft Div. of Zenith Plastics Co., P. O. Box 91, Gardena, Calif.

Zenith Electric Co., 152 W. Walton St., Chicago 10, Ill.

Zenith Optical Co., Div. of Polan Industries, Huntington 19, West Virginia.

Zenith Optical Laboratory, 1940 Great Neck Rd., Copiague, N. Y.

Zenith Radio Corp., 6001 Dickens Ave., Chicago 39, Ill.

Zephyr Products Co., 129 E. 124th St., New York 35, N. Y.

Zero Mfg. Co., 1121 Chestnut St., Burbank, Calif.

Zlerick Mfg. Corp., Beechwood & Rockdale Aves., New Rochelle, N. Y.

Zophar Mills, Inc., 115 26th St., Brooklyn 32, N. Y.

Distributors of ELECTRONIC COMPONENTS AND EQUIPMENT

The following is a list of distributors who are selling and stocking, for immediate delivery, electronic components, instruments, audio equipment, associated apparatus and allied products. These distributors perform a valuable service to manufacturers and users by providing quick delivery to meet the urgent requirements of designers and purchasing agents. This list is provided for the convenience of our subscribers and comprises the leading electronic distributors in the United States. Distributors who are advertisers in this issue have their names boldfaced and page number reference made to their advertisements. For further information regarding the services of these distributors, kindly refer to their advertisements.

ALABAMA

Ack Radio Supply Co., 2205 3rd Ave., N. Birmingham 3.
 Allen & Jemison Co., Tuscaloosa.
 Auto Service Co., 1916 S. 4th Avenue, Birmingham.
 Bessemer Radio Supply Co., 116-118 N. 20th, Bessemer.
 Clark & Jones, 1601 Second Ave. S., Birmingham.
 Clary Co., James W., 1713 Second Ave., Birmingham.
 Forbes Distributing Co., 2600 Third Ave., S., Birmingham 5.
 Hand Supply Co., 705 S. Oates St., Dothan.
 Hand Wholesale Radio, 231 South St., Dothan.
 Harris Supply Co., Inc., 10 N. Water St., Mobile 6.
 McDavid & Co., Inc., R. P. 1430 Second Ave., Birmingham.
 McGowin-Lyons Hardware & Supply Co., 113-125 N. Water St., P. O. Box 1209, Mobile.
 MG Electrical Equipment Co., 203 S. 18th St., Birmingham 3.
 Nelson Radio & Supply Co., 263 St. Louis St., Mobile 10.
 Nolin-McInnis, Inc., 205 Commerce St., Montgomery 3.
 Radio Distributing Co., 1724-5th Ave., Birmingham 3.
 Radio Distributing & Supply Co., 1029 Guinee St., Anniston.
 Reld Distributing Co., 1724 Fifth Ave., N., Birmingham.
 Signal Radio Supply Co., 243 E. Troy St., Dothan.
 Southeastern Radio Parts Co., 120 Chestnut St., Gadsden.
 Southeastern Radio Parts Co., 210 Court St., Montgomery.
 Steel City Supply Co., 600 N. 7th St., Birmingham.
 Teague Hardware Co., 132-134 Commerce St., Montgomery.
 Walther Bros Co., 113 Commerce St., Montgomery.

ALASKA

Alaska Radio Supply Co., Inc., Box 2165, Juneau.
 Alaska Radio Supply, Inc., Box 84-318 8th Ave., Anchorage.
 Yukon Radio Supply, Box 406 Anchorage.
 Yukon Radio Supply, Box 1385, Fairbanks.

ARIZONA

Dalls Brothers, 528 E. Pierce, Phoenix.
 Electrical Equipment Co. of Arizona, P. O. Box 2630, Phoenix.
 Elliott Laboratories, 418 N. 4th Ave., Tucson.
 Midland Specialty Co., 233 S. 11th Avenue, Phoenix.
 Radio Parts of Arizona, 214 S. 11th Ave., Phoenix.
 Radio Specialties & Appl. Corp., 305 E. Roosevelt, Phoenix.
 Ra-Tone Electronics Co., 128 W. Washington, Phoenix.
 Southwest Wholesale Radio & Appliance Co., 126 S. Second St., Phoenix.
 Standard Radio Parts, 218 North First Ave., Tucson.
 Western Radio Engineering Co., 1915 E. Washington St., Phoenix.

ARKANSAS

Blytheville Radio Supply, 112 S. First St., Blytheville.
 Carlton Wholesale Radio, Inc., 109 W. 9th St., Little Rock.
 Carter Electronic Supply Co., 805 N. 11th St., Fort Smith.
 Interstate Electric Co. of Shreveport, Inc., Fort Smith.
 Interstate Electric Co., of Shreveport, Inc., Texarkana.
 Lavender Radio Supply Co., 522 E. Fourth St., Texarkana.
 Martin Wholesale Radio Supply, 1207 W. Kingshighway, Paragould.
 Southern Radio Supply, 1419 Main St., Little Rock.
 Thurman Supply Co., 115 W. 11th St., Little Rock.
 White Radio Supply Co., David, P. O. Box 408, 1222 Main St., Little Rock.
 Wise Radio Supply, 1001 Towson Ave., Fort Smith.

CALIFORNIA

Altshuler Co., Cass, 603B Telegraph Ave., Oakland.

Applied Electronics Co., Inc., 1246 Folsom St., San Francisco.
 Arbuckle, Jack C., 417 E. 19th Street, Bakersfield.
 Arbuckle, Jack C., 2330 Kern St., Fresno.
 Associated Radio Distributors, 1251-3 Folsom St., San Francisco.
 Barrett, Kaemper, Dealers Supply Co., 1850 Mission St., San Francisco.
 Braun Corp., 2260 E. 15th St., Los Angeles 21.
 Braun-Knecht-Heimann Co., 1400 16th St., San Francisco.
 Brill & Co., W. D., 198 10th St., Oakland.
 Brill Co., W. D., 96 Camino Encinas, Orinda.
 Brown Co., C. C., 1714 Tenth St., Sacramento.
 Brown Co., C. C., 61 Ninth St., San Francisco 3.
 California Electronics Supply, 11801 W. Pico Blvd., Los Angeles 34.
 Capitol Records, Inc., Sunset & Vine, Hollywood 28.
 Channel Radio Supply Co., 523 Anacapa, Santa Barbara.
 Coast Electric Co., 744 G St., San Diego 12.
 Coast Electronic Supply Co., 527 W. Main St., Alhambra.
 Commercial Electronics, 317 W. 7th St., Eureka.
 Dealers Wholesale Supply, 610 N. Ventura Ave., Ventura.
 Dean Co., Fred S., 1500 West Burbank Blvd., Burbank.
 Dean Co., Fred S., 969 American Ave., Long Beach 13.
 DeJarnett Radio Supply, 1260 Van Ness St., Fresno.
 DeJarnett Wholesale Radio Co., B. J., 223 Fulton, Fresno.
 DeJarnett Wholesale Radio Co., B. J., 515 N. Hunter St., Stockton.
 Dow Radio, Inc., 1759 E. Colorado St., Pasadena 4.
 Dunlap Wholesale Radio Co., Inc., 826 5th St., Marysville.
 Dunlap Wholesale Radio Co., Inc., 826 Fifth St., Modesto.
 Dunlap Wholesale Radio Co., 1628 "S" St., Sacramento.
 Dunlap Wholesale Radio Co., Carter W., 27 N. Grant St., Stockton 8.
 Electric Supply Co., 140 11th St., Oakland.
 Electronic Equipment Distributors, 1228 Second Ave., San Diego.
 Electronic Equipment Distributors, 1123 W. Base Line, San Bernardino.
 Electronic Supply Co., 149-12th St., Oakland.
 Electronic Supply Co., 2615 E. Foothill Blvd., Pasadena.
 Empire Electronic Supply, Inc., 37 E. Union St., Pasadena.
 Federated Purchaser, Inc., 911 South Grand Ave., Los Angeles 15.
 Figart's Radio Supply Co., 6320 Commodore Sloat Dr., Los Angeles 36.
 Gough Industries, Inc., 424 Commercial St., Los Angeles.
 Graybar Electric Co., 210 Anderson Ave., Los Angeles.
 Haggerty Radio Supply, 6826 San Fernando Rd., Glendale.
 Henderson Company, 630 N. Alvarado St., Los Angeles.
 Henry Radio Shop, 11240 W. Olympic Blvd., Los Angeles.
 Hoffman, Ira, 1125 W. Main Ave., El Centro.
 Hollywood Radio Supply Inc., 5606 Hollywood Blvd., Hollywood 28.
 Inland Electronic Supply, 843 Colton Ave., San Bernardino.
 Kaemper-Barrett Dealers Supply Co., 1940 Ashby Ave., Berkeley.
 Kaemper-Barrett Dealers Supply Co., 1850 Mission St., San Francisco.
 Kemp Co., E. M., 115 R Street, Sacramento.
 Klerulff & Co., 725 L St., Fresno.
 Klerulff & Co., 820-830 W. Olympic Blvd., Los Angeles.
 Klerulff & Co., 3791 Park Blvd., San Diego.
 Kinney & Faust, 1740 Van Ness Ave., Fresno.
 Lynde Radio Supply, Larry, 833 Pine Ave., Long Beach.
 Mac's Radio Supply, 8320 Long Beach Blvd., South Gate.
 Martin Distributing Co., 2475 E. Florence Ave., Huntington Park.
 Martin Distributing Co., 2303 S. Union Ave., Los Angeles 7.
 Massey's Radio Supply Co., 2992 Eighth Ave., Riverside.
 Meyerberg Co., Inc., Leo J. 2027 S. Figueroa St., Los Angeles 15.
 Meyerberg Co., Leo, 33 Gough St., San Francisco.
 Meyerberg Co., Inc., Leo J., 2930 Butler Ave., Fresno.
 Millers Radio & Television, 336 E. 8th St., Oakland.
 Minthorne Music Co., 2920 W. Pico Blvd., Los Angeles.
 Nelson Brothers Co., 630 N. Alvarado, Los Angeles.

North Hollywood Radio & TV Supply, 4333 Lankershim Blvd., North Hollywood.
 Offenbach & Reimus Co., 1564 Market St., San Francisco.
 Pacific Radio Exchange, 1407 Cahuenga Blvd., Los Angeles.
 Pacific Wholesale Co., 116 N. 9th St., San Francisco.
 Papel Bros., 2605 E. Fourth St., Los Angeles.
 Pasadena Radio Supply, 6110 Santa Monica Blvd., Hollywood 38.
 Peninsula TV & Radio Supply, 881 S. First St., San Jose.
 Popkey Co., Inc., G. M., 1201 Howard St., San Francisco.
 Quement Inc., Frank, 161 W. San Fernando St., San Jose.
 Radio Doc, 721 S. Main St., Los Angeles.
 Radio Equipment Distributors, 1340 S. Olive, Los Angeles 15.
 Radio Parts Co., Inc., 1045 11th Ave., San Diego.
 Radio Parts Sales, 5222 S. Vermont Ave., Los Angeles.
 Radio Products Sales, Inc., 1501 S. Hill St., Los Angeles 15.
 Radio Products Sales, Inc., 238 W. 15th St., Los Angeles.
 Radio Specialties Co., 1956 S. Figueroa St., Los Angeles 7.
 Radio & Television Equipment, 709 Cherry Ave., Long Beach.
 Radio & Television Equipment, 207 Oak St., Santa Ana.
 Radio Television Supply Co., 341 W. 18th St., Los Angeles 18.
 Ravenscroft, Inc., A. E., 2320 S. Hill St., Los Angeles.
 Sacramento Electronic Supply Co., 1219 S St., Sacramento.
 San Francisco Radio & Supply Co., 1282-84 Market St., San Francisco.
 Scott Radio Supply, 266 Alamitos Ave., Long Beach 2.
 Shanks & Wright, 2045 Kettner Blvd., San Diego 1.
 Shelley Radio Co., 2008 Westwood Blvd., Los Angeles 25.
 Smith & Crawford, 1345 Mission St., San Francisco 3.
 Stockton Electronics, 710 E. Main St., Stockton.
 Styles & Engelman, 2255 Bancroft Ave., San Leandro.
 Thompson & Holmes, Ltd., 650 Second St., San Francisco.
 United Radio & Electronics Co., 1356 S. Flower St., Los Angeles.
 Universal Radio Supply Co., 1729 So. Los Angeles St., Los Angeles.
 Valley Electronic Supply Co., 1302 N. Magnolia Blvd., Burbank.
 Valley Electronic TV Supply, 2706 Main St., Riverside.
 Valley Radio Supply, 716 Baker St., Station A, Bakersfield.
 Weatherford Co., R. V., 6919 San Fernando Rd., Glendale 1.
 Wenger Co., E. C., 1450 Harrison St., Oakland.
 Western Electromotive Co., 5544 W. Pico Blvd., Los Angeles.
 Western Electronic Supply Corp., 7007 Melrose Ave., Los Angeles 38.
 Western Radio & Television Supply Co., 1415 India St., San Diego 1.
 Western Theatrical Equipment Co., 337 Golden Gate Ave., San Francisco 2.
 Wholesale Radio & Electric Supply Co., 140 Ninth St., San Francisco.
 Wresco, 140 Ninth St., San Francisco.
 Yale Radio Electric, 6616 Sunset Blvd., Los Angeles.
 Zach Radio Supply Co., 1426 Market St., San Francisco.

COLORADO

Electric Accessories Co., 1959 Stout St., Denver.
 Henrie & Boltheff Co., 1635-17th St., P. O. Box 5110, Terminal Sta., Denver 17.
 Interstate Radio & Supply Co., 1639 Tremont Place, Denver.
 Murray Radio Co., 502 West Colorado Ave., Colorado Springs.
 Niles Phonograph & Radio, 505-07 14th St., Denver.
 Radio & Electronic Supply Co., 540 Ute Ave., Grand Junction.
 Radio Products Sales Co., 1237 16th St., Denver 12.

Walker Radio Co., L. B., 854 Broadway, Denver.
Walker Radio Co., L. B., 218 W. Eighth St., Pueblo.

CONNECTICUT

Aikins Electronic Supplies, Inc., 428 Bank St., New London.
Ammrad & Co., 843 Grand Ave., New Haven.
Bond Radio Supply, The, 439 W. Main St., Waterbury 23.
Brown Co., Thomas H., 106 State St., New Haven 10.
Congress Radio Co., 207 Congress Avenue, New Haven.
Dale-Connecticut, Inc., 140 Ferry St., New Haven.
Dale Electronic Distributors, 150 James St., New Haven.
Hatry of Bridgeport, Inc., 1700 Main St., Bridgeport.
Hatry of Hartford, Inc., 203 Ann St., Hartford 3.
Hatry of New Haven, Inc., 77 Broadway, New Haven.
Hatry of Stamford, Inc., 97 Main St., Stamford.
Hatry of Waterbury, Inc., 89 Cherry St., Waterbury.
Hatry & Young of New London, Inc., 428 Bank St., New London.
Modern Radio Supply Co., Becker Ave., Kensington.
Moses Radio Electronics Co., 54 Flower St., Hartford 5.
Regent Electronic Supply Corp., 1153 Boston Post Rd., Milford.
Sam Schwartz Co., The, 124 State Street, New Haven.
Scell & Co., R. G., 1249 Main St., Hartford 3.
Stamford Radio Supplies, 562 Atlantic Ave., Stamford.
Universal Radio Supply, 47-53 E. Main St., New Britain.
Universal Radio Supply Co., Inc., 61 E. Main St., New Britain.
Waldhaus, L. N., 1132 Norman St., Bridgeport.

DELAWARE

Almo Radlo Co., 6th & Orange Sts., Wilmington.
Radio Electric Service Co. of Pa., Inc., 4th & Tatnall Sts., Wilmington.
Wilmington Electrical Spec. Co., 405 Delaware Ave., Wilmington.

