


## New Chairside Phonograph-Radio with Precision Automatic Record Changer

Its inspired styling-its ezciting performance-PLUS its amazingly low price-all combine to make this new Automatic Phono-Radio Combination the year's most thrilling value. The luxurious mahogany chairside cabinet blends perfectly into both modern and traditional surroundings The convenience of its unusual slide-top cabinet adds all the more to your complete enjoyment of the best in recorded and radio entertainment. Here is truly the whole world of music, news, sports and drama at your tingertips. Yes-for beauty, performance and convenience-here is the ultimate in a moderately priced Radio-Phanograph Combination. For untold hours of histening pleasure, enjoy this outstanding set in your own home.
THE RADIO: Six tubes (including rectifier) AC Superheterodyne. Four watts of undistorted output ior radio reception or record playigg. Tunes Broadcast Band and Qupyriaht 1947 Concord Ras in Corp. Cbirracc. III. Printed in U.8.A.

Short Wave 9 to 15.5 Megacycles. Large slide rule dial. Bass Boost circuit. Large PM Dynamic speaker with Alnico magnet assures fidelity of reproduction. Variable tone control lor records and radio.
THE RECORD CHANGER: Completely Automatic, plays ten $12^{\prime \prime}$ or twelve $10^{\prime \prime}$ records at one loading-gently safely-handling records with cushioned ease. Lightweight tone arm and the latest in crystal pick-ups, with new "Floating Point" Needle, reduces surface ncise and record wear. Allows for manual playing.
Available in Regular Mahogany, and Elond Mahogany. Specify finish when ordering. Shpg. wt. 63 lbs . Entire cabinet measures $27 \times 263 / 4 \times 151 / 4^{\prime \prime}$. For operation on 105 125 volts, 60 cycle AC only.
Model I-602-Mahogany
Model I-603-Blond Mahogany
$\$ 109.50 \mathrm{ay}$
.119!

## Console Tone!

- AC-DC

VERSATITITY

- UNBELIEVABLE LOW PRICE

Here's perfection of tone usually possible only in large console sels. Outstanding engineering and design, an extra large speaker and plenty of cabinet baffle space doen the trick. Radio experts-dealers, engineers, service-men-will spof this radio in a hurry for its sensational performance and superb value. More tubes, efficient speakperformance and superb value. More tubes, etingent these "extras" add up to a grand thrill in listening satiofaction. High Undistorted Output: Three watts. Comparable to pre-war consoles. More than TWICE that of most comparable AC-DC sets.
Continuously Variable Tone Control: Deep throated bass to clear toned troble-the kind of tone you would normally expect only from an expensive console radio. Superheterodyne Circuit: Advanced design, licensed by RCA laboratories with 6 tuned circuits. Uses: 6SA7, 6SF7, 6SL7, two 2516 and two $25 Z 6$ tubes.
540-1700 KC Standard American Broadcast and Police Calls.
High Quality 6-inch Speaker: With large Alnico V Magnet for sparkling clarity and resonance of tone.
Built-la Antenna: No outside wires. Plug in and play. Connections for outside antenna if desired
Automatic Volume Control. Inverse Feedback: Eliminates overloading, reduces distortion and hum.
Artistic Cabinet: Exquisitely styled, beautifully proportioned with simple elegance. Rust-proof metal mesh grille add a distinctive touch. Cabinet finished in a hand rubbed high gloss mahogany. Size 14 inches by 10 inches by 8 inches.
Model 1-700. Operates on $105-125$ volts, 50.60 cycle AC or DC. Shpg. wgt. 13 lbs. List price $\$ 44.95$ \$22.95 Your Cost, each, in single lots.
$\$ 24.95$
Adapter for operating set from 220 volts AC or DC.
C5243
\$1.41

## Table Model Superhet

* Powerful Superhet Circuit
* Top Quality 6-inch Speaker
* Three Watts Audio Output
* Mahogany Finished Cabinet


## Full Size

## Concord FM-AM TABLE MODEL

## AC or DC

## Superhet!

Now-for the first thememou get all the exciting advantages of radio's newest miracle development, FM (Fre quency Modulation), plus regular AM broadcasts in one compact table model radio for only $\$ 29.95$. As you read the amazing new engineering features packed into this set, you'll see in an instant why it is astounding the ontire radio world. Here is the FM radio set you have been waiting for! You get all the rich, glorious high fidelity musical beauty of FM-with sennitivity and selectivity you've come to expect only in the most expensive receivers. Here is a table model radio with the newest discovories of radio ongineers. Only Concord engineering genius could bring you all these radio features at such a low, value-giving price.
New Miniature Tubes are employed in a poworful, amazingly elficient circuit. Provide high sensitivity with razor sharp selectivity. Tubes used are: 12 BE 6 Converter, 12BA6 I.F. Amplifier, 12AT6 2nd detector and lat audio, 12AT7 Super-regeneration converter and oscillator, 35B5 Output tube and 35 W 4 Rectifier. Top quality transformers and coils assure peak efficiency with virtually no drift on FM band.
Large Slide Rule Dial with smooth reduction gear drive. Tunes broadcast band- 530 to 1650 kilocycles. FM band -88 to 108 megacycles.
Built-In Loop Antemna. Extra large for maximum AM signal strength. Provision for FM antonna also.
Wide Range Reproduction. New full size Electro Dynamic Speaker. Full, rich quality. Full range tone conIrol. R.C.A. and HAZELTINE licensed.
Model 1-606. Operates on $105-125$ volts, $50-60$ cycle, AC or DC. Shipping weight 15 pounds. \$29.95



Radio is a highly technical field where the knowledge and experience of your supplier is your best guarantee of quality and value. Consequently it pays to deal with an old established supplier . . . one who has EARNED the loyalty of customers through years of delivering the best equipment and service at lowest prices. Back of every item listed in this catalog stands a mighty institution founded on 27 years of experi-
ence and success in serving the complete needs of more than 500,000 customers in every branch of Radio and Electronics. Today .. . as for more than a quarter century . . . the Concord organization is geared to serve you best in ALL your radio needs. We invite you to join the half-million radio equipment buyers who KNOW they can always depend on Concord for topmost quality at lowest prices.

## THE CONCORD GUARANTEE

Every item listed in this catalog is guaranteed to conform with the standards of the Radio Manufacturers' Association, and to perform in the manner intended
for such apparatus. You must be satisfied completely with what you buy. Otherwise you can return it for exchange, repair or refund.


Same day shipment of every available item is a "must" in the huge, com-pletely-stocked Concord warehouses -centrally located in CHICAGO and in ATLANTA. Here huge and varied stocks-thousands and thousands of essential radio and electronic needsawait the arrival of your order, to be selected, inspected, packed and ship-ped-whenever possible-within 24 hours. To avoid delay-order todfrom CONCORD.