DISTRICT OF COLUMBIA

American Amplifier & Telev. Corp., 1111 19th St., N. W., Washington.
Capitol Radio Wholesalers, 2120 14th St., N. W., Washington.
Electronic Wholesalers, Inc., 2345 Sherman Ave., N. W., Washington 9.
General Electric Supply Co., 705 Edgwood St., N. E. Washington.
George's Radio Co., 1111 H St., N. E., Washington.
George's Radio Co., 2013 M St., N. W., Washington.
Kenyon Radio Supply Co., 2214 14th St., N. W., Washington 9.
Rucker Radio Wholesalers, 1312 14th St., N. W., Washington.
Silberne Radio & Elec. Co., 3308-10 Eleventh St., N. W., Washington 10.
Southern Wholesalers, Inc., 707 Edgewood St., N. E., Washington 17.
Star Radio Co., 409-11th St., N. W., Washington.
Sun Parts Distributors, Ltd., 520 Tenth St., N. W., Washington.

FLORIDA

Acme Electronics Distributors, 811 Main St., Jacksonville.
Cooper Radio Co., 648 Second Ave., S., St. Petersburg.
East Coast Radio & Television Co., 1932 N. W. Miami Court, Miami.
Electric Supply Co., Inc., 106 S. Franklin St., Tampa 1.
Electronic Supply Co., 61 N. E. 9th St., Miami.
Emerson Radio of Florida, 131 N. E. 10th St., Miami.
Emerson Radio of Florida, 209 S. Franklin St., Tampa.
Fetterpuff, G., 22-31 W. Beaver St., Jacksonville.
Flagler Radio Co., 1068 W. Flager St., Miami.
Goddard Distributing Co., 2113 S. Andrews, Fort Lauderdale.
Goddard Distributors, Inc., 1309 N. Dixie, W. Palm Beach.
Grice Radio & Electronic Supplies, 358 E. Wright St., Pensacola.
Gulf Electric Supply, 115 E. Gregory St., Pensacola.
Hammond-Adams Co., 228 Volusia Ave., Daytona Beach.
Hammond-Adams, Inc., 9 S. Terry St., Orlando.
Herman Radio Supply Co., 1745 N. E. Second Ave., Miami 36.
Kinkade Radio Supply Co., 1402-04 Laura Street, Jacksonville.
Kinkade Radio Supply Co., 402 W. Fortune St., Tampa.
Morley Radio Co., 944 Main St., Sarasota.
Radio Accessories Co., 1054 S. Florida Ave., Lakeland.
Radio Accessories Co., 62 Church, Orlando.
Radio Accessories Co., 134 N. Franklin St., Tampa.
Radio Parts Co., 712 Main St., Jacksonville.
Radio Parts, Inc., 325 N. W. 3rd Ave., Miami.
Sea Coast Appliance Distrib., Inc., 36 NE 21st St., Miami.
Southeast Audio Co., 930 W. Adams Ave., Jacksonville.
Southern Hardware & Bicycle Co., 11 S. Newman St., Jacksonville.
Thurou Distributors, Inc., 15-17 E. Church St., Jacksonville.
Thurou Distributors, Inc., 2207 N.E. 2nd Ave., Miami.
Thurou Distributors, Inc., 625 W. Central Ave., Orlando.
Thurou Distributors, Inc., 739 N. Monroe St., Tallahassee.
Thurou Distributors, Inc., 134-136 S. Tampa St., Tampa.
Thurou Distributors, Inc., 308-10 S. Olive Ave., Box 3002, West Palm Beach.
Walder Radio & Appliance, 1809 N. E. Second Avenue, Miami 36.
Welch Radio Supply, 408 Ninth St., S., St. Petersburg.

GEORGIA

Atlanta Phonograph Co., 27 Pryor St., N. W., Atlanta.
Aviation Supply Corp., P. O. Box 512, Hapeville.
Beck & Gregg Radio Co., 217 Luckie St., N. W., Atlanta.
Concord Radio Corp., 265 Peachtree St., Atlanta 3.
Economy Auto Stores, Inc., 1130 Bankhead Highway, P. O. Box 5078, Atlanta.
Electrical Wholesalers, Inc., 229 W. Whitehall St., Atlanta.
Electronic Distributing Co., 754 Ponce de Leon Place, N. E., Atlanta 5.
Garlyn Electric Co., 69 Forsyth St., N. W., Atlanta 5.
Georgia Appliance Co., 1405 Spring St., N. W., Atlanta.
Guy White Radio Co., 654 Mulberry St., Macon.
Hatcher Co., A. S., 596-98 Third St., Macon.
Prestwood Electronics Co., 708 Reynolds St., Augusta.
Radio Sales & Service Co., 1326 First Ave., Columbus.
S. & H. X-Ray Company, 501 Peachtree St., N. E., Atlanta.
Southeastern Radio Parts Co., 442 W. Peachtree St., Atlanta.
Southeastern Radio Parts Co., 38 Montgomery St., Savannah.
Specialty Distributing Co., 104 Pine Ave., Albany.
Specialty Distributing Co., 425 Peachtree St., Atlanta.
Specialty Distributing Co., 644 Reynolds St., Augusta.
Specialty Distributing Co., Inc., 513 Arch St., P. O. Box 815, Macon.
Specialty Dist. Co., 233 E. Broughton St., Savannah.
Yancey Co., Inc., 1500 Northside Dr., Sta D., P. O. Box 4034, Atlanta.
Yancey Company, Inc., The, 666 Indian St., Savannah.

IDAHO

Bill Meyers, Wholesale, 240-248 S. Arthur, Pocatello.
Craddock's Radio Supply, 1522 State St., Boise.
Kopke Electronics Co., 119 Peasley St., Boise.
Schwendian Wholesale Distributors, 380 E. St., Idaho Falls.

ILLINOIS

Allen Electric Co., 18 E. North St., Danville.
ALLIED RADIO CORP., 833 W. Jackson Blvd., Chicago 7.
ADV. PG. 464.
Alverson Sales Co., 208 E. Front St., Bloomington.
Arbuckle, J. W., 626 W. Oakland Ave., Bloomington.
Bowman & Co., J. G., 513 E. 75th Street, Chicago 19.
Broadwin Television & Radio, Inc., 5004-6 North Broadway, Chicago 40.
Bruce Co., Harold, 120 N. 1st St., Springfield.
Central Scientific Co., 1700 Irving Park Rd., Chicago.
Chauncey's Distributing Corp., 1327 W. 79th St., Chicago.
Chauncey's Inc., 4737 W. Chicago Avenue, Chicago 51.
Chicago Apparatus Corp., 1735 N. Ashland Avenue, Chicago.
Clayton Radio Co., 2749 N. Ashland Ave., Chicago.
Concord Radio Corp., 901 Jackson Blvd., W., Chicago.
Cooper Supply Co., 935 Main Street, Quincy.
Electronic Publishing Co., 180 N. Wacker Drive, Chicago.
Fox Electric Supply Co., 67-69 N. State Street, Elgin.
Gates Radio Co., 123 Hampshire, Quincy.
H & H Electronic Supply, Inc., 510 Kishwaukee St., Rockford.
Herberger Radio Supply, P. O. Box 1197, Peoria 1.
Hyland Electrical Supply Co., 700 W. Jackson Blvd., Chicago.
Illinois Appliance Co., 407 W. First Street, Dixon.
Joliet Radio Supply Co., Inc., 460 N. Chicago St., Joliet.
Klaus Radio & Electric Co., 707 Main Street, Peoria 2.
Lamprey Radio Supply, 802 N. McLeansboro St., Benton.
Lofgren Distributing Co., 1202 4th Avenue, Moline.
Loughane & Company, 804 N. Water Street, Decatur.
Lukko Sales Corp., 5024 Irving Park Rd., Chicago.
Lurtz Electric Co., 210 N. Illinois St., Belleville.
Melvin Electronics Co., 321 Madison St., Oak Park.
Mid West Associated, 506 Walnut St., Rockford.
Mid West Electronics, 6907 N. Western Ave., Chicago.
Montgomery Ward & Co., W. Chicago Ave. & Larrabee St., Chicago.
Mort's Radio Shack, 630 W. Randolph St., Chicago.
Moulden Distributing Co., Tuscola.
Nagel, Inc., Arthur, 925 E. 55th St., Chicago.
Nation Wide Radio Co., 572 Randolph St., Chicago.
National Theatre Supply, 1325 Wabash Ave., Chicago.
Newark Electric Co., Inc., 223 W. Madison Street, Chicago 6.
Pilgrim Distributing Co., 910 W. Jackson Blvd., Chicago.
Radio Doctors, 314 N. Hickory, Campaign.
Radio Doctors Supply House, 220 E. Statlon St., Kankakee.
Radio Parts Co., 612 W. Randolph St., Chicago 6.
Radio Parts Distributors, 925 E. 55th Street, Chicago 15.
Radio Parts Outlet, Inc., 4305 Lincoln Avenue, Chicago 18.
Radolek Co., 601 W. Randolph St., Chicago 6.
Relay Sales, 4721 W. Madison, Chicago 44.
Ross Radio Co., 1915 Main St., Peoria 5.
Spiegel, Inc., 1061 W. 35th St., Chicago 9.
Star Electronic Distributors, Inc., 7736 S. Halsted St., Chicago 20.
Triangle Industries Corp., 600 W. Adams Street, Chicago.
Tri-City Radio Supply, 1919 Fourth Avenue, Rock Island.
United Aircraft Supply, 5637-43 W. 63rd Place, Chicago.
Wabash Electronics, 700 Plum St., Mt. Carmel.
Warren Radio Co., 801 S. Adams, Peoria.
Walker-Jimieson, Inc., 811 S. Western Avenue, Chicago 12.
Wilkins-Anderson Company, 4525 West Division St., Chicago.
Wilson Supply Co., 108 W. Jefferson Street, Springfield.
York Radio Supply Corp., 801-805 N. Broadway, Decatur.

INDIANA

Archer & Evinger, 1348 Wabash Avenue, Terre Haute.
Associated Distributors, Inc., 210-214 S. Meridian Street Indianapolis 4.
Bloomington Store, 1300 S. Rogers St., Bloomington.
Bowman & Co., J. G., 103 Lafayette Street, Valparaiso.
Broadwin Television & Radio, Inc., 615 E. State St., Hammond.
Castrup's Radio Service, 1014 W. Franklin, Evansville.
Clingaman Radio Co., 814 W. Main, Peru.
Commercial Sound & Radio Co., 528 E. Colfax Avenue, South Bend.
Cosmopolitan Radio Co., 528 Washington Ave., Gary.
Fort Wayne Electronic Supply, 223 E. Main St., Fort Wayne.
Graham Co., Inc., Phillip E., 2606 W. Michigan Street, Indianapolis 22.
Graham Electronics Supply Co., 102 S. Pennsylvania St., Indianapolis 4.
Hub Distributors, 106 N. Main Street, Crown Point.
Lafayette Radio Supply, Inc., 408 E. North Street, Lafayette.
Lakeland Radio Supply Co., 525 Southwest St., Angola.
Meunier Radio Supply Company, 524 N. Illinois Street, Indianapolis.
Myers Radio Supply, 115-17 W. 22nd St., Marion.
Ohio Valley Sound Co., 11 N. W. Riverside Drive, Evansville.
Pemberton Laboratories, 236 E. Columbia St., Fort Wayne 2.
Radio Distributing Co., 1013 N. Capitol Avenue, Indianapolis.
Radio Distributing Co., 432 S. Carroll Street, South Bend.
Radio Electronic Supply Co., 1419 Cameron Street, Lafayette.
Radio Supply of Muncie, 305 N. Madison, Muncie.
Radio & TV Dist. Co., 717 S. 5th St., Richmond.
Rinehart, Inc., 511-13 Main St., Richmond.
Rodefald Co., 614 N. Capital Ave., Indianapolis.
Rodefald Co., 96 W. Main St., Richmond.
Seybert's Radio Supply Co., 1331 Main Street, Anderson.
Stansifer Radio Co., 343 S. Rogers St., Bloomington.
Terre Haute Radio Co., 501 Ohio St., Terre Haute.
Van Sickle Radio Supply Co., 102 S. Pennsylvania St., Indianapolis.
Warren Radio Co., 1716 S. Harrison St., Fort Wayne.
Wesco Radio Parts, 428 Penn St., Evansville.
Williams Co., H. A., 334 5th St., Columbus.

IOWA

Boe Distributing Co., 498 N. Grandview Avenue, Dubuque.
Duke's Radio Company, 209 Sixth Street, Sioux City.
Farnsworth Radio & Television Co., 623 Jefferson, Waterloo.
Gifford-Brown, Inc., 106 1st Street, SW, Cedar Rapids.
Gifford-Brown, Inc., 1216 Grand Avenue, Des Moines 9.
Iowa Radio Corporation, 1212 Grand Avenue, Des Moines 9.
Ken-Elis Radio Supply Co., 810 N. 9th, Fort Dodge.
Midwest-Timmermann Co., 114 Western Avenue, Davenport.
Onthank Co., G. W., 10th and Mulberry, Des Moines.
Power City Radio Co., 513 Seventh St., Sioux City.
Radio Trade Supply Co., 1224 Grand Avenue, Des Moines 9.
Radio Trade Supply Corp., 115 W. Second, Ottumwa.
Ray-Mac Supply Co., 613 Water Street, Waterloo.
RCA Victor Distributing Corp., 1235 W. 5th Street, Davenport.
Sildes Co., 912 Locust Street, Des Moines.
Sioux City Radio & Appliance Co., 210 W. 7th Street, Sioux City 16.
Sorensen Co., H. E., 100 S. W. First St., Des Moines.
Tri City Radio Supply, Inc., 320 E. 4th St., Davenport.
Union Supply Co., 4th & Washington, Burlington.
World Radio Laboratories, Inc., 740-46 W. Broadway, Council Bluffs.

KANSAS

Acme Radio Supply, 516 Quincy Street, Topeka.
Amateur Radio Equipment Co., Inc., 1203 E. Douglas Street, Wichita.
Costelow Co., Inc., John A., 125 Kansas Avenue, Topeka.
Excel Distributors, 118 W. 2nd Street, Wichita 2.
Four-State Radio & Supply Co., 227 Santa Fe, Salina.
Interstate Electronics Supply Co., 230 Ida Street, Wichita 1.
Overton Electric Co., Inc., 522 Jackson Street, Topeka.
Pittsburg Radio Supply Co., 212 S. Broadway, Pittsburg.
Radio Supply Co., 1125-27 E. Douglas, Wichita.
RCA Victor Distributing Corp., 351 N. Water, Wichita.
Western Distributors, 227 N. Santa Fe, Salina.

KENTUCKY

Apex Distributing Co., 506 York St., Newport.
Ashland Radio Supply Co., 2125 Winchester Ave., Ashland.
Burks & Co., P. I., 911 W. Broadway, Louisville 3.
Central Electronic Supply Co., Inc., 203 W. 4th St., Owensboro.
Crescent Radio Supply Co., 212 W. 10th St., Bowling Green.
Electronic Distributors, P. O. Box 55, Lexington.
Ewald Distributor Co., 911 W. Jefferson, Louisville 3.
Kentucky Radio Supply Co., 376 E. Main St., Lexington.
Miller, Barney, 239 E. Main Street, Lexington.
Peerless Electronic Equipment Co., 912-914 S. 2nd Street, Louisville 3.
R & K Distributing Co., 801 W. St. Catherine St., Louisville.

Radio Equipment Co., 480 Skain Avenue, Lexington 34.
Universal Radio Supply Co., 533 S. Seventh St., Louis-
ville 3.
West Kentucky Electronic Supply Co., 1205 Broadway,
Paducah.

LOUISIANA

Allen Supply Co., Wm. B., 1601 Orleans St., New
Orleans 16.
Autolotronics Supply Co., 2100 Benefit St., New Orleans
22.
Bell Radio Supply Co., 2625-27 Tulane Ave., New Orleans.
Central Radio Supply, 509 Monroe St., Alexandria 1.
Columbia Radio & Supply Co., 3940 3rd St., New
Orleans 13.
Crescent Radio & Supply Co., 1428 Baronne St., New
Orleans.
Dunckelman-Pace, 1417 Louisiana Ave., Shreveport.
Electrical Supply Co., 21 Magazine St., New Orleans.
Electronic Supply Co., 1753 N. 21st St., Baton Rouge.
Electronic Supply & Engineering Co., 205-207 N. Broad
Ave., New Orleans.
Electronics Co., Inc., The, 936-938 Milam St., P. O.
Box 1494, Shreveport.
Hale & McNeil, Cor. N. 3rd & Pine Sts., Monroe.
Interstate Electric Co., 1001 S. Peters, New Orleans.
Interstate Electric Co., 616 Spring St., Shreveport.
Koelemay Sales Co., 220 Crockett St., Shreveport.
Louisiana Radio & Television Dist., 1042 N. Boulevard,
Baton Rouge.
Lynch & Co., Inc., S. H., 832 Baronne St., New Orleans.
Ole Miss Supply, 901 Carondelet St., New Orleans.
Pee Jay Radio Electric, Inc., 2306 Tulane Ave., New
Orleans.
Radio Electronic Supply, 3004 Cameron St., Lafayette.
Radio Parts, Inc., 807 Howard St., New Orleans.
Ralph's Radio Electronic Supply, 3004 Cameron St.,
Lafayette.
Schneider & Sons, Inc., F. H. 215 Lake St., Lake
Providence.
Shuler Supply Co., 415 Dryades St., New Orleans.
Southern Radio Supply, 1900 Tulane Ave., New Orleans
19.
Walther Bros. Co., Inc., 714 Howard Ave., New Orleans.
Wholesale Radio Equipment Co., 239 Bilbo St., Lake
Charles.

MAINE

Brown Co., Frank M., 8-16 Free St., Portland.
Commercial Distributors, 35 Commercial St., Portland.
Commercial Electronics Service, 103 Chapel St., South
Portland.
Cressey & Allen, 35 Commercial Street, Portland 6.
Maine Electronic Supply Corp., 13 Deer Street, Portland.
Radio Service Laboratory, 76 Exchange Street, Bangor.
Radio Service Laboratory, 1004 Congress St., Portland 3.
Radio Supply Co., Inc., 28 Cross Street, Auburn.

MARYLAND

Art Craft Electronic Supply Co., Cor. Calvert & Baptist Sts.,
Salisbury.
Berman, O'Henry O., 12 E. Lombard St., Baltimore.
D & H Distributing Co., 25 S. Liberty Street, Baltimore.
Dealers Radio Supply Co., 219 Highland Ave., Salisbury.
Kann-Ellert Electronics Inc., 9 South Howard Street,
Baltimore.
Lytron Distributing Co., 1338 N. North St., Baltimore.
Radio Electric Service Co., 3 N. Howard St., Baltimore 1.
Rucker Radio Wholesalers, 8049 13th St., Silver Spring.
Spartana, A. R., 239 N. Gay St., Baltimore.
Wholesale Radio Parts Co., Inc., 311 W. Baltimore St.,
Baltimore 1.
Zimmerman Wholesalers, 162 Bedford St., Cumberland.
Zimmerman Wholesalers, 114 E. Washington St., Hagers-
town.

MASSACHUSETTS

Beckman & Co., C. E., 11-35 Commercial St., New
Bedford.
Burke Co., J. H., 37-39 Brighton Ave., Boston.
Cramer Electronics, 811 Boylston St., Boston.
Cushing, T. F., 349 Worthington St., Springfield 3.
Dean & Co., David B., 85 Cohannet St., Taunton.
DeMambo Radio Supply Co., Inc., 1111 Common-
wealth Ave., Boston 15.
DeMambo Radio Supply Co., Inc., 222 Summer St.,
Worcester.
Eastern Co., 620 Memorial Dr., Cambridge 39.
Electrical Supply Corp., 1739 Massachusetts Ave., Cam-
bridge 40.
Filnt Radio Co., 73 Troy St., Fall River.
Gelotte Claus, Inc., 1290 Massachusetts Ave., Cambridge.
Gerber Radio Supply Co., 1900 Columbus Ave., Rox-
bury 19.
Hatry & Young of Fitchburg, Inc., 390 Water St., Fitch-
burg.
Hatry & Young of Lawrence, Inc., 262 Lowell St.,
Lawrence.
Hatry & Young of Mass., Inc., 811 Boylston St., Boston.
Hatry & Young of Springfield, Inc., 169 Spring St.,
Springfield.
Herman Co., Louis M., 885 Boylston St., Boston.
Mayer, A. W., 895 Boylston St., Boston 15.
McCartin Co., Frank P., 181 Market St., Lowell.
Melrose Sales Co., 407 Franklin St., Melrose 77.
Pittsfield Radio Co., 44 West St., Pittsfield.
Radio Electronic Sales Co., 52 Chandler St., Worcester 2.
Radio Maintenance Supply Co., 80 Thomas St.,
Worcester.
RADIO SHACK CORP., 167 Washington St., Boston.
ADV. PG. 616.
Radio Wire Television, Inc., 110 Federal St., Boston.

Regent Sales, Inc., 236 Chestnut St., Springfield.
Ross Co., E. A., 1663 Purchase St., New Bedford.
Ross Co., E. A., 73 Troy St., Fall River.
Sager Electrical Supply Co., 201 Congress St., Boston.
Soundco Electronic Supply Co., 147 Dwight St., Spring-
field.
Springfield Radio Co., 93 High St., Holyoke.
Springfield Radio Co., Inc., 405 Dwight St., Springfield.
Springfield Sound Co., 147 Dwight St., Springfield.
Tarbell Watters Co., West St. & Clapp Ave., Pittsfield.
Tarbell Watters Co., 144 Chestnut St., Springfield.
Ware Radio Supply Co., 913 Centre St., Brockton 11.
Weston Electronic Sales Corp., Weston 93.
Willett Radio Service Inc., 11 Court St., Natick.

MICHIGAN

Brenklight Projection Co., 6545 St. Antoine, Detroit.
Bursma Radio Co., 853 Grandview Ave., S. W., Grand
Rapids.
Duffy & Co., M. N., 2040 Grand River Ave., Detroit 26.
Earle Appliance Distributors, Inc., 814 First Ave., North
Escanaba.
Electric Products Sales Co., 427 E. Michigan Ave.,
Lansing 29.
Electronic Supply Corp., 94 Hamlin St., Battle Creek.
Electronic Supply Corp., 906 E. Michigan Ave., Kalamazoo.
Electronic Supply Corp., 248 E. Pike St., Pontiac.
Felton Radio Co., 1603 Ludington, Escanaba.
Ferguson Radio Supply Co., 622 W. Baltimore, Detroit 2.
Fitzpatrick Electric Supply Co., Inc., 444 Irwin St.,
Muskegon.
Fulton Radio Supply Co., 1208 Greenwood Ave., Jackson.
Gardner Radio Supply Co., 332 River St., Manistee.
General Motors Corp., United Motors Service Div., 3044
W. Grand Ave., Detroit.
Glendale Supply Co., 12866 Woodward Ave., Detroit.
Hi-Park Distributors, 155 Labelle, Detroit 3.
K-L-A Laboratories, Inc., 7422 Woodward Ave., Detroit 2.
Lifsey Distributing Co., 726-30 N. Saginaw, Flint 3.
Morley Brothers, 5943 Second Ave., Detroit 2.
Morley Brothers, 25 Ottawa Ave., W. Grand Rapids.
Morley Brothers, Harrison Rd., E. Lansing.
Morley Brothers, 115-129 N. Washington Ave., Saginaw.
Northwest Radio of Michigan, 435 Tamarack St., Laurium.
Offenhauer Company, 227 N. Washington, Lansing.
Orem Distributing Co., 801 E. Genesee, Saginaw 11.
Radio Electronics Supply Co., 1112 W. Warren, De-
troit 1.
Radio Electronic Supply Co., 505 Jefferson Ave., S. E.,
Grand Rapids 3.
Radio Parts Co., Water & Millard Sts., Saginaw.
Radio Parts Inc., 720 Division Ave. S., Grand Rapids.
Radio Specialties, 456 Charlotte St., Detroit 1.
Radio Supply & Engineering Co., Inc., 85 Selden Ave.,
Detroit 1.
Radio Tube Merchandising Co., 508 Clifford St., Flint 3.
Ralston Co., Ralph M., 201 N. Park St., S., Kalamazoo.
Rissi Electronic Supply Co., 1112 West Warren, Detroit.
Shand Radio Specialties, 203 W. Kearsley, Flint 3.
Stevens Radio Parts, 713 Portage St., Kalamazoo.
Straits Distributors, Inc., 200 S. Main St., Sheboygan.
Warren Radio Co., 713 Portage St., Kalamazoo 7.
Wedemeyer Electronics Supply Co., 213-217 N. Fourth
Ave., Ann Arbor.
Wedemeyer Electronic Supply Co., 2005 E. Michigan
Ave., Lansing.
West Side Radio Supply, 8140 Michigan Ave., Detroit 10.
Wholesale Radio Co., 317 S. Division St., Grand Rapids.

MINNESOTA

Bauman Co., 3033-35 Lyndale Ave. S., Minneapolis 8.
Bonn Co., Lew, 228 E. Superior St., Duluth.
Bonn Co., Lew, 67 South 12th St., Minneapolis 4.
Bonn Co., Lew, 141-147 W. 7th St., St. Paul 2.
Catalog Service Co., The, 2020 Douglas Drive, Minneapolis.
Electronic Center, Inc., 107 Third Ave. N., Minneapolis.
Electronic Distributing Co., 856 Raymond Ave., St. Paul
4.
Elliott & Hanson Radio & TV Supply, 13 SW. 4th St.,
Rochester.
Hall Electric Co., 566 N. Robert St., St. Paul 1.
Hayes Co., E. C., 300 Washington Ave., N., Minneapolis.
Northwest Radio, 123 E. First St., Duluth 2.
Northwest Radio & Electronic Supply Co., 52 S. 12th
St., Minneapolis 4.
Northwest Radio & Electronic Supply Co., 194 W. 4th
St., St. Paul 2.
Popkey Co., G. M., 206 E. First St., Duluth.
Radio Electric Supply Co., 2451 Nicollet Ave., Minne-
apolis.
Radio Maintenance Co., 3016½ 27th St., S., Minne-
apolis 6.
S. M. Supply Co., 321 First Ave., SW, Rochester.
Southern Minnesota Supply Co., Cor. 2nd and Main St.,
Mankato.
Stark Radio Supply Company, 109 S. Lake St., Duluth.
Stark Radio Supply Co., 71 S. 12th St., Minneapolis 4.
Stark Radio Supply Co., 246 W. Kellogg Blvd., St. Paul.
Sterling Electric Co., 33 South Main St., Minneapolis.
Walker & Co., George T., 324 Fifth Avenue, South,
Minneapolis.

MISSISSIPPI

Cabell Electric Co., 922 S. Farish St., Jackson.
Elliott Radio, Inc., 816 South Gallatin St., Jackson.
Goyer Supply Co. (Home Appliance Div.), 805 Alexander,
Greenville.
Griffin Radio & Supply Co., P. O. Box 1404, Meridian.
Industrial Suppliers, Inc., Radio Div., Highway 80, Jack-
son.
Nelson Radio & Supply, 816 W. Howard, Biloxi.
Radio Supply Co., 909 24th Ave., Meridian.
Ryan Supply Co., 508-514 E. Pascagoula St., Jackson.
Ryan Supply Co., 814 21st, NE, Meridan.

Southern Distributors, Inc., 330 W. Capitol St., Jackson.
Swann Distributing Co., Inc., 717 W. Monument, Jackson.

MISSOURI

Acme Radio Supply, 110 N. 9th St., St. Joseph.
Ashe Radio Co., Walter, 1125 Pine St., St. Louis.
Brotherson M., 515 N. Beyers St., Joplin.
Brown Radio Co., Tom, 3924 Washington Ave., St. Louis.
Bursteln-Applebee Co., 1012 McGee St., Kansas City.
Central Missouri Distributing Co., 324 Capital St., Jef-
ferson City.
Ebinger Radio & Supply Co., 2211 Gravois Ave., St.
Louis 4.
Electro-Crafts, Div. of North Kansas City Electric Co.,
1303-1305 Swift St., N. Kansas City.
Four State Radio & Supply Co., 201 Main, Joplin.
Gordon, Co., J. C., 1118 Pine St., St. Louis 9.
Henry Radio Co., 211-215 N. Main St., Butler.
Henshaw Radio Supply, 3619 Troost Ave., Kansas City.
Hollander & Co., Inc., 3900 W. Pine St., St. Louis.
Interstate Supply Co., 10th & Walnut Sts., St. Louis.
Larrimore Sales Co., P. O. Box 1234, St. Louis 1.
Manhattan Radio & Equipment, Inc., 1732 Grand Ave.,
Kansas City 8.
McGee Radio Co., 1422 Grand Ave., Kansas City.
Napper Radio Company, 3117 Washington Blvd., St.
Louis.
Olive Electronic Supply Corp., 6711 Olive Blvd., Univer-
sity City.
Potter Radio Co., 1312 McGee St., Kansas City 6.
Radiolab, 1612 Grand Ave., Kansas City 8.
Radonics, 5040 Easton Ave., St. Louis.
Radonics, 2218 S. Jefferson St., St. Louis.
Reed Radio & Supply, Harry, 805 Boonville Ave., Spring-
field.
St. Joseph Radio & Supply Co., 922-24 Francis St., St.
Joseph.
Stout Radio Supply, 700 Boonville, Springfield.
Studekum Electronic Supply Co., 902 S. Sprigg St.,
P. O. Box 221, Cape Girardeau.
Tri-State Radio & Supply Co., 118 Bartlett St., Poplar
Bluff.
Van Sickle Radio Co., 1113 Pine St., St. Louis 1.
Walters Radio Supply, 3645 Main, Kansas City.

MONTANA

Electronic Supply Co., 214 Eleventh St., Billings.
Lindgren Co., 109 Central Ave., Great Falls.
Northwest Distributors, S., 509 Higgins Ave., Missoula.
Northwestern Auto Supply Co., 420 N. Broadway, Bill-
ings.
Smith's Supply Co., 425 S. Arizona St., Butte.
Smith Supply Co., 114 First Ave., N., Great Falls.
Smitty's Electronics, 126 W. Broadway, Butte.
Valley Motor Supply Co., 512-514 First Ave., S., Great
Falls.

NEBRASKA

Hicks Radio Co., 1422 "O" St., Lincoln 8.
J B Distributing Co., 2855-57 Farnam St., Omaha 2.
Joachim Radio Supply, 1913 Broadway, Scottsbluff.
Leuck Radio Supply Co., 243 S. 11th St., Lincoln.
Noll Co., H. C., 2226 Harney St., Omaha.
Omaha Appliance Co., 17 St. Mary's St., Omaha.
Radio Equipment Co., 282-22 Farnam St., Omaha.
Sidles Co., 508 S. 19th St., Omaha.

NEVADA

Metcalfe's Radio Supply, 819 Ogden St., Las Vegas.
Saviers Electrical Products Corp., Las Vegas.
Saviers Electrical Products Corp., 640 Sierra, Reno.

NEW HAMPSHIRE

American Radio Corp., 6th & Chestnut Sts., Dover.
DeMambo Radio Supply Co., Inc., 1308 Elm St.,
Manchester.
Evans Radio, 10 Hills Ave., P. O. Box 312, Concord.
Radio Service Laboratory, 670 Chestnut St., Manchester.