## For a New Conception of Listening Pleasure The Concord CHIPPENDALE-A Custom-

Befond Compare-Here is the set that is beyond comparimon with any other. . . because it is the only complet home iastrument made to the commercial itudio standards of acoustio labor atories and the reception standarda of commerolal trans-world communications stations.
Flawlesa Cabizetry-The dietinguished cabinet, of choicest hand-rubbed makogany voneers, has the rare warmth and charm of really fine furniture. good taste so sought after in interior decoration
Versatility-Bringe the whole magip world of musio and drama to your home. Standard broadcast...the new static-free high-fidelity FM...the home. Standard broadcast i. the new static-free high-fidelity FM . . the entiro world of international short wave and
Adranced Engineering-New standard of fidelity go far beyond fullrange frequency renponse . . . also provide perfect steep-wave-front transient responme and fresdom from intermodulation and harmonic distortion right through the reoeiver...amplifer... and on out the ciant $15-\mathrm{in}$. Jensen Co-Axial dual speaker, the same principle of sound reproduction used in broadcant atudios and the better motion-pioture theatres where nothing short of perfect sound reproduction can be tolerated.
Clanrieal or Popular Mreie-A violin and a trumpet should sound like a volin and a trumpet whother they are being played in a ballroom or a concert hall ... in both cases you want to hear them zealistically . . . and thal it oxactly what this instrument bring you: room-presence realism. Music with all the tine shaden of tone and the full dynamio sange of volume
the rich deep basses, the delicate vibrancy of singing etrings, the sudden impaot of percussions, the olear trille of reeds... musio that thrills, whether Popelar or Classioal. In the voice ranges, you hear your favorite radio dramatists as though they were speaking to you from the cabinet... you hear every subtle nuance of intonation and the catch in the throat, the sigh that is no more than a slowly released breath, the Uit of laughter. That is what alectronic and aconatic engineer have been working to achieve. In this inetrument you get the results of their efforts to date.

Automatio Reeord Playiag-The ad. vanced electro-acoustical engineering is matched by the meoharioal perfection of the record chenger. Slides out for inetant loading, or in for concealed playing, at the alightest pressure of your finger tipe. The aliontl hedling aoorded your record by gentle handling aooorded your recorde by this superb ohanger adds hundreda of playings to the life of each record. Load it with ten 12 inoh record or twalve 10 . inch records and relax for a long period of uninterrupted listening pleasure. Change your mind about one of your se-
lections if you wish. . any record may be
rejected at will; or use the changer as a single record player have complete control at all times.
Smooth Perfection - The changer mechanimm is the culmination of all the experience in the ant to date. Smooth, sure action. Quiet powerful constant-speed motor hold. its soeed to within $3 / 10$ of 1 RPM change constant-speed motor hold ifs soeed to within $3 / 10$ of 1 RPM change whether it is loaded with 1 record or 2 . Minimum inction and rumble. Record-Saving Picitup-Extremely high lateral compliance in the advanced crystal castridge increaser record life enormously and gives true tonal response becauce the needle follows every bend and turn in the recorded groove, with negligible pressure on the ade of the groove. Needle point pressure is only $11 /$ ounce... your records last indefinitely. The permanent jewel-point needle is zadius-rounded and shadoweraphed for perfection. The unique arm suspengion insurea a smooth gliding action so that the neodle followi groove modulation, and onough inertia so the arm does not. Sub-audibl arm resomance. . . mechanical vibration are lost in the arm insieat of being amplitied by audible mechanical resozance. Wide range... electrical output of the pickup reproduces the highest irequencies used in modern recording techniquer.
Record Storage-Spacious record storage shelves in the cabinet accom. modate large record libraries.. no need for separate record cabinet unless your collection is unusually extensive.

## The Receiver

The CONCORD Neme-Here is your assurance of the best in radio reception. Concord is a name known throughout the radio and electronic industry as providing the best in communcation engineering for many years. In this model, all the known "bests" in radio circuitry, components, and construction are combined into a home receiver. Concord, too, is a "mame brand". . to professionals who know and apprectate the highest developments in the communicatione art.
Simplicity of Operation-Here is a set which any professional would be proud to own.. and which any teen-ager can operate with greate ease than any other instrument with an FM bandl
Push-Button Tuning-There is nothing new about puah-button tuning in the AM band, and thit set has tive buttons for AM station eelection and it also has... which is new. . five push buttons for FM tuningl You don't have to tune up to . . .then beyond. . . then come back to center
for FM tuning. Select any of five channels, which is more than ample for evor the largest metropolitan FM area, merely by pushing a button, This remarkable innovation is made ponsible by an advanced type of Automatic Frequenay Control circult which electromically tunes to the exact center of any FM channel il the mechanical tuning comes anywhere exact center of any
within the channel.


# The Ultimate in Luxurious Cabinet Styling Built 15 Tube FM-AM Phono Radio 

## Automatic Frequency Control

The AFC circuit in the FM band solves the problem of stability at very high frequencies. At these frequencies, FM tuning requires skill and attontion because slight variations in temperature and humidity cause "drift" which ordinarily requires constant re-tuning. FM recaivers without AFC require ten minutes, af least, for warm up botore the circuits stabllise themeelves to some extert. In thil advanced receiver, however, the AFC circult not only finds the ezact center of each FM ohannel, but also holds this center during and after the tube warm-up poriod.

## Band-Spread Tuning

Here is a leature of the best communications recelvers . . . electrical band apread. . brought to you in this unusual home recelver. The three most important foreign-broadcast channels are spread ovor the length of the large odge-lighted glass alide-rule dial. Record the ponition of your favorite forelgn programs and tune to them eadily and quickly without using the hair-line delicacy ueually associated with foroign tuning.

## Frequency Range

Five separate accurately calibrated dial strips and tive band-switch positions give the following frequency coverage:
Band 1-Broadoast Band. 535 to 1720 Hlocycles (ko).
Band 2-Short Wave and Amateur. Complete coverage between 5.9 and 18.2 mogacycles (mc).

Band 2 a -Spread band. 9.0 to $12.0 \mathrm{mc}(331 / \mathrm{s}$ to 25 metera), the so-called 31 -meter foroign broadcast band.
Band 2 b -Spread band. 15.0 to 18.0 mc ( 20 to $16 \%$ meters), the so-called 19 -meter and 16 -meter loreign broadcast bands.
Band 3 -New FM Band. 88 to 108 mc . Uses a completely separate internal tuner and separate tuning knob.

## Variable Selectivity

As in the better communicationa receivers a switch provides choice of selectivity in the AM bands... sharp for adjacent channel separation broad for high fidelity.