NEW JERSEY

Admiral Corp. of Newark, 497-511 N. J. Railroad Ave.,
Newark.
Allen & Hurley, 25 S. Warren St., Trenton 10.
All State Distributors, 30 Warren Place, Newark.
Almo Radio Co., 4401 Ventnor Ave., Atlantic City.
Almo Radio Co., 1133-35-37 Haddon Ave., Camden.
American Distributing Co., 327 Hudson St., Hackensack.
American Distributing Co., 6335 Hudson Blvd., North
Bergen.
Apollo Distributing Co., 15 Shipment St., Newark 2.
Continental Sales Co., 521 Bloomfield Ave., Newark.
Cooper Sales Co., Factory & Cooper Sts., Trenton.
Dale-New Jersey, Inc., 79 Lock St., Newark.
Eastern Radio Corp., 1055 Main Ave., Clifton.
Economy Electronics, 624 Ridge Rd., Lyndhurst.
Electronic Marketers, Inc., 415 Halsey St., Newark 2.
Federated Purchaser, Inc., 114 Hudson St., Newark.
General Radio Co., 207 N. Broadway, Camden.
General Radio Supply Co., 600 Penn St., Camden.
Hallmark Electronic Corp., 592 Communipaw Ave.,
Jersey City.
Hallmark Electronics Corp., RDS 37 Lincoln Hwy., New
Brunswick.
International Distributing Co., 821 S. Orange Ave.,
East Orange.
Jersey Electronic Dist. Co., 301 Grand St., Paterson 1.
Joe's Radio Shop, 67-69 S. Pearl St., Bridgeton.
Kearns, Inc., Harrisburg & Atlantic Aves., Atlantic City.

Krich-New Jersey Inc., 422-432 Elizabeth Ave., Newark 8.
 Lippman & Co., Aaron, 88-107 Newark St., Newark.
 M & H Sporting Goods Co., 1832 Atlantic Ave., Atlantic City.
 Monmouth Radio Supply, 404 Shrewsbury Ave., Red Bank.
 Mytelka & Rose, Inc., 1020 Broad St., Newark.
 Nidisco-Cliffside, Inc., 658 Anderson Ave., Cliffside.
 Nidisco-Jersey City, Inc., 713 Newark Ave., Jersey City 6.
 Nidisco Passaic, Inc., 294 Passaic St., Passaic.
 Nidisco-Trenton, Inc., 126 S. Warren St., Trenton.
 O'Loughlin & Co., Inc., T. A., 90 Washington St., Newark.
 Radio Electric Service Co. of Pa., Inc., 452 N. Albany Ave., Atlantic City.
 Radio Elect. Serv. Co. of Pa., 513-515 Cooper St., Camden.
 Radio Wire Telev. Inc., 24 Central Ave., Newark.
 Teldisco, Inc., 444 William St., E. Orange.
 Variety Electric Co., Inc., 468 Broad St., Newark 2.
 William Radio Supply Co., 1861 Woodbridge Ave., New Brunswick.
 Williams Co., Carl B., 154 Main St., Phillipsburg.

NEW MEXICO

Miller Supply Co., 211 W. Coal St., Albuquerque.
 Radio Equipment Co., 523 E. Central Ave., Albuquerque.
 Walker Radio Co., Inc., 114 W. Granite, P. O. Box 921, Albuquerque.

NEW YORK

Ace Electronics Co., 2610 E. 16th St., Brooklyn.
 Acme Electronics, Inc., 74 Willoughby St., Brooklyn 1.
 Adirondack Radio Supply, 32 Guy Park Ave., Amsterdam.
 Adirondack Radio Supply, 54 Market St., Amsterdam.
 Admiral Corp. of New York, 621 W. 54th St., New York.
 Arace Electronic Distributors, 25-27 Henry St., Kingston.
ARCO ELECTRONICS, INC., 103 Lafayette St., New York. ADV. PG. 624.
ARROW ELECTRONICS, INC., 82 Cortlandt St., New York 1. ADV. PG. 86.
 Associated Electronics Supply, 1427-29 Sunset Ave., Utica.
 Baldwin-Hall, Inc., 475 Oswego Blvd., Syracuse.
 Barclay-New York, Inc., 139 Cedar St., New York.
 Barker Roses & Kimball, Inc., 511 Baldwin St., Elmira.
 Beacon Electronics Inc., 14 Catherine St., Utica.
 Beacon Electronic Distb., 108 Lincoln Bldg., Watertown.
 Benray Distributing Co., 485 Coney Island Ave., Brooklyn.
 Berndt, W. E., 653-55 S. Warren St., Syracuse.
 Blackford Bros. Co., 1209 Broadway, Buffalo.
 Bickford Bros. Co., 208 St. Paul St., Rochester 4.
 Boro Electronics, Inc., 69-18 Roosevelt Ave., Woodside.
 Brahan Electrical Supply Co., John, 304 W. 55th St., New York.
 Brujac Electronic Corp., 103 Lafayette St., New York.
 Bruno-New York, Inc., 460 W. 34th St., New York 1.
 Buchman Radio Co., 492 Atlantic Ave., Brooklyn 17.
 Calvert Electronics, Inc., 1947 Broadway, New York 23.
 Cawley Aircraft Supply Co., Inc., 150-45 Twelfth Ave., Whitestone.
 Certified Radio Supply, Montgomery Rd. Rte. 84, Middletown.
 Chanrose Radio Distributors, Inc., 170-16 Jamaica Ave., Jamaica 3.
 Chief Electronics, Inc., 248 Washington St., Newburgh.
 Chief Electronics, 104 Main St., Poughkeepsie.
 Commercial-Radio-Sound Corp., 570 Lexington Ave., New York 22.
 Concord Radio Co., 55 Vesey St., New York 7.
 Consolidated Radio Sales Corp., 768 Amsterdam Ave., New York 25.
 Continental Theatre Accessories Inc., 325 W. 44th St., New York.
 Crosley Distributing Corp., 559 West 35th St., New York.
 Dage Corp., 40 Hudson St., New York 13, N. Y.
 Dale Distributing Co., Inc., 40 E. 32nd St., New York.
 Dalls, Inc., H. L., 175 Varlick St., New York 14.
 Dare's Radio Service, 22 E. Genesee St., Auburn.
 Davega Stores Corp., 76 9th Ave., New York.
 Davis Electronics Corp., 204 Main St., Hempstead.
 Davis Radio Distributing Co., 66 E. 3rd St., Mt. Vernon.
 Dymac, Inc., 2329 Main St., Buffalo 14.
 Electric City Radio Supply, 1566 State St., Schenectady.
 Electronic Equipment Co., 2912 Atlantic Ave., Brooklyn.
 Electronic Laboratories & Supply Co., 1415 Orskany St., West, Utica 4.
 Electro-Tech Equipment Co., Inc., 308 Canal St., New York 13.
 Electronic Supply, 40-14 Greenpoint, Long Island City.
 Electronic Wholesalers, 5047 Broadway, New York.
 Electronics Center, Inc., 118 Duane St., New York 7.
 Erskine-Healy, Inc., 420 St. Paul St., Rochester.
 Federal Radio Sales Supply Co., 188 State St., Binghamton.
 Federated Purchaser, Inc., 66 Dey St., New York 7.
 Fischer Distributing Co., Inc., 118 Duane St., New York 7.
 Fordham Radio Supply, 5669 Broadway, New York 63.
 Fort Orange Radio Distributing Co., 904 Broadway, Albany.
 Fulton County Distr. Co., 14 Bleeker St., Gloversville.
 Gates Electric Co., 65 West Broadway, New York.
 Gem Electronics Distributors, Inc., 236 Broadway, Hicksville.
 Genesee Radio & Parts Co., 205 Genesee St., Buffalo 3.
 Gershoff Elect. Sup. Corp., 220 W. 83rd St., New York.
 Goler Elect. Sup. Corp., 225 S. Broadway, Yonkers.

Graybar Electric Co., 420 Lexington Ave., New York.
 General Offices—branches in 105 principal cities.
 Green Tele-Radio Distributors, Inc., 472 Sutter Ave., Brooklyn 7.
 Greylock Electronics Supply Co., 156 Liberty St., New York 6.
 Harrison, Fred C., 108 W. Church St., Elmira.
 Harrison Radio Corp., 172-31 Hillside Ave., Jamaica, L. I.
 Harrison Radio Corp., 225 Greenwich St., New York 7.
 Harvey Radio Co., 103 W. 43rd St., New York 18.
 Hoffman Electronic Corp., 253 E. 72nd St., New York.
 Hornbeam Distributing Co., 67-15 Fresh Pond Rd., Brooklyn.
 Hornbeam Distributing Co., 1630 Bedford Ave., Brooklyn.
 Hornbeam Distributing Co., 4117 Ft. Hamilton Pkwy., Brooklyn 19.
 Hornbeam Distributing Co., 61-01 16th Ave., Brooklyn.
HUDSON RADIO & TELEVISION CORP., 48 W. 48th St., New York. ADV. PG. 588.
 Hunter Electronics, 233 East Ave., Rochester.
 International Electronics Corp., 137 Hudson St., New York 13.
 Interstate Appliance Co., Inc., 90 Prince St., New York 12.
 Island Radio Distributors, 412 Fulton Ave., Hempstead.
 Jacobs, Rene M., 601 W. 26th St., New York.
 Johnson Radio & Elect. Equip. Co., 119 Hunt Rd., Jamestown.
 Kay Instrument Sales Co., Inc., 843 Tenth Ave., New York 19.
 L & S Radio Sales Co., 132-134 North St., Middletown.
LEEDS RADIO COMPANY, 73 Vesey St., New York 7. ADV. PG. 302.
 Leonard Radio, Inc., 69 Cortlandt St., New York 7.
 Lust, Henry B., 310 W. 85th St., New York.
 Machlett & Son, E., 220 E. 23rd St., New York 10.
 Masline Radio & Electronics, 192-196 Clinton Ave., Rochester 4.
 McRae & Co., Inc., H. A. 137 River St., Troy.
 Melville Radio Corp., 160-13 Northern Blvd., Flushing.
 Melville Radio Corp., 317 Central Ave., White Plains.
 Mid-Hudson Electric Supply Corp., 408 Main St., Poughkeepsie.
 Midway Radio & Television, 60 West 45th St., New York.
 Miller Electric Co., 11 Hopper St., Utica.
 Milo Radio & Electronics Corp., 200 Greenwich St., New York.
 Morris Distributing Co., Inc., 1153 W. Fayette St., Binghamton.
 Morris Distributing Co., 412 S. Clinton St., Syracuse.
 National Radio Distributors, 1348 Southern Blvd., Bronx.
 National Radio Distributors Corp., 73-20 Northern Blvd., Jackson Heights.
 National Radio Parts Dist. Co., 611 New York Ave., Brooklyn 3.
 National Theatre Supply Co., 92-96 Gold St., New York.
 Newark Electric Co., Inc., 242 W. 55th St., New York.
 Niagara Falls Radio Equipment Co., 1363 Pierce Ave., Niagara Falls.
 Niagara Radio & Parts Co., 1518 Main St., Niagara Falls.
 Niagara Radio Supply Corp., 55 Vesey St., New York 7.
 Norman Radio Distributors, Inc., 94-29 Merrick Rd., Jamaica 5.
 O & W Radio Co., 141 Cedar St., New York.
 Peerless Electronic Distributors Corp., 76 Willoughby St., Brooklyn.
 Peerless Radio Distributors, Inc., 92-32 Merrick Rd., Jamaica.
 Pond Electric & Battery Service, Inc., 123 East Main St., Malone.
 Popper & Sons, Inc., 300 Fourth Ave., New York 10.
 Powell Radio Supply, 142 W. 169th St., New York 52.
 Progress Electronics Co., 222 Fulton St., New York.
 R. T. A. Distributors, Inc., 36 Broadway, Menands, Albany 4.
 Radelco, Inc., 246 W. First, Mt. Vernon.
 Radio Equipment Corp., Inc., 145-151 Genesee St., Buffalo 3.
 Radio Equipment Corp., 1363 Pierce Ave., Niagara Falls.
 Radio Supply Co., 200 Walton St., Syracuse.
 Radio Wire Television, Inc., 542 E. Fordham Rd., Bronx.
 Radio Wire Television, Inc., 100 Sixth Ave., New York 13.
 Radionic Equipment Co., 170 Nassau St., New York.
 Ray Distributing Co., 284 Glen St., Glens Falls.
 Ray Distributing Co., 55 W. Main Ave., Malone.
 Raytec, Inc., 140 Irving Ave., Port Chester.
 Reliance Distributors, Inc., 343 W. Jefferson St., Syracuse.
 Roberts & O'Brien, 714-716 Park Ave., Syracuse 4.
 Rochester Radio Supply Co., 114 St. Paul St., Rochester 4.
ROCKBAR CORP., 211 E. 37th St., New York. ADV. PG. 488.
 Rotary Electronic Sales, 10 Grace Ave., Great Neck.
 Sanford Electronics Corp., 157 Chambers St., New York 7.
 Schwartz & Son, Morris, 710 Broadway, Schenectady.
 Schweber Electronics, 122 Herricks Road, Mineola.
 Slate & Co., 2755 Webster Ave., New York.
 Stage, Roy C., 265 Erie Blvd., West Syracuse.
 Starks & Co., George L., 8 Woodruff, Saranac Lake.
 Smith, Inc., Stewart, 325 E. Water St., Syracuse.
 Sponcraft Corp., 115 West 45th St., New York 19.
 Spectol Corp., 10 Bridge St., New York.
 Stallman of Ithaca, 123-131 S. Tioga St., Ithaca.
 Stan-Burn Radio & Electronics Co., 558 Coney Island Ave., Brooklyn 18.
 Stan-Burn Radio & Electronics Co., 1697 Broadway, New York 19.
 Standard Electronics Co., 1497 Main St., Buffalo 8.
 Standard Parts Corp., 277 N. Franklin St., Hempstead.
 State Labs., Inc., 649 Broadway, New York.
 Strong Television Corp., 286 Main St., Farmingdale.
 Sun Radio & Electronics Co., Inc., 650 Fifth Ave., New York.

Sylvan-Wellington Co., 269 Canal St., New York 13.
 Taylor Co., E. E., 465 Central Ave., Albany.
 Terminal Radio Corp., 85 Cortlandt St., New York.
 Time Electronic Sales, 368 Broadway, New York.
 Trojan Radio Co., Inc., 426 River St., Troy.
 United Catalog Publishers, Inc., 106-110 Lafayette St., New York.
 United Optical Mfg. Corp., 202-4 E. 19th St., New York.
 United Radio & Electric Co., 47 W. 63rd St., New York 23.
 Vaeth Electric Co., 35 Genesee St., Utica.
 Vermont Hardware Co., Inc., 40 E. Main St., Malone.
 Vim Electric Co., 325 Gold St., Brooklyn.
 Walter's Electric Co., 740 Third Ave., New York.
 Westchester Electronic Supply Co., 420 Mamaroneck Ave., White Plains.
WESTERN INTERNATIONAL CO., 45 Vesey St., New York. ADV. PG. 612.
 Wilco Radio Distributors, 383 E. 138th St., New York.
 Wilgreen Industries, 99 Murray St., New York.
 Winchell, C. A., 37 Central Ave., Cortland.
 Yonkers Electronic Supply, 541 Nepperhan Ave., Yonkers.