## Separate Bass and Treble Controls

The human ear is less efficient at low and high frequencies when general volume is reduced to room-lovel listening. In addition to a freble boont circuit in the audio system which automatically raises the treble level at low general volume levele to compensate for this characteristic of the oar, individual bass and treble controls are provided to make personalized adindividual bass and treble controle are provid also for the acoustic effects justmonts not only for the listeners ear but also for the acoustic ofrects

Custom Installations
an the need arises for a cobint other than those pictured bere. custom fnstallations in moderin or period pieces.. is in a favorplace, booksbelves. of tc rephace recommend an the tinest equibed ire cabinel. . Concord compiathty of the intrumenuat lover or mant avallable, the indindual unts. Fou tic-lactronic design malow, now available as inditumate in acou the-siat "tops" for a connoisseur who desirestor who wanta the abenntr that will fultill -or the interior decot, the are the individual only with the tipest alscriminating clieal, thost who are satishind ank

# Performance and Tone To Modern and Period Styling 

If you are a perfectionist-if you are satiafied only when there is no compromise with quality or performance-this ie your radio-phonographl Offered in either traditional period or modern cabinet styling, this is truly the finest oustom assembled radio-phonograph ever created. Each component unit was ohosen by Concord engineers only when exhaustive teste had proved it the finest of its kind-the nearest perfect in quality, ongineering design and operating superiority. The result is a flawless Instrument to delight the eye, the ear and the heart of the most discriminating music lover.
At your command is radio enjoyment such as you have never experienced belore. Both atandard AM broadcaats and the erciting now high fidelity FM (Frequency Modulation) stationa! Thi is FM reception at its bestclear, strong, atatic tree signals with full wide range tone fidelity. For reproduction of recordinge the precision-made imported Garrard automatic unit changes and plays your recorde with epeed, ease and gentleness that is a marvel to observe. And the combination of the famous Concord 15-watt amplifier and matched Jensen Co-Axial apeaker reoreatea both radio and recorded mugio as laithfully as though the artints wore performing in your living room.
This outstanding radio-phonograph combination is ideal for home, club or hotel. Wherever surzoundings are distinctive and luzurious, this custom built set will find a warm wolcome. Both the modern and period cabinets are illustrated above-but pictures alone can only begin to describe their magnificent styling and careful construction. Only when the console of your choice is installed in your own surroundinge can you truly appreciate its dignity and beauty.
In this exceptional ingtrument for your home-remember, you receive all the benolite of custom construction. Concord engineers were not limited by "assembly lime" techniques. Thns, you have a radio-phonograph that contain all that ia outstanding in the radio art.
On these pages we present important detail of esch component unit built into this remarkable oustom combination set. This equipment is the 6
produet of famoth radio manufacturers whose reputation and experience xtend back to the very beginning of radio. This is equipment of complete dependability-precimion engineered to give you top performance and maxmum mojoyment for the years ahead.
If you have promised yourself the finest obtainable in a radio-phonograph $\rightarrow$ here is your anewer. By overy standard, by applying the most rigid of teste-there is no other ingtrument which can ever begin to match the Concord "Custom" tor quality, performance or value. Here is the one set created for the mudic lover and the tine radio enthusiast- to aatisy completely his most exacting standards.

THE MODERN CABINET-Here is functional boauty, with full aweep ing lines, to mark thie stribing console as an outotanding example of effective modern styling. The smart natural wood finish is hand rubbed to a lustrous sheen. Craftmanghip is superb-featuring ingenious cabinet detign that provides ample room for the equipment, with generous record torage space. A divided lid assures easy access to both radio and automatic record changer. The slide-away doora in front move eanily at fingertip pressure. Thim exceptional conmale is the supreme touch to your comfortable functional furnitare. Thi cabinet is available as a separate unit. See price on following page. Size: $171 / 2$ inches deep, 34 inches high and 40 inches long.
THE PERIOD CABINET-A distinguighed console, created for the conventfonal living room. Truly a beautiful plece of furnture-and a grand achievement of the cabinet-mater's art. Built from the finest hardwoods, the matched mabogany veneers are rioh and exquiaite. The two spacious doors below open to the large record storage compartment and the loud speaker unit. Bernished bras door pulls add an emphasising note of beauty. If your home in in the traditional mode, you will cherish this console for many years to come. This cabinet is available as a separate unit. See price on next page. Size: $171 / 2$ inches deep, 34 inohes high, and 40 inches long.
nation Supreme-Featuring The Finest Of Ouality Components


## Delight The Music Lover... For The Distinctive Setting

THE BROWNING TUNER AND POWER SUPPIY. Designed for high fidelity and extreme sensitivity on new FM band ( 87 to 109 MC ) and AM standard broadcast band ( 540 to 1650 KC ). Two entirely different uners are incopporated on one chassis to assure greatent efficiency and tuners are inco pM section consists of RF stage, mixer with separate oscilquality output. FM section consists or hF stage, mixer with separacascadelator to eliminate image interierence, iwo stages or with added TRF stage for image rejection. Automatic volume control. Large full vision slide rule dial. Separate power aupply for hum-free reception THE CONCORD 15 WATT AMPLIFIER-Actually 15 watts represent many times the audio power you will require for ordinary room volume. But this tremendous reserve power gives you flexibility and tonal fidelity impossible with an ordinary audio system. You may vary tone to emphasize bass or treble at will. You may reiniorce weak recorded passagea, imper ceptible. Inverse feedback circuit design assures amadig fidelity. Amplifier cabinet shown in picture above is not included. For a complete description tura to page 22.
THE JENSEN CO-AXIAL SPEAKER-A remarkable now development in loud speaker construction. Ideally suited for FM and fine AM receivers, such as the Concord "Custom". Actually two speakers in one a cone "tweeter' mounted in the cone assembly of the large 15 -inch "woofer", each doing a specialized job to assure overall fidelity impousible to obtain with one speaker only or with two speakers of the same type. The assembly includes a built-in electrical network which passes only the high audio frequencies to the "tweeter"-designed especially to reproduce "highs" with tzuly astonishing clarity. The "woofer"-designed especially for the low audio frequencies-reproduces "lows" so realistically that a drum roll, for example, seems to come from an actual drum in the room. Together, the two speakers reproduce the entire audible range, from 50 to 15,000 cycles per second, with a response so true that many audiencos, in actual listening fests, could not distinguish between a concealed live orchestra and ts electronic reproduction.

THE GARRARD AUTOMATIC CHANGER-This is one of the frest, most versatlle record changers ever made. It's the new Deluxe "mixer" unit that plays 10 -inch and 12 -inch records inferleaved in any assortment and any combination. The Garrard changer is world famous, imported from England-a fool-proof mechanism of the highest quality. Record changing is performed simply, efficiently and silently. Features a oneounce high fidelity pickup with frequency response flat irom 30 to 8500 c.p.s. The permanent jewel stylus will last for years of normal playing. The motor is allent, powerful, governor controlled. Special spring mounting eliminates vibration.

## ORDER YOUR CONCORD CUSTOM COMBINATION FROM THE LISTINGS BELOW

Model 1.100. Traditional Period Cabine Combination complete with Jonsen Speaker, Garrard Changer, Browning Tuner and Concord Deluxe 15 Watt Amplifier as described above. Shpg. wt. 150 lbs . \$525. 00 Your Cost.
. $\$ 195.00$ Your Cost

Speaker
Model 1-101. Modern Cabinet Combination complete with Jensen Speaker Garrard Changer, Browning Tuner and Concord Deluxe Your Cost
Model 3-101. Modern Cabinet only. Shipping weight 90 pounds Model 3-10
$\$ 225.0 \mathrm{C}$

## SPECIAL DESIGN STUDIO

The services of Concord's Special Design Studio are available for those who desire dintinctive cabinets of special design, modern or period, radio installations of an individual character, with remote speakers in more than one room, etc. Write to our Special Design Studio.


Model 1-1100,-Operates on 105-125 volts AC, 50/60 cycles.
Shipping weight 20 pounds. Chassis size: $133 / 4^{\prime \prime}$ long, $9^{\prime \prime}$ deep, $81 / 8^{\prime \prime}$ high. $\$ 89.50$

## Concord FM-AM CHASSIS

## For True to Life Tone

It'a here at lastl The amazing new Concord Chassis that bring: you BOTH AM and FM (Frequency Modulation) reception. Designed and built to the most exacting standards. this superb chassis is perfectly suited to the custom installa tion demanding the ultimate in radio performance. Newest FM ratio detector circuit development gives greater ease of tuning, low noise level, tremendous gain and complete interference elimination. Tuning range covers Broadcast and Police Calls ( 540 to 1700 kc ) and now FM band ( 88 to 102 mc .). Superb 11 -tube (including rectifier) superheterodyne circuit employs dual and triple purpose tubes to give 15-tube sensitivity and selectivity. Outstanding features include Automatic volume control, 8 -inch slide rule dial, Full range Basa and Treble tone control and new permeability tuned IF transiormers. Has phono input for record player or automatic changer. 13 watts of high fidelity andio output with large 10 -inch PM speaker mploying Alnico $V$ magnot combine to assure glorious tone quality and tremendous volume. Has builtin antenna and folded Di-Pole for FM reception. No outside wires needed.
USES NEWEST TUBES including ofticient miniature types: 1-6BA6 FM, RF amplifier, $1-7 \mathrm{Q} 7 \mathrm{AM}$ oscillator, Mixer, 1-7AH7 IF amplifier, 1-7AG7 FM detector driver, 1 7A6 FM detector, audio amplifier, inverter, 2-7C5 Pushpull amplifiers, 1-5Y3 rectifier.
Thie excellent chassis may be used in a variety of custom installations-either near the peaker or at a distance. On this page, we illustrate several typical custom applications. In the home, club, office or hotel-anywhere the finest radio reception is desired. Use it in elther of the cabinets on the preceding page and you will have a radio with beauty beyond beliof in tone and styling.
Combined with any of the record changera listed in this book the 13 watt high tidelity audio output will give you a radio-phonograph that will match the finest anywhere for top quality performance.



## Modern As TomorrowAUTOMATIC PHONO-RADIO <br> With Reversible Phono Drawer

Here is a Chairside Combination Triumphl An entirely new concept of gracious apartment or amall home liv-ing-bringing convenlence and perfect concert-quality radio and phonograph enjoyment to the arm of your favorite chair. Just look at the smart, functional cabinet lines-the large elide rule dial for complete ease of tuning-and the new reveraible Phono Drawor that pulls out of either ride of the cabinet. Here is pow ordul, supersensitive superheterodyne radio reception combined with the most convenient, readlly accessible record player of the day. The acoustically correct tone chamber with exclusive Di-Fuse-Tone assures maximum volume and tonal range to all parts of the room. No lid to lift when playing either radio or phonograph. Use the spacious top for books, lamp or vase graph. Use the spacious top for books, a lamp or vase of towers. Thousands of entanusiastic supich for atruly modern, superb perming been clamoring tor a truly modern, superb periorming it's here-a beautiful mahogany veneer, hand subbed functional cabinet with radio and phonograph tonal reproduction rivaled only by the largest, most expensive sets.
AUTOMATIC RECORD CHANGER-Simple and foolproof for quick and smooth operation. Playe ten 12 -ineh records or twelve 10 -inch records with the drawer closed. Crystal pickup, self-starting oxtra heavy motor, featherweight pressure tone arm. Com plete with floating point needle.
AUTOMATIC VOLUME CONTROL-Eliminate fading and blasting. Continuously variable tone control provides deep throated bass to clear-toned treble. THREE WATTS UNDISTORTED OUTPUT-Push-pull audio circuit brings glorious realism to recorded music and radio reception. Large 8 -inch speaker with Alnico $V$ magnet provide true clarity and full resonance of tone.
BUILT-IN ANTENNA-No outside wires. Just plug in and play. Connections for outside atrial provided if one is desired.
POWERFUL SUPERHETERODYNE CIRCUITT-
Employs siz tuned circuits. Usen 6SA7, 6SF2, 6SL7, two 25L6, and two 2526 tubes.
ADDITIONAL FEATURES-Power linefilter Completely shielded chassis, Shock Mounted variable condenser, Hi-Cap filter condensers, Smooth Drive Tuning. Operates on $105-120$ volts, 60 oycle AC only. Sise: 18 inches and 28 inchen by $253 / 1$ inches. Ship. ping weight 78 pounds.
Model 1-702-List Price $\$ 199.50$ Your Cost
\$139.50

3 Band

## AC-DC Superheterodyne

* 2 Short Wave Bands Plus Broadcast Band
* Built-in Loop Anterna
$\star$ Automatic Volume Control
* Dual Purpose Tubes

A great thrill awaits you in this new Concord Superhet-Arodyne-for here is a radio designed for your listening erodyne-lor here sadio with features usually found only in pleasure-a radio with teatures usually found only in from the finest materiale.
The 2 Short-Wave Bands cover 13 to 22 meters and 20 to 50 meters. This gives you full coverage of all of tho world's major short wave stations. The regular broadcast band of 540 to 1600 KC makes it easy to get any of your favorite domestic stations.
The Superheterodyne Circuit, employing all of the nowest radio discoveries, plus the super-officient built-in loop anfenna, bring you fine reception from stations thousands of miles away. There is a connection for an extra outside aerial, if desired.
The Automatic Volume Control eliminates fading and blasting. The PM Alnico speaker with V magnet gives every program a true-to-life tone.
Uses 5 Tubes including rectitier. Two of these tubes are dual purpose tubes to give you 7-tube performance. Tubes used: 12SK7, 12SA7, 12SQ7, 50L6 and $35 Z 5$ rectitier.
Beautiful Plastic Ivory or Brown Cabinet is $91 / 6$ inches long, 6 inches high and $51 / 2$ inches deep. The large illuminated dial makes tuning easy, even on closely spaced foreign short wave atations.