NORTH CAROLINA

Carolina Radio Equipment Co., Inc., 105-107 E. Martin St., Raleigh.
 Dalton-Hege Radio Supply Co., 340 Bookstown Ave., Winston-Salem.
 Dixie Radio Supply Co., 715 W. Moorehead St., Charlotte.
 Eastern Radio Supply Co., 532 Hay St., Fayetteville.
 Freck Radio & Supply Co., Inc., 38 Biltmore Ave., Asheville.
 Glasgow Supply Co., 224 S. Cedar St., P. O. Box 1997, Charlotte 1.
 Johannesen Electric Co., Inc., 312-314 N. Eugene St., Greensboro.
 Lambeth Electric Supply Co., 100 Burke St., Winston-Salem.
 Long's Distributing Co., Inc., 12 Biltmore Ave., Asheville.
 Noland Co., Inc., 636 W. Fourth St., Winston-Salem.
 Radio Amateur Center, 411 Hillsboro St., Raleigh.
 Radiotronic Distributors Inc., 208 N. College St., Charlotte.
 Show Distributing Co., 205 W. First St., Charlotte.
 Signal Radio Supply, Goldsboro.
 Southeastern Radio Supply Co., 416 Market St., Greensboro.
 Southeastern Radio Supply Co., 411-15 Hillsboro St., Raleigh.
 Southern Radio Corp., 1625 W. Morehead St., P. O. Box 2356, Charlotte 1.
 Walker Martin, Inc., 449 Atonda Ave., Charlotte.
 Walker Martin, Inc., 287 Raleigh St., Greensboro.
 Walker Martin, Inc., 840 Poole Ave., Raleigh.
 Womack Electric, 319 Worth St., Burlington.
 Womack Electric, 304 S. Dillend, Durham.

NORTH DAKOTA

Bristol Distributing Co., 419 North Pacific Ave., Fargo.
 Dakota Electric Supply Co., 1017-23 Fourth Ave., N., Fargo.
 Hayer Co., F. C., 814 First Ave., North P. O. Box 1657, Fargo.
 Maytag Electric Co., Minot.
 Maytag Electric Co., Williston.
 McFall Radio Co., 58 N. Main St., Box 1055, Minot.
 Quanrud, Brink & Riebold, 122 First St., Bismarck.
 Radio Equipment Co., 624 Second Ave., N., Fargo.

OHIO

Akron Radio & TV Parts, 75 N. Case, Akron 5.
 Allied Supply Co., Inc., 359 W. Monument Ave., Dayton 2.
 Armstrong Radio Supply, 1261 Cleveland Ave. N., Canton 3.
 Bell Radio Supply, 527 N. Main St., Marion.
 Bletzacker Electronics, Inc., 135 W. Chestnut St., Lancaster.
 Broadway Elect. Supply Co., 6209 Broadway, Cleveland.
 Burroughs Radio Co., 711 Second St., NW, Canton 3.
 Burroughs Radio Co., 218 E. Second St., Mansfield.
 Carnegie Radio Company, 3153 Carnegie Ave., Cleveland.
 Chillicothe Hdwe. & Supplies, 21 E. 2nd St., Chillicothe.
 Chambers Electronic Supply Co., Inc., 1667-71 Central Parkway, Cincinnati.
 D & R Radio Supply Co., Inc., 156 S. 3rd St., Steubenville.
 Eberle's Radio Supply, 522 W. Main St., Springfield.
 El-A-Co., 235 Lodi St., Elyria.
 Electronics Supply Corp., 134 E. Long St., Columbus 15.
 Goldhamer, Inc., 2239 E. 14th St., Cleveland.
 H & W Auto Accessories Co., 713 Adams St., Toledo 2.
 Hamburg Brothers, 320 E. Federal St., Youngstown.
 Hausfeld Radio Supply, 116 N. 3d St., Steubenville.
 Herrlinger Distributing Co., 1436 Vine St., Cincinnati 10.
 Holub & Hogg, 1400 Sycamore St., Cincinnati.
 Howard's Electronic Supply, 135 17th St., Toledo 2.
 Hughes-Peters, Inc., 1128 Sycamore St., Cincinnati.
 Hughes-Peters, Inc., 111 E. Long St., Columbus 15.
 Hughes-Peters, Inc., 300 W. 5th St., Dayton.
 Hutch & Son, 125 S. Elizabeth St., Lima.
 Jantsen Radio Specialties, 136 Pine Ave. S. E., Warren.
 Lima Radio Parts Co., 600 N. Main St., Lima.
 Main Line Cleveland, Inc., 5005 Euclid Ave., Cleveland 3.
 Mainline Distributors, Inc., 374-384 S. Erle St., Toledo 2.
 Marietta Radio & Elect. Supply, 211 Second St., Marietta.
 Martin Co., M. H., 1118 Lincoln Way, Massillon.
 Mytronic Co., The, 121 W. Central Pkwy., Cincinnati.

Morrison's Radio Supply, 331 Center St., Astabula.
 Northern Ohio Laboratories, 2073 W. 85th St., Cleveland.
 Northwestern Radio Co., 116 W. Spring St., Lima.
 Ohio Appliance Inc., Daylight Bldg., 804-808 Sycamore St., Cincinnati 2.
 Ohio Appliances, Inc., 243 N. 4th St., Columbus.
 Ohio Appliances, Inc., 430 Leo St., Dayton 4.
 Oliver Theatre Supply Co., Inc., 1701 E. 23rd St., Cleveland.
 Olson Radio Warehouse, Inc., 73 E. Mill St., Akron 8.
 Olson Radio Warehouse, 2020 Euclid Ave., Cleveland.
 Pioneer Radio Supply Co., 2115 Prospect Ave., Cleveland 15.
 Progress Radio Supply Co., 413-415 Huron Rd., Cleveland.
 Radio & Electronics Parts Corp., 3235 Prospect Ave., Cleveland 15.
 Radio Parts Co., 230 E. Boardman St., Youngstown.
 Radio & Refrigeration Supply Co., 1220 Jackson St., Cincinnati.
 Radio Specialties Co., 136 Pine Ave., SE, Warren.
 Ross Radio Co., 325 W. Federal St., Youngstown 3.
 Schuster Electric Co., The, 319 E. Eighth St., Cincinnati.
 Electronic Supplies, Inc., 1013 Jefferson Ave., Toledo.
 Servex Distributing Co., 131 N. State St., Marion.
 Sommer Electric Co., 818 Third St., Canton 4.
 Sound Electronics Supplies, 7th & Findley St., Portsmouth.
 Spreco, Inc., 135 E. 2nd St., Dayton 2.
 Standard Radio Springfield, Inc., 119 W. Main St., Springfield.
 Steinberg's Inc., 633 Walnut St., Cincinnati 2.
 Stotts Friedman Co., 420-22 S. Main St., Dayton 2.
 Sun Radio Co., The, 110 E. Market St., Akron 8.
 Thompson Radio Supplies, 182 E. Long St., Columbus 15.
 Thompson Radio Supplies, 135 S. 6th St., Zanesville.
 Toledo Radio Specialties, 1215 Jackson St., Toledo 2.
 United Radio, Inc., 1314 Vine St., Cincinnati.
 Warren Radio Co., 71 So. Broadway, Akron 8.
 Warren Radio Co., 222 S. Elizabeth, Lima.
 Warren Radio Co., 1320 Madison St., Toledo 2.
 Whitehead Radio Co., 124 E. Long St., Columbus 5.
 Winteradio, Inc., 1468 W. 25th St., Cleveland 13.

OKLAHOMA

Dulaney's, 825 N. W. Second St., Oklahoma City.
 Electronic Supply Co., 212 NW Tenth St., Oklahoma City 3.
 Industrial Electronic Supply Co., 1124 E. 4th St., Tulsa.
 Miller-Jackson Co., 111-119 E. California, Oklahoma City.
 Muskogee Electronic Supply Company, 231 Court St., Muskogee.
 Oklahoma Theatre Supply Co., 628 W. Grand Ave., Oklahoma City.
 Patterson Radio Supply Co., 211 E. 13th St., Tulsa.
 Radio, Inc., 1000 S. Main St., Tulsa 3.
 Radio Supply Inc., 724 N. Hudson St., Oklahoma City.
 S & S Radio Supply, 721 S. Detroit, Tulsa.

OREGON

Appliance Wholesalers, 600 NW 14th St., Portland 9.
 Bergelt Supply, 1131-35 SW Washington St., Portland 5.
 Brison, Hatton & Hay, Inc., 96 E. Tenth Ave., Eugene.
 Central Distributors, 1131-33 S. W. Washington, Portland 5.
 Dessey & Allen, 35 Commercial St., Portland 6.
 Harper-Meggee, Inc., 1506 NW Irving, Portland 9.
 Hawthorne Electronics, 700 S. E. Hawthorne Blvd., Portland 14.
 Johnson Co., Inc., Lou, 1051 So. Commercial St., Salem.
 Johnson Co., Lou, 422 NW Eighth Ave., Portland.
 Northwest Radio Supply Co., Inc., 717 SW Akemy St., Portland.
 Pacific Stationery Wholesale Radio, 414 S. W. Second Ave., Portland.
 Portland Radio Supply Co., 825 S. E. Grand Ave., Portland.
 RF Supply Co., 2319 S. 6th St., Klamath Falls.
 Radio Electronics Co., 9th & Commercial, Astoria.
 Tubbs Electric Co., 33 NW Park Ave., Portland 9.
 Wacey & Co., Inc., 937 NW Gilsan, Portland 9.
 Witted Radio Supply Inc., 179 W. 8th St., Eugene.
 Witted Radio Supply, Inc., 22 NW 9th Ave., Portland 9.
 Walker Co., Verl G., P. O. Box 1586, Medford.

PENNSYLVANIA

C. Radio Supply Co., 1539 W. Passyunk Ave., Philadelphia 45.
 G. Radio Parts Co., 3515 N. 17th St., Philadelphia 40.
 G. Radio Parts Co., 628 Schuylkill Ave., Reading.
 Allied Electric Appliance Parts Inc., 3640 Elder St., Philadelphia 40.
 Anco Radio Co., 509 Arch St., Philadelphia 23.
 Anco Radio Co., 6205 Market St., Philadelphia.
 Anco Radio Co., 412 N. 6th St., Philadelphia 23.
 Erie R Electric Co., Railroad Ave., St. Marys.
 Erie Radio Electric, 111 Johns St., Johnstown.
 Geobey Co., Geo. D., 622 Columbia Ave., Lancaster.
 Geobey Co., Geo. D., 111 N. Washington St., Pottstown.
 Geobey Co., Geo. D., 2nd & Penn Sts., Reading.
 Nett Bros. Radio Co., 117 N. 7th St., Philadelphia.
 Ono Radio Co., 321-6th Ave., McKeesport.
 Onon's Radio Supplies, 116 East Jefferson St., Butler.
 Erie Electric Supply Co., 1017 Fifth St., New Kensington.
 Boys Auto Parts Co., 123-129 S. Second, Sunbury.
 Es Radio Electric Supply, 61-63 E. Broad St., Bethlehem.
 G. Radio Equipment Co., 17-27 Johns St., Johnstown.
 Geradio Co., 963 Liberty Ave., Pittsburgh 22.
 G. Radio Records Inc., Scranton.

Consolidated Radio Co., 612 Arch St., Philadelphia 6.
 D & H Distributing Co., 311 S. Cameron St., Harrisburg.
 D & H Distributing Co., 251 S. Main St., Wilkes-Barre.
 Duncombe Co., J. V., 1011 W. 8th St., Erie.
 Elliott & Waddington, 116-118 N. Mercer St., New Castle.
 Emerson Radio of Pa., Inc., 223-225 N. Broad St., Philadelphia 7.
 Eshelman Supply Co., 110 N. Water St., Lancaster.
 Excelsior Radio Co., 17th & Derry Sts., Harrisburg.
 Federated Purchaser, Inc., 115 Hamilton St., Allentown.
 Federated Purchaser, Inc., 925 Northampton St., Easton.
 Fisher Scientific Co., 711-723 Forbes St., Pittsburgh 19.
 Fox, John, 2121 Market St., Philadelphia 4.
 General Electronics Distributors, Inc., 120 E. Ottermans St., Greensburg.
 General Radio & Electronics, 287 S. Main St., Wilkes-Barre.
 Graybar Electric Co., 910 Cherry St., Philadelphia.
 Hamburg Bros., 213 Galveston Ave., Pittsburgh 22.
 Herbach & Rademan, Inc., 1204 Arch St., Philadelphia 7.
 Hollenback's Radio Supply, 2221 Eighth Ave., Altoona.
 J. R. S. Distributors, 646 W. Market St., York.
 Jordan Electronic Co., 1130 German St., Erie.
 Kennedy's Radio Supply, 1500 Seventh Ave., Altoona.
 Kratz Brothers, Cor. John & Oaks Sts., Norristown.
 Lazar Radio Co., Nat., 4241 Lancaster Ave., Philadelphia 4.
 Lectronic Research Labs., 715-19 Arch St., Philadelphia 6.
 Luckenback & Johnson, Inc., 1034 Chestnut St., Allentown.
 M & H Sporting Goods Co., 722 Market St., Philadelphia 6.
 Mansfield Co., M. V., 937 Liberty Ave., Pittsburgh.
 Marks Parts Co., 313 Braddock Ave., Braddock.
 Marshall Co., John, 201 Anderson St., Pittsburgh.
 Midwestern Electronic Supply Co., 241 West Grant St., New Castle.
 Motorola-Philadelphia Co., 120 S. 30th St., Philadelphia.
 Moyer Electronic Supply Co., 758 N. Locust St., Hazelton.
 Moyer Electronic Supply Co., Inc., 330 E. Norwegian St., Pottsville.
 Penn Electronics Parts Co., 5303 Frankford Ave., Philadelphia.
 Pep Boys, 32nd & Allegheny Ave., Philadelphia 32.
 Phillips Auto Stores, Dean, Harrison & Valley Sts., Avoca.
 Pierce-Phelps, Inc., 437 N. 5th St., Philadelphia.
 Pursell, Fred P., 548-550 Wyoming Ave., Scranton 3.
 Radio Distributing Co., 915 S. 13 St., Harrisburg.
 Radio Electric Serv. Co. of Pa., Inc., 1042 Hamilton St., Allentown.
 Radio Electric Service Co. of Pa., Inc., 916 Northampton St., Easton.
 Radio Electric Service Co. of Pa., Inc., 3412 Germantown Ave., Philadelphia.
 Radio Electric Service Co. of Pa., Inc., 5930 Market St., Philadelphia 43.
 Radio Electric Service Co. of Pa., Inc., NW Cor. 7th & Arch Sts., Philadelphia.
 Radio Parts Co., 325 Bedford St., Johnstown.
 Radio Parts Company, 17th & Venango Sts., Philadelphia.
 Radio Parts Co., 929 Liberty Ave., Pittsburgh.
 Radio Parts Co., 47 N. Gallatin Ave., Uniontown.
 Radio Service Co., 346 S. Main St., Wilkes-Barre.
 Reliable Motor Parts Co., 1700 Seventh Ave., Beaver Falls.
 Reliable Motor Parts Co., 402 Adams St., Rochester.
 Rosen & Co., Raymond, 32nd & Walnut Sts., Philadelphia.
 Rumsey Electric Co., 1007 Arch St., Philadelphia.
 Scranton Radio & Television Supply Co., 519-521 Mulberry St., Scranton 2.
 Scott Co., Charles B., 119 Franklin Ave., Scranton.
 Sharon Electronic Supply Co., 1344 East State St., Sharon.
 South Hills Electronic Supply Co., 1420 W. Liberty Ave., Pittsburgh.
 Steinberg & Co., Albert, 2520 N. Broad St., Philadelphia 32.
 Superior Distributing Co., 5124 Liberty Ave., Pittsburgh 24.
 Test Equipment Sales Co., Inc., 1505 Race St., Philadelphia.
 Tydings Co., 5800 Baum Blvd., Pittsburgh 6.
 Tydings Company, Inc., 305 Morgantown St., Uniontown.
 Wall, R. B., 58 East St., Wilkes-Barre.
 Warren Radio, Inc., 1125 State St., Erie.
 Wile, Eugene G., 218 S. 11th St., Philadelphia.
 Williamsport Radio Supply, 518 W. Third St., Williamsport 28.
 York Radio & Refrigeration, 519 W. King St., Lancaster.
 York Radio & Refrigeration Parts, 265 W. Market St., York.
 Young Bros. Electronics Inc., 1909-15 Peach St., Erie.
 Zimmerman Wholesalers, 55 Morgantown St., Uniontown.