Model 1-508. Brown Plastic. Operates on $105-125$ volts, 50.60 eycle, AC-DC Shipping weight 6 pounds.
Your Cost, ach, in lote of 3
$\$ 26.95$
Your Cost, in single lots.
Mour lisf
Model -507. Ivory Plastic. Same as above. Shpg. wgt. 6 pounds
Your Cost, oach, in lots ot
C5243. Adapter for operating set from 220 volts $A C$ or $D C$


## Concord

## AC-DC Superhet A Real Value!

Here's more value for your radio dollarg than you ever dreamed possible. Outside, the ultra modern cabinet if an inepiration in gleaming Ivory or Brown plastic. Inside, a host inepiration in gleaming Ivory or Brown plastic. Inside, a host of outstanding new circuit eatures-employing finest qual.
ity components bring in fovorite programs with tonal quality ity components bring in fevorite programs with tonal quality
and clarity of reception to delight the most critical ear. Here is supreme value in an AC-DC table model superhet set. For here is a radio that will give years of pleasure as the main set in your home or as the "extra radio" for kitchen, bedroom or office.
SUPERHETERODYNE CIRCUIT-An improved superhet circuit, condenser-tuned assures maximum sensitivity and selectivity-features you need for clear, interference. free reception in any location.
LARGE PM SPEAKER-A 5-inch Alnico V magnet PM dynamic apeaker (not the usual 4-inch speaker used in so many small sets) provides excellent tone and plenty of vol. ume. You get the woll rounded tonal quality which assures long hours of listening pleasure.
TUNING RANGE-Covers entire broadcast band from 535 kc to 1700 kc . Large Airplane type dial makes it easy to find your favorite station.
TUBES USED: 12SA7GT IF amplifier, Converter; 12SQRectifier. Operates First Audio; 50L6GT Output and 3525 Rectifier. Operates on 115 volts, $A C$ or $D C$
LICENSED BY R.C.A. and HAZELTINE to bring you the newest developments in radio from these famous laboratories.
Model 1-402. Brown Plastic cabinet is $108 / 8$ inches wide and $51 / 2$ inches deep. Shipplng weight 10 pounde.
Your Cost, lots of 3, each
$\$ 9.95$
Your Cost, singly
.$\$ 10.95$
Model 1-403. Ivory Finish Plastic. Same as above
Yout Cost, lots of 3, each
\$10.95
Your Cost, singly
.$\$ 11.95$
Adapter for operating set from 220 volts AC or DC.
C5243

## For Full-Toned Reception

Look at this sensational set. It's really a beauty-a leader in smast appearance and top performance. The beautiful plastic cabinet fits in anywhere-in the living room, in the bedroom, at the office. The amazing power and sensitivity are really worth shouting about. And what tonel An extra large baffle area brings out deep bass and high treble noter like a giant organ. This is your set. It has everything you had hoped to find in a table model radio.
SEMI-CONCEALED RANDLE-Makes this litile Concord set the ideal receiver for traveling or moving around the house. When not in use its convenient carrying handle drops down into the cabinet.
SUPERHETERODYNE CIRCUIT-A highly perfected S-tube (including rectifier) superheterodyne circuit, using multi-purpose tubes. Automatic volume control, usually found only on large console model, reduces fading to minimum. Condenser tuning permits sharp separation of flations and PLUS performance in the most "outof-way" locations.
BUILT-IN LOOP ANTENNA-Just plug-in and play al. most anywhere. Provision for outside antenna, however, if required in very remote apols. High gain characteristics of loop assure astounding sensitivity.
ALNICO V PM SPEARER-This Concord Set has a skillfully designed audio system, and a 5-inch PM speaker using the new Alnico $V$ magnet that is many times more sensitive to every impulse than the pre-war type.
SLIDE RULE DIAL-Large, eaby to read, eany to tune, slide rule dial makes selecting your programs quick and accurate. Edge lighted, with bold, clear markings.
TUBES USED - Multi-purpose tuber permit greater efficiency from the superhet circuit employed. They are 12SA7GT converter, 12 SK7GT IF, 12 SO 7 GT Detector and 1st audio, 35L6GT output and 35ź5GT rectitior. Operates on 115 volts 60 cycle AC or DC.
Model 1-501. Walnut Plastic. Size: 10 inches wide by $63 / 4$ inches high by 6 inches doep.
Your Cost, in lote of 3, each
\$15.95
Your Cost, singly
Adapter for operating set from 220 volts AC or DC 5243



# THRILLING FEATURES FOR VALUE-WISE BUYERS 

* Modern Plastic Cabinet
* Full Vision Dial
- Glorious Tone
$\star$ Powerful Superhet Circuit
* Dual Purpose Tubes
* Amazing Sensitivity


## AC-DC Table Model

From its wide, full vision airplane type dial to its gleaming ivory plastic cabinet-here's the perfect recaiver for any room in your home. It's packed with exciting new design features, utilixing many new engineering developments If you want a set that's light and easy to carry from room to room-a set that gives you top performance and glorious tone where ever you use it-then here's your aet and no mistake. Buy it on Concord's 30 Day Money Back Guarantee of Satisfaction.
IMPROVED SUPERHETERODYNE CIRCUIT Different . . . better . . . with many brand-new improve ments that help deliver top-quality reception.
ANTENNA - You don't need an outalde antenna to bring in nearby and remote stations clear and strong. Proviaion for outside antenna is included for those who prefer it.
5-INCR ELECTRODYNAMIC SPEAKER-A speaker that gives you plenty of tone . . a whisper, a high violin note, a low bass, or a whole orchestra, with large console set tone quality.
STREAMLINED AIRPLANE DIAL-Tune in your stations faster, get them clearer with Illuminated Dial. No crowding of stations at high frequency end of broadcast band... all stations indicated with large numorals, evenly spaced.
WIDE TUNING RANGE. Complete band from 535 KC to 1620 KC .
TUBES USED: 12SK7 IF, 12SA7 Converter, 12SO7 Det. and lst Audio, 50L6GT Outpul and 35Z5GT Rectitior.
Model 1-500-Ivory Plastic with Brown Trim. For 110 volt, AC-DC operation. 12 inches wide, $61 / 4$ inches deep, $63 /$ inches high. Shipping weight 10 pounds.

## Your Cost

$\$ 18.95$
C5243-Line Cord Resistor for 220 volt operation.
Additional

## An Outstanding Buy!

## AC-DC Superheterodyne

In a Beautiful Wood Cabinet

Only a manufacturing miracle makes it possible for us to give you this sensationally performing table model for so Little money. It is possible only because of Concord's tremendous buying power and leadership in the radio field. With its rich, soft finiahed Walnut vereer cabinet to delight the eye, this amazing set bringe you near and distant stations with amazing fidelity and power. It hae plenty of big set features, using the newest super-efficient minlature tubes. Truly a once-in-a-life-time value.
535-1720 KC Standerd American broadcast and police band.
BUILT-IN ANTENNA: No outside wires. Plug in and play. Connections for outside antenna if desired.
SUPERIOR SENSITIVITY AND SELECTIVITX: New miniature tube and postwar oircuit design bring in weak stations two to four times stronger than formerly. UNDISTORTED POWER OUTPUT: 1 Watt. Approximately twice that of most comparable tone quality and clarity.
TUBES USED: 12BE6, 12BA6, 12AT6, 50B5 and $35 W 4$. These are all newest miniature type tubes.
ADDITIONAL FEATURES: Automatic Volume Control, Superheterodyne Licensed by RCA laboratories with 6 tuned circuits, Litz wound I.F. Transformers and Oscillator Coil, Power line filter, completely shielded chassis, shock mounted variable condenser. Wide vision slide rule dial for easy station selection.
Model 1-502. Operates on $105-125$ volts, $50-60$ cycle AC, or $105-125$ volts DC. Size $121 / 4$ inches by 6 inches by 8 inches. Shipping weight 9 pounds.
List price $\$ 34.95$
\$18.95
Yous Cost each in lots of 3
$\$ 19.95$ Your Cort each in aingle lots



## A. Radio - Automatic Phonograph Combination Designed For Modern Living

Porfect for the small home or apartmentl Here is complete home enjoyment -Radio and Automatio Phonograph combined-in half the apace usually required by a standard Console model. Although it's truly compact in sise, thin sel gives you all the operating convemionce and quality construction you've come to expect in radio-phonograph combinations selling at far higher prices. It recreales the artist's original performance in all its concert hall perfection of tone-whether recelved by radio or reproduced trom favorite recordings. The redio is senaltive and amaxingly powerful; embodying thrilling new deaign features to bring you near and distant atations with exeiting clarity and volume. Under the handy hinged top is the ruggedly built autonatic record player. It changes your records with unbelievable speed - yet it's ldad and gentle in action. Just load it up and settle back to listen to a half hour or more of enjoyable recorded music. Plays ten 12 -inch or twolve 10 inch records, automatically at one sitting, chosen to delight your mood of the moment.
And look at the oabinet| $\mathrm{It}^{\prime}$ 's really a beauty-with mart modern styling to add new attractiveness and dietinction to your living room or den. Just the right height to blend into sectional furaiture or bookcases. In the lower section is a spacious record storage space to hold a large recerd librarya most demrable convoriezce feature for small living rooms. Beautifully finished in walnut, heary rugged construction, buill acountioally to eliminate cabinet resonance
If you're living in crowded quartere-but long for the magnificent tone and wonderful convenience of a large console radio-phonograph-here's your set. A perfect result of the combination of the skill of the cabinet maker and the radio engineer. And here's your set, too, if you're furnishing a den or recreation roam where you wish to make the most of every inch of space. It's perfectly designed for modern living.

## Sensational Radio Features

$\star$ New improved superheterodyne, longer tube life, longer set life.

* Iso-Tron colls-proteoted from air and mointure. Highly nelective IF transformers for top efficioncy, eure separation of adjacent stations.
* Automatio Volum Control complotely eliminates atmoupheric fading and volume rises, maintaina listening level sot by the manual contral.
* Manual volume contral separate from On-O甘 switch.
* High audio output for greater fidelity. Soparate ton control
* Now fullirvision alide-rule dial. Tuning ratio $43 / 4$ to 1 . Tuning range 540 to 1712 blloaycles ( 556 to 175 meters).
* Large 6-inch high flux density PM speaker of new acoustic design. Features new Alnico V Pormanent Magnet.
- Tuber: 12SA 7GT Looal Oscillator and Mixer; 12SK7GT IF Amplitier; 12SQ7GT Detector-AVC-Firat Audio Amplifier; 50L.6GT Beari Power Output; now oool, officient Selenium Dlife Rectifior.


## Improved Phonograph Features

$\star$ Lightning fask record ohanger. Precinion made. Fast, amazingly easy to reload. Smooth, quilet operation.

* Acountically treated cabinot for improved tone.
* Zophyr weight Crystal pickup. Advanced new type with extendod freguency range, ascuring remarkable falthful tone fidelity. Equipped with long lifo floating point needle.
Model No. 1-407 Walnut Finish. Cabinet size in $331 / 2$ inches high, $201 / 4$ inches wide and $171 / 2$ inches deop. Operates on 110 volt, 60 cycle AC only. Your Cost.
$\$ 89.95$



## $C_{\text {maxid }}$

## 3 Band AC Superhet

Here's a whole world of radio thrills and enjoyment for you! Bring the far away places that you ve dreamed about into your home, Paris-London-Shanghai-MoscowRio de Janerio become your next door neighbors with this powerful 3-band AC Superhet circuit. You'll find it has bower domestic reception too. This elegant modern plastic cabinet covers a radio that has all the lateat discoveries of Concord's radio engizeers.
DISTINCTIVE CABINET: Exceptionally large, provid. ing plenty of baffling for superior tone. Styled in smart plastic-in a moft grained Walnut tinish.
POWERFUL SUPERHETERODYNE CIRCUIT for clear, perfect reception of most distant atations. Five tubes give seven-tube circuit performance
5-INCH PERMANENT MAGNET SPEAKER with large Alnico $V$ magnet for superb tonal tidelity. Full 2 watts output
BROADCAST TUNING from 535 to 1720 kilocycles. SHORT WAVE BANDS from 2.2 to 7.2 Megacycles and 6.9 to 23.5 Megacycles. Get everything! Domestic, Police, Foreigal
SLIDE RULE DIAL for easy, quick, accurate tuning. No jamming of stathons-no double reception at low frequency end of band.
TUBES: 6BE6-Converter, Oscillator; 6BA6-I.F. Amplitier; 6AT6-Det. A.V.C., and Audio Amplitior; 6AQS Beam Power output; 6X4-Rectitier. Seven tube elficiencyl FULL RANGE VOLUME CONTROL and Automatic volume control.
Operates on $50-60$ oycle $110-230$ volt AC only.
Model 1-504. Size: 20 inches wide, $93 / 4$ inches deep and $151 / 2$ inches high. Shipping weight 12 lbs.
Youz Cost in lots of 3, each.
$\$ 32.50$
Your Coat in aingle lot, each