RHODE ISLAND

Dandreta Co., Wm., 129 Regent St., Providence.
 DeMambo Radio Supply, Inc., 90 Broadway, Providence.
 Eddy & Co., Inc., 43 Hospital St., Providence.
 Edwards Co., W. H., 94 Broadway, Providence 3.

SOUTH CAROLINA

Carolina Radio Supply Co., Inc., 227 W. Washington St., Greenville.
 Dixie Radio Supply Co., 1715 Main St., Columbia.
 Dixie Radio Supply Co., 22 Richardson St., Greenville.
 Florence Radio Supply, Inc., 223-27 E. Cheves St., Florence.
 Gilliam Radio Co., 117 W. Coffee St., Greenville.
 McElhenney Radio Supply House, 196 St. John St., Spartanburg.
 Noland Co., Inc., 162 Morgan Ave., Spartanburg.

Radio Laboratories, 215 King St., Charleston.
 Southeastern Radio Parts Co., 1513 Taylor St., Columbia.
 Wholesale Radio Supply Co., 78 1/2 Calhoun St., Charleston 11.

SOUTH DAKOTA

Burghardt Radio Supply, 602 S. Main St., Aberdeen.
 Burghardt Radio Supply, 12 N. Broadway, NW, Watertown.
 Power City Radio Co., 513 Seventh St., Rapid City.
 Power City Radio Co., 209 S. First Ave., Sioux Falls.
 Warren Radio Supply, 115 S. Indiana Ave., Sioux Falls.

TENNESSEE

Bluff City Distributing Co., Inc., 905-7 Union St., Memphis 3.
 Bomar Appliance Co., Inc., 520 Western Ave., Knoxville.
 Boyd Electronic Supply, 1153 Union Ave., Memphis.
 Braid Electric Co., 1100 Demonbreun St., South, Nashville.
 Chemcity Radio & Elec. Co., 1019 Bristol Highway, Kingsport.
 Chemcity Radio & Electric Co., 12 Emory Park, Knoxville 17.
 Curle Radio Supply, 825 Cherry St., Chattanooga.
 Currey's 109-16th Ave., Nashville.
 Electra Distributing Co., 1914 West End Ave., Nashville 4.
 Hahn Electronic Supply Corp., 350 East Scott St., Knoxville.
 Interstate Hardware Co., Inc., Bristol.
 Keith-Simmons Co., Inc., Cummins Station, Nashville.
 Lavender Radio Supply Co., Inc., 1012 Union Ave., Memphis.
 Lynch & Co., Inc., S. H., 1049 Union, Memphis.
 McClung & Co., Inc., C. M., 501 W. Jackson St., Knoxville 7.
 McGregor's Inc., 1071 Union Ave., Memphis 3.
 Mills-Morris Co., 171-175 S. Ludley St., Memphis 1.
 Orgill Brothers & Co., 10-56 West Calhoun Ave., Memphis.
 Radio & Appliance Corp., 4 Cummins Station, Nashville 3.
 Radio & Appliance Dist., Inc., Corner Main & Broad Sts., Chattanooga.
 Radio Electric Supply Co., 210 Cherokee St., Kingsport.
 Randolph & Cole, Inc., 1516 Church St., Nashville.
 Roden Electrical Supply Co., 808 N. Central Ave., Knoxville.
 Rush Co., L. K., 103 Highland Ave., Jackson.
 Shobe, Inc., 1195 Union Ave., Memphis.
 Specialty Distributing Co., Inc., 709 Chestnut St., Chattanooga.
 W & W Distributing Co., 677 Madison Ave., Memphis.
 Woodson & Bozeman, Inc., 482 Union Ave., Memphis.

TEXAS

Adleta Co., 1914 Cedar Springs at Akard, Dallas.
 All-State Distributing Co., 2407 Ross Ave., Dallas 1.
 Amateur Headquarters & Supply Co., 828 Brooklyn Ave., San Antonio.
 Amateur Radio Supply Co., 510 Broadway, San Antonio.
 Automatic Sales Co., 325 M & M Bldg., Houston 2.
 Beyer & Co., A. R., 1318 Polk Ave., Houston 2.
 Busacker Electronic Equip. Co., 1721 Waugh Drive, Houston.
 Carver Sound Equipment Co., Inc., 1408 S. Akard St., Dallas.
 Clark & Gose Radio Supply, 1204-B Ohio Ave., Wichita Falls.
 Crabtree's Wholesale Radio, 2608 Ross Ave., Dallas 1.
 Dallas Electric Supply Co., 1800 Magnolia St., Dallas 2.
 Denison Radio Supply, 310 W. Woodward, Denison.
 Electronic Communications, 1310 McKinney Ave., Houston.
 Electronic Equipment Co., 917-919 Florence St., Fort Worth.
 Electronic Equipment & Engineering Co., 1152 E. Madison Sts., Brownsville.
 Electronic Equipment & Eng. Co., 805 S. Staples St., Corpus Christi.
 Fort Worth Radio Supply Co., 1201 Commerce St., Fort Worth.
 Geophysical Supply Co., PO Box 2214, Houston 1.
 Guarantee Radio Supply Co., 1314 Iturbide St., Laredo.
 Gunter Distributing Co., San Angelo.
 H & L Radio Supply Co., 318 Commerce St., Fort Worth.
 Hall, Inc., R. C. & L. F., 1219 Caroline Ave., Houston.
 Hargis Co., Box 716, Austin.
 Hargis Co., Inc., 1205 Washington Ave., Waco.
 Harrison Equipment Co., 1422 San Jacinto, Houston.
 Houston Radio Supply Co., Inc., Clay at La Branch, Houston.
 Industrial Elect. Supply Co., 134 Leslie St., Dallas.
 Lavender Radio Supply Co., 520 E. 4th St., Texarkana.
 Lavener Radio Supply Co., 503 E. Oakwood St., Tyler.
 Lenert Company, 2213 Congress St., Houston 3.
 L & M Sales, 1307 Austin Ave., Waco.
 Lynch & Co., Inc., S. H., 2101-3 Pacific Ave., Dallas.
 Lynch & Co., Inc., S. H., 910 Calhoun St., Houston.
 Lynch & Co., Inc., S. H., 241 Broadway, San Antonio.
 Midland Specialty Co., 425 W. San Antonio St., El Paso.
 Mission Radio Inc., 521 Broadway, San Antonio.
 Modern Radio Supply Co., 635 Soledad, San Antonio.
 Mومن-Dunneagan-Ryan Co., 800 E. Overland St., El Paso.
 Montague Radio Distributing Co., 760 Laurel St., Beaumont.
 Mooney Radio Supply Co., 1635 Huff, Wichita Falls.
 R & R Electronic Co., 107 N. First St., N. Walnut, Abilene.
 R & R Electronic Co., 416-18 W. Tenth, Amarillo 1.
 R & R Supply Co., Inc., 706 Main St., Lubbock.
 Radio Parts Co., 902 Crawford, Houston 3.
 Radio Service Supply Co., 111 University Pl., Tyler.
 Ra-Tel, Inc., 2409 Ross Ave., Dallas 1.

Radio & Television Parts Co., 118-120 7th St., San Antonio 2.
 Reeves Radio Supply, 720 N. Stanton St., El Paso.
 Rio Supply Co., PO Box 168, McAllen.
 "Scooter's" Radio Supply, 509-11 Commerce St., Fort Worth.
 Shield Co., Inc., 1010 Macon St., Fort Worth.
 South Texas Radio Supply, 307 S. Presa St., San Antonio.
 Southern Radio Supply Co., 3221 Ross Ave., Dallas.
 Southwest Radio Supply, 1820 N. Harwood St., Dallas.
 Southwest Radio & Sound Equipment Co., 635 S. Flores St., San Antonio.
 Southwestern Theatre Equipment Co., Inc., 2010 Jackson St., Dallas 1.
 Southwestern Theatre Equipment Co., Inc., 1416 Main St., Houston 2.
 Standard Radio Supply Inc., 309 Lavaca St., Austin.
 Sterling Radio Parts Co., 1602 McKinney St., Houston.
 Straus-Frank Co., 4000 Leeland, Houston.
 Straus-Frank Co., 301 S. Flores St., San Antonio.
 Sutton's Wholesale Electronics, Bill, 601 Commerce St., Fort Worth 2.
 Walz Company, W. G., 500 San Francisco St., El Paso.
 Wanslow & Co., 912 N. Peak St., Dallas.
 West Texas Radio Supply, 1026 West 51st, Amarillo.
 White's Auto Stores, 1507 Lamar St., Wichita Falls.
 Wholesale Elect. Supply Co., 3002 Ross Ave., Dallas.
 Wicks-DeVilbiss Co., 513-15 S. Staples St., Corpus Christi.
 Wilkinson Brothers, 2406 Ross Ave., Dallas.

UTAH

Ballard & Carter Co., 2426 Grant Ave., Utah.
 Central Supply Co., 47 E. 5th So. St., Salt Lake City.
 Flint Distributing Co., 316 Second South, PO Box 1470, Salt Lake City 11.
 Standard Supply Co., Box 1047, Salt Lake City.
 O'Laughlin's Radio Supply, 113 E. 3rd So. St., Salt Lake City.
 Radio Supply Co., 157 Motor Ave., Salt Lake City.

VERMONT

Hagar Hardware & Paint, 164-170 St. Paul, Burlington.
 Vermont Hardware Co., Inc., 180 Flynn Ave., Burlington.
 Vermont Hardware Co., Main & Bridge Sts., White River Junction.

VIRGINIA

Auto Spring & Bearing Co., Inc., 116-118 Chuck Ave., W., Roanoke.
 Baker Sales Co., Inc., H. C., 19 Franklin Road, Roanoke.
 Bristol Radio Supply Corp., 31 Moore St., Bristol.
 Eastern Electric Co., 920 Commerce St., PO Box 943, Lynchburg.
 Hartley & Co., M. A., 327 N. Central Ave., Staunton.
 J & J Appliance Co., 211 William St., Fredericksburg.
 Johnston-Gasser Co., 3023 W. Marshall St., Richmond 21.

Leonard Electronic Supply Co., 131 Center Ave., NW., Roanoke.
 Leonard Electronic Supply Co., 23 N. Braddock, Winchester.
 Lynchburg Battery & Ignition, 406 Fifth St., Lynchburg.
 Noland Co., Inc., 27th St., & Virginia Ave., Newport News.
 Radio Equipment Co., 821 W. 21st St., Norfolk 10.
 Radio Parts Distributing Co., 128 W. Olney Rd., Norfolk 10.
 Radio Supply, 711 Granby St., Norfolk 10.
 Radio Supply Co., 3302 W. Broad St., Richmond 21.
 Rucker Radio Wholesalers, 1906 N. Moore St., Arlington.
 Southern Electric Co., 14 E. Johnson St., Staunton.
 Virginia Battery & Ignition, Inc., 35 East Bank, Petersburg.
 Winfree Supply Co., 800 W. Cary St., Richmond 21.
 Womack Radio Supply Co., 502-504 Craghead St., Danville.
 Wyatt-Cornick Distributors, Inc., 951 W. 21st St., Norfolk.
 Wyatt-Cornick Inc., 14th & Grace Sts., Richmond 19.

WASHINGTON

Alaska Radio Supply Co., Inc., 2701 California Ave., Seattle 6.
 Associated Industries, 1752 Rainier Ave., Seattle 44.
 Coast Radio Corp., 110 University St., Seattle.
 Columbia Electric & Mfg. Co., South 123 Wall St., Spokane 8.
 C & G Radio Supply, 2502 Jefferson Ave., Tacoma 2.
 Garrison Radio Supply, Second & Bell Sts., Seattle.
 Geiger Radio, W. A., 1101 Columbia, P. O. Box 660, Ellensburg.
 General Radio Inc., 100 Wall St., Seattle 1.
 Harper-Meggee, Inc., 960 Republican, Seattle 9.
 Harper-Meggee, Inc., 734 N. Division St., Spokane.
 Kar Radio & Electric Co., PO Box 676, Walla Walla.
 Lay & Nord, 112 S. Second St., Yakima.
 Modern Theatre Supply, Inc., 2400 Third Ave., Seattle 1.
 Northern Electric Co., 314 Bell St., Seattle.
 Northwest Electronics, Inc., North 102 Monroe St., Spokane.
 Pringle Radio Wholesale, 417 King St., Wenatchee.
 Pringle Radio Wholesale Co., Rte 5, Box 750B, Everett.
 Radio-Electric Supply Co., 2722 Second Ave., Seattle 1.
 Radio Products Sales Co., 1214 First Ave., Seattle.
 Radio Television & Appliance, Inc., 510 Westlake Ave., N., Seattle 9.
 Sargent, Myron J., N. 2604 Wall St., Spokane.
 Seattle Radio Supply Inc., 2117 2nd Ave., Seattle 1.
 Spokane Radio Supply, 305 W. 2nd Ave., Spokane.
 Standard Sales Co., 1219 W. First Ave., Spokane 8.
 Stewart Co., A. T., 743 Broadway, Tacoma.
 Waitkus Supply Co., 110 Grand Ave., Bellingham.
 Washington Distributors, 115 Madison Ave., Seattle.
 Western Electronic Supply Co., 717 Dexter Ave., Seattle 9.
 Wible Radio Supply Co., 907 S. Tacoma Ave., Tacoma 3.
 Yakima Wholesale Radio Co., 506 S. First, Yakima.
 Zobrist Co., Herb E., 2125 Westlake Ave., Seattle 1.

WEST VIRGINIA

Chemcity Radio & Elec. Co., 103 Clendenin St., PO Box 2066, Charleston.
 Electronic Supply Co., 422 11th St., Huntington 1.
 General Electronics Distributors, Inc., 26 Tenth St., Wheeling.
 Hicks Radio Supply Co., 10 Virginia St., E., Charleston.
 King & Irwin, Inc., 314 Eleventh St., Huntington.
 Meyers Electronics, Inc., 813 Bluefield Ave., Bluefield.
 Mountain Electronics Co., Inc., 708 Bigley Ave., Charleston.
 Randle & Hornbrook 536 7th St., Parkersburg.
 TV Supply Co., 1226 Third Ave., Huntington 1.
 Trenton Radio Co., 414 Clark St., Clarksburg.
 Trenton Radio Co., 300 Grant Ave., Morgantown.
 Van Zandt Supply Co., 1123 4th Ave., Huntington.
 Wheeling Radio Supply, 924 Market St., Wheeling.
 White Electric Co., 903 West Pike St., Clarksburg.
 Whithead Radio Co., Inc., 813 Bluefield Ave., Bluefield.

WISCONSIN

Acme Radio Supply Corp., 510 W. State St., Milwaukee 3.
 Appleton Radio Supply Co., 1217 N. Richmond St., Appleton.
 Central Radio Parts Co., 1723 W. Fond du Lac Ave., Milwaukee 5.
 Electro-Plance Distributors, Inc., 2458 W. Lisbon Ave., Milwaukee 5.
 Harris Radio Corp., 115 N. Tenth St., Manitowoc.
 Larson Electronic Co., J. H., 402 Water St., Eau Claire.
 Lingnor & Co., Frank, 934 S. 5th St., Milwaukee 7.
 Marsh Radio Supply Co., 838 N. Fourth St., Milwaukee 3.
 Neslo Electronic Distributors, 308 N. Chestnut St., Green Bay.
 Northern Electrical Distributors, 708 S. Broadway, Green Bay.
 Northern Radio & Telev. Co., 708 So. Broadway, Green Bay.
 Popkey Co., G. M., 716 Main St., Green Bay.
 Popkey Co., G. M., Main at Ninth St., Marinette.
 Radio Distributors, 701 E. Johnson St., Madison 3.
 Radio Parts Co., Inc., 538 W. State St., Milwaukee 3.
 Radio Service & Supply Co., Inc., 615 Third St., Wausau.
 S. M. Supply Co., 409-11 S. Barstow St., Eau Claire.
 Satterfield Radio Supply Co., 326 W. Gorham St., Madison.
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 Television Parts, Inc., 714 State St., Milwaukee.
 Valley Radio Distributors, 518 N. Appleton St., Appleton.