## 2 Band AC-DC Superhet

Why be satisfied with domentic stations alone-reach out and pull in the principal short wave atations of the world Hear the news of the world direct from the place it hap. pens, as it happens! It's fun-it's exciting-it keeps you abreast of the times. It's guaranteed to perform to periec tion-delivering reception to satisfy the most critical radio expert-bringing in stations with power, clarity, selectiv ity and fidelity to delight your heart. This auperbly buil sot gives you complete radio entertainment from all over set gives the world.
BEAUTIFUL PLASTIC CABINET. The graceful plas tic cabinet has been carefully styled to harmonize with any type of furniture It is avallable in Brown or Ivory. The large slide rule type dial assures accurate tuning SUPERHET CIRCUIT. Employe dual purpose tubes. Unes 12SQTGT Detector and First IF; 12SK7GT RF Amplifier and 12SK7GT IF Amplitier; 12SA7GT Oscilla for and Mixer, 35L6GT Audio Amplifier and $35 z 5$ Rectiffer
5-INCH PM DYNAMIC SPEAKER. Has 1.5 watts maximum audio output.
BAND COVERAGE. Broadcast from 540 to 1750 Kilocycles. Short Wave from 6 to 21 Megacycles. Gives band spread tuning ease on short wave band.
BUILT-IN LOOP ANTENNA. High gain type.
Operater on 105.125 volts-AC or DC.
Model 1-604. Walnut Plastic. Same as below.
Your Cost aach, lots of 3
\$19.95
Your Cost each
$\$ 21.50$
Model 1-605-Ivory Plastic. $61 / 2$ inchea wide, 12 inches long and $73 / 4$ inches high. Shpg. wt. 10 lbs . $\$ 20.95$
Youx Cost each, lots of 3
Your Cost sach

Adaptor for operating set trom 220 volte AC or DC.
C5243



Concord

## 3 WAY PERSONAL PORTABLE

## * Operates on AC or DC or Self-Contained Batteries <br> * Large Set Tone and Volume <br> * Economical-Low Battery Drain <br> * Built-In Loop Antenna

It's small... it's light and handy to carry . . . and it's packed with "big set" features and performance you've always wanted in a portable. And look at the price here is truly the most sensational "buy" in a portable we've ever been privileged to offer our customers. Take this compact set anywhere... wherever 105 to 120 volts AC or DC house current is available... or play it far out in the country from self-contained, long-life batteries. You always get the same super sensitive reception, the same glorious tone quality that makes radio listening truly enjoyable. At your finger tips is a full broadcast band tuning range from 535 to 1720 kilocycles. Hear domestic stations as well as most police calls.
No fuss-no bother, Just open the hinged cover . . . and start listening! No outside aerial to bother with, no batteries to connect... just $100 \%$ pleasure. The amazing RCA and Hazeltine licensed improved superhet circuit uses the following tubes: 1R5, 1TR, 1S5, 3Q4, and a Selenium Rectifier. 3 of these tubes serve a dual function... which means you get extra power, extra efficiency from fewer tubes. This feature cuts battery current drain and giver you real economy of operation. Superhetrodyne circuit and the built-in antenna assure fine reception everywhere. A 3 -inch dynamic speaker has an Alnico V magnet. This value-pack portable is housed in a smartly styled, unbreakable plastic case. It requires two $11 / 2$ volt "A" cells and one $671 / 2$ volt "B" battery. Size: $81 / 2$ inches long, $43 / 8$ inches wide and $37 / 8$ inches deep. Shpg. wgt. 7 pounds with batteries.
Model 1-408. Radio without batteries.
Your Cost
\$24.95
Battery Kit for above radio.
$\$ 1.84$ Your Cost

## EVERYWHERE



## MIGHTY MITE

## Use It Anywhere!

## $\star$ Weighs Only 8 Pounds

* Full Vision Slide Rule Dial
* Smart Leatherette Covered Case
* Fits on the Palm of Your Hand
* Self-Contained Batteries

Meet the friendliest little radio ever made. It goes along with you wherever you travel... to the beach, to parties, to your favorite hide-away ... or it will stay right at home and entertain you. It's small enough to fit into the palm of your hand . . . but it's really a giant in performance. Its voice is big, with plenty of volume. And it's really smart looking too, in its trim, durable leatherette covered case with contrasting plastio carrying handle.
Maybe you never thought much about the "insides" of your radio. But it's good to know this powerful Mighty Mite is ruggedly constructed to give you long, satisfying performance. It's made of the Hnest components, including the newest miniature tubes that proved so sensational during the war for walkie-talkies and other battle equipment. The skillful design by expert engineers assures you top performance from every part and tube.
Operates from self-contained batteries. Equipped with a built-in anterna and two midget IF stages, Uses the following miniature tubes: IS5, 3Q4, IT4 and IR5. Has a $31 / 2$-inch speaker. Easily fits on the palm of your hand for it's only 7 inches long, $61 / 4$ inches high and $33 / 4$ inches wide. Here is a portable radio with advanced design at an economical pricel
Model 1-400. Portable Radio less batteries. Shipping weight 8 pounds.
Your Cost, each, in lots of 3 .
$\$ 15.95$
Your Cost, each, in single lots.
Battery Kit for Portable Radio above.

## Designed for the Country Home BATTERY OPERATED TABLE MODEL RADIO

## * Low Cost Battery Operation

$\star$ Improved Superhet Circuit for Brilliant Tone

* Built-1n Loop Antenna for Long Range Reception
* Low Current Drain Battery Tubes for Economy
$\star$ Full Vision Airplane Dial for Easy Tuning
* 5-Inch PM Dynamic Speaker for Wide Range Clarity

At last . . a powerful battery operated superhetrodyne receiver, designed expressly for the Farm or Country Home. It has all the clarity and volume, all the smart appearance of the city AC or DC operated cousin. Everything is self contanedno external batteries or outside aerial to worry about. And what receptronl in like if you're located many miles from the nearest broadcast station, signais roll in ike magic. This amazing performance is possible only because Concord rarm Radio uses the newest, most efficient dual and triple purposo tubes in an improved, super-senitive superhet circuit. You'll be thrilled and delighted with the full, rich tone quality. This set featuzes a large 5 -inch PM dynamic speaker with efticient Alnico No. 5 magnet. It handles tremendous volume with true wide range tone. A large, full vision airplane dial tunes the entire broadcast band-from 535 to 1720 kilocycles. Covers all domestic stations and many police calls. Automatic volume control and full range manual volume control eliminat
fading ... always keeps your station at a constant volume level.
Heres a battery operatedtery tubes, combined with top circuit efficiency, assure you long battery life. Operates on any battery pack supplying $11 / 2$ volts "A" and 90 volts "B." Uses iH5 Diode, Audio and AVC, 3Q5 Power amplifier; 1 A7 First Detector and Converter; INS5 IF amplifier.
Model 1-405. Brown Cabinet. Size: $101 / 2^{\prime \prime} \times 43 / 8^{\prime \prime} \times 61 / 8^{\prime \prime}$ Shpg. wgt. 7 lbs. $\$ 19.95$ Your Cost, each, in lots of 3
Your Cost, in single lots
$\$ 20.95$
Model 1-404. Same as above except Ivory Cabinet. \$20.95
Your Cost, each, in lots of 3
$\$ 22.50$
Your Cost, in single lots
Battery Pac
Your Cont