WYOMING

Casper Supply Co., 444-448 S. Center St., Casper.
 Houge Radio & Supply, 2008 Carey Ave., Cheyenne.

RCA Electronic Components INDEX

A comprehensive array of electronic components for commercial, industrial and military applications.

RCA supplies electronic equipment manufacturers with a wide range of electronic components . . . quality-engineered and manufactured to fill the exacting requirements of industrial,

commercial, and military applications.

RCA will be glad to help you select the right types for your requirements. For further details or design assistance, contact your nearest RCA Field Office:

(East) Humboldt 5-3900
415 S. 5th St.
Harrison, N. J.

(Midwest) Whitehall 4-2900
589 E. Illinois St.
Chicago 11, Ill.

(West) Madison 9-3671
420 S. San Pedro St.
Los Angeles 13, Calif.



RADIO CORPORATION of AMERICA
ELECTRONIC COMPONENTS CAMDEN, N. J.



D1 Yoke for 15GP22 tricolor Kinescope.



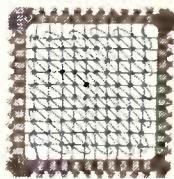
225° C Transformer, Light Weight, Small Size.



240T1 Flyback, 20-KV Transformer for Color-TV Receivers.



Pole, Hermetically Sealed Aircraft Relay.



Memory-Core Matrix, using RCA Torroids.



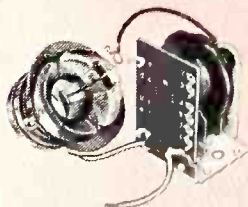
Hermetically Sealed Transformers.



Hi-Fi Speaker, new "damping ring."



2 3/4-inch Speaker for "Pocket Personal" Type Radios.



220D1 Deflecting Yoke, and 235T1 Horizontal and High Voltage Transformer for 90° Deflection Systems.

RCA ELECTRONIC COMPONENTS FOR:

AIRCRAFT—

380/1600-cycle transformers, encapsulated or hermetically sealed; high temperature transformers. Relays. Speakers.

AUDIO AMPLIFIERS—

Input, interstage, line, microphone, modulation, and output transformers.

COLOR-TV RECEIVERS—

Yokes. Flybacks. Purifying coils. Dynamic-convergence and focusing transformers. Isolation inductors.

ELECTRONIC COMPUTERS—

Memory-core matrices. High-speed switches. Torroids. Pulse transformers.

INSTRUMENTS—

Frequency modulators. Low-temperature film transformers. Reactors.

MILITARY APPLICATIONS—

Transformers. Chokes. Yokes. Blast-resistant speakers. Relays. Focusing coils. Frequency modulators.

RADAR AND LOAN—

Yokes. Pulse transformers. Magnetic amplifiers. Torroids.

RADIO/TV BROADCASTING—

Transformers. Reactors. Monitor speakers. Deflecting yokes. Band-pass filters. Frequency Blocking-oscillator transformers.

RADIO/TV MANUFACTURING—

Transformers. Chokes. Flybacks. Yokes. Reactors. Focusing Coils.

SOUND SYSTEMS—

Speakers (regular, elliptical, horn, weatherproof). Transformers. Repeaters. Tone control filters.

TELEVISION STUDIOS—

Yokes. Flybacks. Band-pass filters. Focusing and alignment coils.

THEATRES—

Transformers. Reactors. Band-pass filters. Speakers for booth, backstage, overhead drive-in.

REPRESENTATIVE TYPES

FLYBACK TRANSFORMERS—

Deflection transformers (with or without flyback windings); auto-types and isolated secondary types; universal types.

HIGH TEMPERATURE TRANSFORMERS—

Encapsulated or hermetically sealed; 50/60-cycle, 380/1600-cycle; up to 5000 VAC.

POWER TRANSFORMERS—

High-power; miniature; general purpose application; step-up, step-down; high temperature; low-temperature rise; 50/60-cycle; 380/1600-cycle.

RADAR YOKES—

Planned position indicator, large screen military television, and resolver.

RELAYS—

Military aircraft types; hermetically sealed; high-temperature, miniature, high-speed types.

SPEAKERS—

Auto-radio, "pocket personal," AC-DC, radio/TV console, drive-in theatre, PA, broadcast monitor, high fidelity.

SPECIAL TRANSFORMERS—

Pulse, high-temperature, flybacks, miniature, hermetically sealed types; instrument, military types.

TV STUDIO YOKES—

For image orthicons, flying-spot scanners, iconoscopes, monoscopes, and vidicons.

TRANSFORMER TYPES—

Encapsulated, encased, hermetically sealed; miniature; open frame, potted, shielded, torroidal.

YOKES FOR KINESCOPIES—

Direct view and projection, color and monochrome; 45° to 90° inclusive; high, low, and intermediate inductance; ferrite core.

Radio & Television Parts Co., 118-120 7th St., San Antonio 2.
 Reeves Radio Supply, 720 N. Stanton St., El Paso.
 Rio Supply Co., PO Box 168, McAllen.
 "Scooter's" Radio Supply, 509-11 Commerce St., Fort Worth.
 Shield Co., Inc., 1010 Macon St., Fort Worth.
 South Texas Radio Supply, 307 S. Presa St., San Antonio.
 Southern Radio Supply Co., 3221 Ross Ave., Dallas.
 Southwest Radio Supply, 1820 N. Harwood St., Dallas.
 Southwest Radio & Sound Equipment Co., 635 S. Flores St., San Antonio.
 Southwestern Theatre Equipment Co., Inc., 2010 Jackson St., Dallas 1.
 Southwestern Theatre Equipment Co., Inc., 1416 Main St., Houston 2.
 Standard Radio Supply Inc., 309 Lavaca St., Austin.
 Sterling Radio Parts Co., 1602 McKinney St., Houston.
 Straus-Frank Co., 4000 Leeland, Houston.
 Straus-Frank Co., 301 S. Flores St., San Antonio.
 Sutton's Wholesale Electronics, Bill, 601 Commerce St., Fort Worth 2.
 Walz Company, W. G., 500 San Francisco St., El Paso.
 Wanslow & Co., 912 N. Peak St., Dallas.
 West Texas Radio Supply, 1026 West Sixth, Amarillo.
 White's Auto Stores, 1507 Lamar St., Wichita Falls.
 Wholesale Elect. Supply Co., 3002 Ross Ave., Dallas.
 Wicks-DeVilbiss Co., 513-15 S. Staples St., Corpus Christi.
 Wilkinson Brothers, 2406 Ross Ave., Dallas.

UTAH

Ballard & Carter Co., 2426 Grant Ave., Utah.
 Central Supply Co., 47 E. 5th So. St., Salt Lake City.
 Flint Distributing Co., 316 Second South, PO Box 1470, Salt Lake City 11.
 Standard Supply Co., Box 1047, Salt Lake City.
 O'Laughlin's Radio Supply, 113 E. 3rd So. St., Salt Lake City.
 Radio Supply Co., 157 Motor Ave., Salt Lake City.

VERMONT

Hagar Hardware & Paint, 164-170 St. Paul, Burlington.
 Vermont Hardware Co., Inc., 180 Flynn Ave., Burlington.
 Vermont Hardware Co., Main & Bridge Sts., White River Junction.

VIRGINIA

Auto Spring & Bearing Co., Inc., 116-118 Chuck Ave., W., Roanoke.
 Baker Sales Co., Inc., H. C., 19 Franklin Road, Roanoke.
 Bristol Radio Supply Corp., 31 Moore St., Bristol.
 Eastern Electric Co., 920 Commerce St., PO Box 943, Lynchburg.
 Hartley & Co., M. A., 327 N. Central Ave., Staunton.
 J & J Appliance Co., 211 William St., Fredericksburg.
 Johnston-Gasser Co., 3023 W. Marshall St., Richmond 21.

Leonard Electronic Supply Co., 131 Center Ave., NW., Roanoke.
 Leonard Electronic Supply Co., 23 N. Braddock, Winchester.
 Lynchburg Battery & Ignition, 406 Fifth St., Lynchburg.
 Noland Co., Inc., 27th St., & Virginia Ave., Newport News.
 Radio Equipment Co., 821 W. 21st St., Norfolk 10.
 Radio Parts Distributing Co., 128 W. Olney Rd., Norfolk 10.
 Radio Supply, 711 Granby St., Norfolk 10.
 Radio Supply Co., 3302 W. Broad St., Richmond 21.
 Rucker Radio Wholesalers, 1906 N. Moore St., Arlington.
 Southern Electric Co., 14 E. Johnson St., Staunton.
 Virginia Battery & Ignition, Inc., 35 East Bank, Petersburg.
 Winfree Supply Co., 800 W. Cary St., Richmond 21.
 Womack Radio Supply Co., 502-504 Crashead St., Danville.
 Wyatt-Cornick Distributors, Inc., 951 W. 21st St., Norfolk.
 Wyatt-Cornick Inc., 14th & Grace Sts., Richmond 19.

WASHINGTON

Alaska Radio Supply Co., Inc., 2701 California Ave., Seattle 6.
 Associated Industries, 1752 Rainier Ave., Seattle 44.
 Coast Radio Corp., 110 University St., Seattle.
 Columbia Electric & Mfg. Co., South 123 Wall St., Spokane 8.
 C & G Radio Supply, 2502 Jefferson Ave., Tacoma 2.
 Garrison Radio Supply, Second & Bell Sts., Seattle.
 Geiger Radio, W. A., 1101 Columbia, P. O. Box 660, Ellensburg.
 General Radio Inc., 100 Wall St., Seattle 1.
 Harper-Meggee, Inc., 960 Republican, Seattle 9.
 Harper-Meggee, Inc., 734 N. Division St., Spokane.
 Kar Radio & Electric Co., PO Box 676, Walla Walla.
 Lay & Nord, 112 S. Second St., Yakima.
 Modern Theatre Supply, Inc., 2400 Third Ave., Seattle 1.
 Northern Electric Co., 314 Bell St., Seattle.
 Northwest Electronics, Inc., North 102 Monroe St., Spokane.
 Pringle Radio Wholesale, 417 King St., Wenatchee.
 Pringle Radio Wholesale Co., Rte 5, Box 750B, Everett.
 Radio-Electric Supply Co., 2722 Second Ave., Seattle 1.
 Radio Products Sales Co., 1214 First Ave., Seattle.
 Radio Television & Appliance, Inc., 510 Westlake Ave., N., Seattle 9.
 Sargent, Mvron J., N. 2604 Wall St., Spokane.
 Seattle Radio Supply Inc., 2117 2nd Ave., Seattle 1.
 Spokane Radio Supply, 305 W. 2nd Ave., Spokane.
 Standard Sales Co., 1219 W. First Ave., Spokane 8.
 Stewart Co., A. T., 743 Broadway, Tacoma.
 Waitkus Supply Co., 110 Grand Ave., Bellingham.
 Washington Distributors, 115 Madison Ave., Seattle.
 Western Electronic Supply Co., 717 Dexter Ave., Seattle 9.
 Wible Radio Supply Co., 907 S. Tacoma Ave., Tacoma 3.
 Yakima Wholesale Radio Co., 506 S. First, Yakima.
 Zobrist Co., Herb E., 2125 Westlake Ave., Seattle 1.

WEST VIRGINIA

Chemcity Radio & Elec. Co., 103 Clendenin St., PO Box 2066, Charleston.
 Electronic Supply Co., 422 11th St., Huntington 1.
 General Electronics Distributors, Inc., 26 Tenth St., Wheeling.
 Hicks Radio Supply Co., 10 Virginia St., E., Charleston.
 King & Irwin, Inc., 314 Eleventh St., Huntington.
 Meyers Electronics, Inc., 813 Bluefield Ave., Bluefield.
 Mountain Electronics Co., Inc., 708 Bigley Ave., Charleston.
 Randle & Hornbrook 536 7th St., Parkersburg.
 TV Supply Co., 1226 Third Ave., Huntington 1.
 Trenton Radio Co., 414 Clark St., Clarksburg.
 Trenton Radio Co., 300 Grant Ave., Morgantown.
 Van Zandt Supply Co., 1123 4th Ave., Huntington.
 Wheeling Radio Supply, 924 Market St., Wheeling.
 White Electric Co., 903 West Pike St., Clarksburg.
 Whithead Radio Co., Inc., 813 Bluefield Ave., Bluefield.

WISCONSIN

Acme Radio Supply Corp., 510 W. State St., Milwaukee 3.
 Appleton Radio Supply Co., 1217 N. Richmond St., Appleton.
 Central Radio Parts Co., 1723 W. Fond du Lac Ave., Milwaukee 5.
 Electro-Plance Distributors, Inc., 2458 W. Lisbon Ave., Milwaukee 5.
 Harris Radio Corp., 115 N. Tenth St., Manitowoc.
 Larson Electronic Co., J. H., 402 Water St., Eau Claire.
 Lingnor & Co., Frank, 934 S. 5th St., Milwaukee 7.
 Marsh Radio Supply Co., 838 N. Fourth St., Milwaukee 3.
 Nesjö Electronic Distributors, 308 N. Chestnut St., Green Bay.
 Northern Electrical Distributors, 708 S. Broadway, Green Bay.
 Northern Radio & Telev. Co., 708 So. Broadway, Green Bay.
 Popkey Co., G. M., 716 Main St., Green Bay.
 Popkey Co., G. M., Main at Ninth St., Marinette.
 Radio Distributors, 701 E. Johnson St., Madison 3.
 Radio Parts Co., Inc., 538 W. State St., Milwaukee 3.
 Radio Service & Supply Co., Inc., 615 Third St., Wausau.
 S. M. Supply Co., 409-11 S. Barstow St., Eau Claire.
 Satterfield Radio Supply Co., 326 W. Gorham St., Madison.
 Seemuth Distributing Div., Electro-Plance Dists., Inc., 2406 W. Lisbon Ave., Milwaukee.
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Los Angeles 13, Calif.



RADIO CORPORATION of AMERICA
ELECTRONIC COMPONENTS CAMDEN, N. J.



15GP22 Yoke for 15GP22 Color Kinescope.



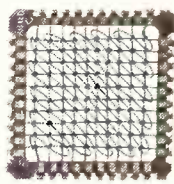
225° C Transformer, Light Weight, Small Size.



240T1 Flyback, 20-KV Transformer for Color-TV Receivers.



Hermetically Sealed Aircraft Relay.



Memory-Core Matrix, using RCA Torroids.



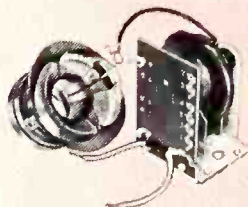
Hermetically Sealed Transformers.



Hi-Fi Speaker, new "damping ring,"



2 3/4-inch Speaker for "Pocket Personal" Type Radios.



220D1 Deflecting Yoke, and 235T1 Horizontal and High Voltage Transformer for 90° Deflection Systems.

RCA ELECTRONIC COMPONENTS FOR:

- AIRCRAFT—**
380/1600-cycle transformers, encapsulated or hermetically sealed; high temperature transformers. Relays. Speakers.
 - AUDIO AMPLIFIERS—**
Input, interstage, line, microphone, modulation, and output transformers.
 - COLOR-TV RECEIVERS—**
Yokes. Flybacks. Purifying coils. Dynamic-convergence and focusing transformers. Isolation inductors.
 - ELECTRONIC COMPUTERS—**
Memory-core matrices. High-speed switches. Torroids. Pulse transformers.
 - INSTRUMENTS—**
Frequency modulators. Low-temperature pulse transformers. Reactors.
 - MILITARY APPLICATIONS—**
Transformers. Chokes. Yokes. Blast-resistant speakers. Relays. Focusing coils. Frequency modulators.
 - RADAR AND LOGAN—**
Yokes. Pulse transformers. Magnetic amplifiers. Torroids.
 - RADIO/TV BROADCASTING—**
Transformers. Reactors. Monitor speakers. Deflecting yokes. Band-pass filters. Flybacks. Blocking-oscillator transformers.
 - RADIO/TV MANUFACTURING—**
Transformers. Chokes. Flybacks. Yokes. Yokes. Focusing Coils.
 - SOUND SYSTEMS—**
Speakers (regular, elliptical, and high impedance proof). Transformers. Reactors. Pulse transformers.
 - TELEVISION STUDIOS—**
Yokes. Flybacks. Band-pass filters. Transformers, and alignment coils.
 - THEATRES—**
Transformers. Reactors. Band-pass filters. Speakers for booth, backstage, and drive-in.
- REPRESENTATIVE TYPES**
- FLYBACK TRANSFORMERS—**
Deflection transformers (with or without deflection windings); auto-types and universal types; universal types.
 - HIGH TEMPERATURE TRANSFORMERS—**
Encapsulated or hermetically sealed; 380/1600 cycle, 380/1600-cycle; up to 5000°C.
 - POWER TRANSFORMERS—**
High-power; miniature; general purpose; isolation; step-up, step-down; high temperature; low-temperature rise; 50/60 cycle; 1800°C.
 - RADAR YOKES—**
Planned position indicator, target designation, military television, and resolution types.
 - RELAYS—**
Military aircraft types; hermetically sealed; high-temperature, miniature, high-speed types.
 - SPEAKERS—**
Auto-radio, "pocket personal," ACB, radio/TV console, drive-in theatre, PA broadcast monitor, high fidelity.
 - SPECIAL TRANSFORMERS—**
Pulse, high-temperature, flyback, miniature, hermetically sealed types; instrument, military types.
 - TV STUDIO YOKES—**
For image orthicons, flying spot scanners, iconoscopes, monoscopes, and vidicons.
 - TRANSFORMER TYPES—**
Encapsulated, encased, hermetically sealed; miniature; open frame, potted, shielded, toroidal.
 - YOKES FOR KINESCOPIES—**
Direct view and projection, color and monochrome; 45° to 90° inclusive; high, low, and intermediate inductance; ferrite core.

Check list of RCA Tube Division Products and Services

ELECTRON TUBES

✓ Receiving Tubes

Detectors
Oscillators
Converters and Mixers
Power Amplifiers
Voltage Amplifiers
Electron-ray types
Rectifiers

✓ Power Tubes

High, Medium, Low Power
AF, RF, VHF, UHF

✓ Industrial Receiving Tubes

"Special Reds"
"Premium" Types
"Pencil" Triodes
Computer Types
Voltage Reference and Regulator Types

✓ Cathode-Ray Tubes

Kinescopes (Black & White)
Kinescopes (Tricolor)
Oscillographs
Special-purpose

✓ Microwave Tubes

✓ Thyratrons and Ignitrons

✓ Phototubes and Multiplier Phototubes

✓ Rectifiers

Vacuum, Gas, Mercury, Vapor Types

✓ TV Camera Tubes

Image Orthicons
Vidicons
Monoscopes
Iconoscopes

✓ Special Types

SEMICONDUCTOR DEVICES

✓ Transistors

✓ Crystal Diodes

TEST EQUIPMENT

- ✓ Cathode-Ray Oscilloscopes
- ✓ RF and AF Signal Generators
- ✓ TV Calibrator
- ✓ TV Sweep Generators
- ✓ Color-TV Test Equipment
- ✓ VoltOhmysts®
- ✓ Ultra Microammeter

BATTERIES

- ✓ Radio A and B Types
- ✓ Industrial and Special Types

SERVICES

- ✓ **RCA Application Engineering Service**—designed to assist equipment manufacturers in product development.
- ✓ **RCA Field Engineering Service**—provides "on the spot" technical assistance and liaison between RCA and customer.
- ✓ **RCA Sales and Customer Service**—seasoned representatives within convenient reach, ready to extend day-to-day personal service.

- ✓ **RCA District Offices**—located in Harrison, Chicago, and Los Angeles, to provide prompt service in your territory.
- ✓ **RCA Distribution**—bulk tube stocks are maintained in warehouses strategically located for quick service.
- ✓ **RCA Technical Literature**—the most authoritative in the field, covers characteristics and operating conditions of RCA tubes and components.

For information on any RCA Tube Division product, write RCA, Commercial Engineering, Section F20Q, Harrison, N. J., or contact your nearest RCA District Office:

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(CENTRAL) WHitehall 4-2900
589 E. Illinois St.
Chicago 11, Ill.

(WEST) MAAdison 9-3671
420 S. San Pedro St.
Los Angeles 13, Cal.

COLOR TV

RCA tricolor kinescopes; receiving, transmitting and camera tubes; components; and test equipment are ready for your color-TV designs.

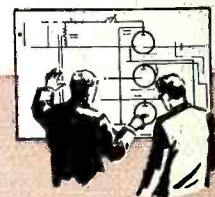


RADIO CORPORATION of AMERICA
ELECTRON TUBES AND COMPONENTS
HARRISON, N. J.

Which items can we put to work for you?

ELECTRONIC COMPONENTS

- ✓ Radio and TV Components
- ✓ Loudspeakers
- ✓ Custom-Built Components
- ✓ Components for Military, Industrial, and Broadcasting Applications



Check list of RCA Tube Division Products and Services

ELECTRON TUBES

✓ Receiving Tubes

Detectors
Oscillators
Converters and Mixers
Power Amplifiers
Voltage Amplifiers
Electron-ray types
Rectifiers

✓ Power Tubes

High, Medium, Low Power
AF, RF, VHF, UHF

✓ Industrial Receiving Tubes

"Special Reds"
"Premium" Types
"Pencil" Triodes
Computer Types
Voltage Reference and Regulator Types

✓ Cathode-Ray Tubes

Kinescopes (Black & White)
Kinescopes (Tricolor)
Oscillographs
Special-purpose

✓ Microwave Tubes

✓ Thyratrons and Ignitrons

✓ Phototubes and Multiplier Phototubes

✓ Rectifiers

Vacuum, Gas, Mercury-Vapor Types

✓ TV Camera Tubes

Image Orthicons
Vidicons
Monoscopes
Iconoscopes

✓ Special Types

SEMICONDUCTOR DEVICES

✓ Transistors

✓ Crystal Diodes

TEST EQUIPMENT

- ✓ Cathode-Ray Oscilloscopes
- ✓ RF and AF Signal Generators
- ✓ TV Calibrator
- ✓ TV Sweep Generators
- ✓ Color-TV Test Equipment
- ✓ VoltOhmysts®
- ✓ Ultra Microammeter

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Los Angeles 33, Cal.

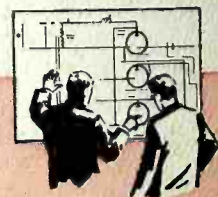
COLOR TV

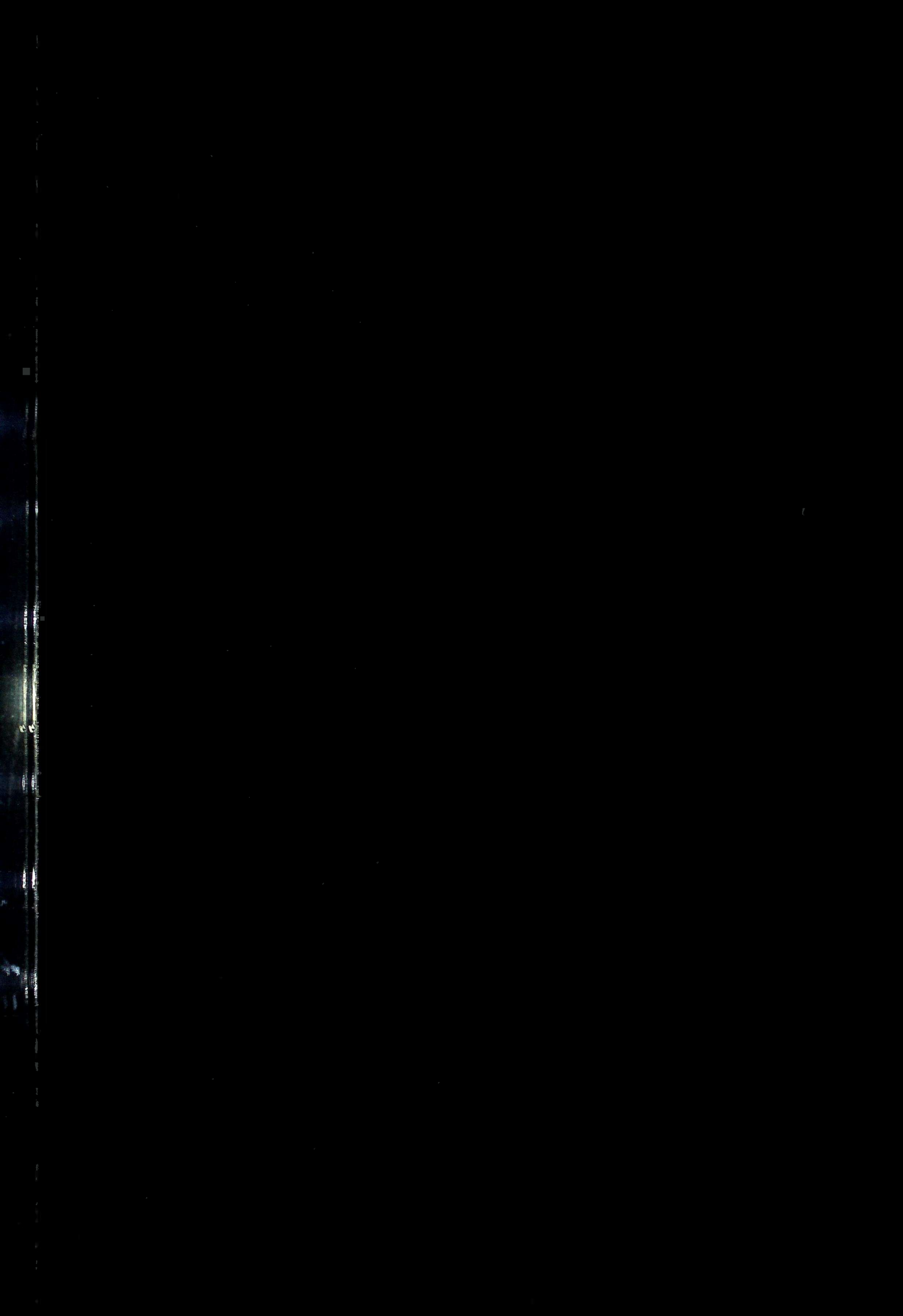
RCA tricolor kinescopes; receiving, transmitting and camera tubes; components; and test equipment are ready for your color-TV designs.

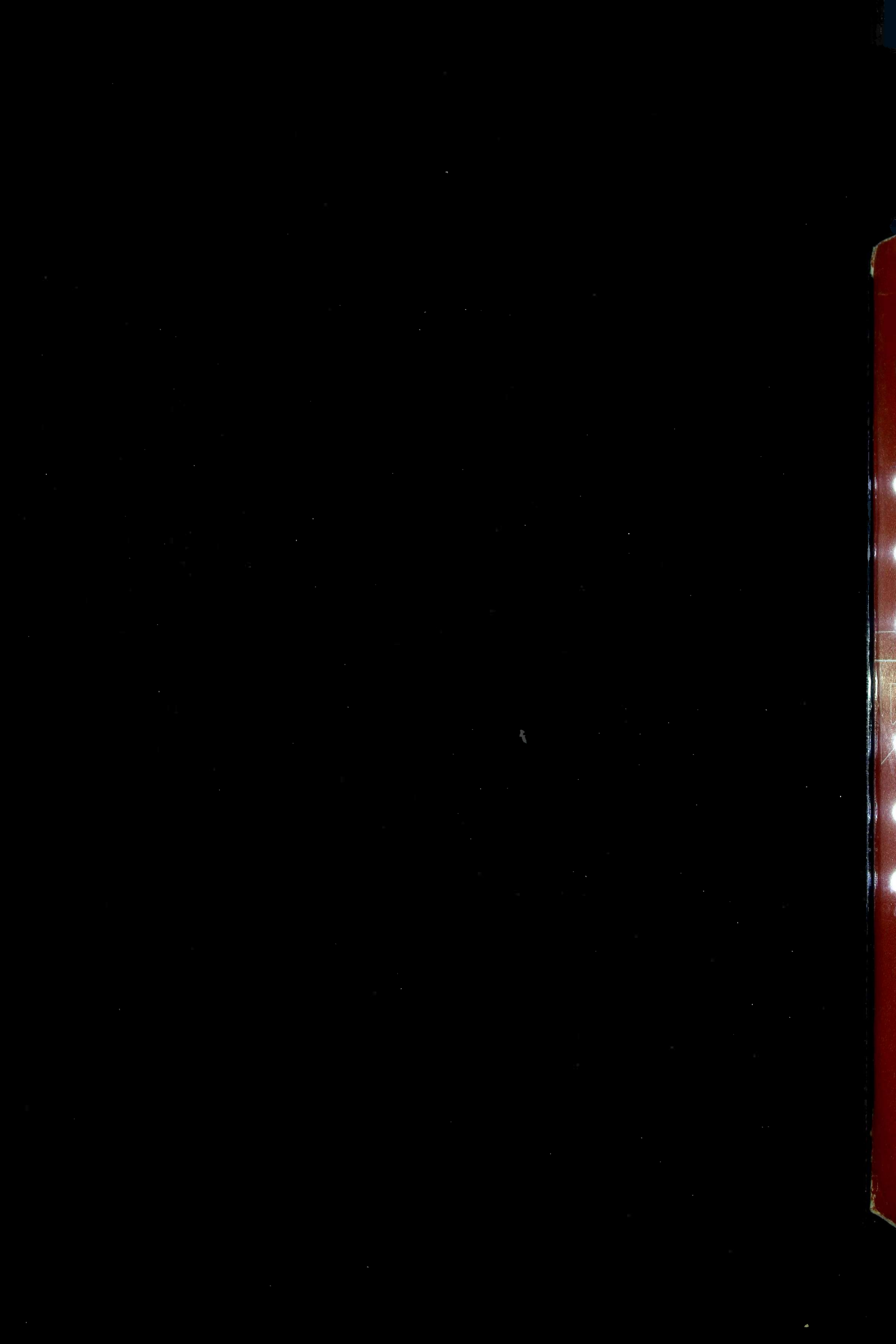


RADIO CORPORATION of AMERICA
ELECTRON TUBES AND COMPONENTS
HARRISON, N. J.

Which items can we put to work for you?







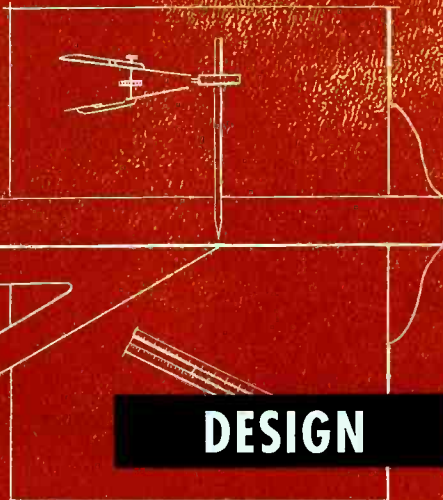
electronics

BUYERS' GUIDE ISSUE

MID-MONTH

JUNE 1956

PRICE 3 DOLLARS



DESIGN



PRODUCTION

USE



**A MCGRAW-HILL
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330 West 42nd St.,
New York 36, N. Y.