## Radio-Phonograph Combination

## With Automatic Changer

Enjoy complete home entertainment. From records! From radiol And all at a price you can really afford. Thir beautifully styled Concord Radio-Phonograph Combination plays secords automatically-and at the flip of a switch brings you the fineat in radio enjoyment with eupreme clarity and tone quality. Its thrifty price will appeal to the budget minded-its distinctive cabinet and glorious performance will appeal to those who could pay much more. THE CABINET: Attractively styled to hasmonize with any surroundings. Beautifully fashioned of tine Walnut veneers. The top has been hand rubbed to bring out the beauty of the gorgeous grain. The heavy, warp-proof lid conceals the changer and eliminates needle noise. The radio tuning dial and controls are eanily accessible with. out raising the lid. This sturdily constructed cabinet will fit the top of any standard record utorage cabinet.
THE RADIO: A powerful superheterodyne with fine quality audio system for superb reproduction of both radio and records. Largo 5-inch PM dynamic speaker. Has built-in loop antenna and full range tone control. Uses two dual purpose tubes for top seven tube elficiency; 12SQ7GT Detector and first IF, 12SK7GT IF, 12SA7GT THE PHONOGRAPH: So ousy to and $35 z 5$ Rectifier. child can use it. Separate "Off"- "On"-"Reject" but tons make it completely fool-proof. The automatic changer holds 12 ten-inch or 10 twelve-inch records. You can hear your favorite symphony or enjoy piece after plece by your favorite artist without changing a record. The lightweight crystal pickup has the new "Floating Point" needle. You'll find this fine phonograph is the perfect companion to the top quality radio.
Model 1-505. Operates on $105-125$ volts, 60 cycle, AC only. Cabinet size is 20 inches wide, 15 inches deep, and 9 inches high. Shipping weight 35 pounde
Your Cost, each, in loti of 3 .
$\$ 47.50$
Each in single lots.

## An Exceptional Value!

## Portable Phono-Radio

## With Automatic Changer

What an opportunity to SAVEI Thousands of sattsfied users paid the nattonally advertised price of $\$ 94.50$ for this superb Phono-Combination. Now it's yours for only \$47.50 Hear it! Enjoy its full, rich tone and record breaking performance. Then you'll be convinced it simply can't be surpassed for quality construction ; ensational radio reception and record reproduction PLUS really good looks.
THE RADIO: 5 tubes plus Selenium Rectifier gives 6 tube performance on $540-1700$ KC Standard American Broadcant and Police Bands. Illuminated alide-rule dial. Higher undistorted output due to Selenlum Rectifier, over $11 / 2$ watts-approximately twice that of most other, comer parable seta. Continuously variable tone control gives deep throated to clear toned treble reception. Inverse foedback reduces distortion and hum. Fine speaker with Alnico V Permanent Magnet. Built-in antenza-no outside wires, connections for outsid aerial if desired. Automatic Volume Control. Power line filter, completely shiolded chassis, shock mounted variable condenper fiy shielded Condensers. Uses 12SA7, two 12SK7, 12SQ7, 50L6 and Selenium Rectifior
THE PHONOGRAPH: Simple and foolproof, quick and mooth record changer of latest dosign to play ten 12 -inch records or twelve 10 -inch records automatically with lid closed. Lightwoight crystal pickup with now Floating Point needle. Quiel self-starting motor, Featherwolght pressure tone arm. Tone arm firmly anchored when not in use .

THE CABINET, A wonder for beauty and downight convenience, this phono-radio will grace the finest living room, den or playroom. Its ruggedness and light weight make it ideal as a portable for shool, college, partios or picnics. All exposed surfaces finished in waterproof plastic treated leatherette.
Model 1-506. Size $203 / 4$ inches by $151 / 8$ inches by $83 / 4$ inches. Shipping weight 36 pounds. Operates on 105.125 volts, 60 cycle AC. Lint Price $\$ 94.50$
Your Cost, each, in lots of 3 .
$\$ 47.50$
Each in single lots.
\$49.50


## PORTABLE RECORD PLAYER

## * 3-Tube Amplifier

## $\star$ Special Tone Control

This portable electric phonograph will surprise and delight you with its excellen ans portion and superior performance. It plays your favorite recordings with amazing conntruction and superior performan in any room in the house or take it over to your power and All you have to do is plug it into a wall socket and it's ready to go. Plays any riends. All you have 12 -inch shellac, acetate or paper base recording or transcription standard 10 -inch and 12 -inch shellac, acetate or paper mith a tone quality and volume comparable to much higher priced portables. High fidelity thxee-tube amplifier provides ample volume for even crowded moms and loud parties. There's no need to readjust the volume for every record as a ooms "On" "Off" switch allows you to change the records without changing the separate $n$. volume. Individual tone control makes it easy to adjust treble or bass to just the righ pitch. The cover can be closed while playing to eliminate needle noise. The sturdily pitch. The cover can is covered with pebble tinished leatherette and has a strong plastic constructed cabinetis covered witlocking hinges hold lid open when changing records. Light-weight cryatal pickup reduces record wear and improves tone. Improved PM Light-weight crystal pickup reduces recoradlear mazimum volume without distortion speaker with efficient Anico magnet handies manches by 15 inches by $81 / 2$ inches Model C22653. Shipping weight 15 pounds.
Your Cost, lots of 3, each
\$22.95 Your Cont, aingly

## PORTABLE RECORD PLAYER With Automatic Changer

* Gentle on Records
* Play Ten $12^{\prime \prime}$ or Twelve $10^{\prime \prime}$ Records

Here's what you've been waiting forl A new portable phonograph equipped with an Here s what you ve been waing ion A new by ftself. All you have to do is plug it into automatic record a socket and listen to it play one recble aferd player gives you music wherever you for parties and dancing - this portable record player gith plenty of bass. Shaped like a want tt. The new design amplior suitcase, it's easy to carry too. of every inch of its 19 -inch length, 14 -inch widh and 12 , 2 -inch changes AUTOMATICALLY 10 twelve-inch or 12 ten-inch records at one siting Chargex is ruggedly builf and trouble-fzee. It's noiseless and it's fast.... only 5 seconds between recordsl Gentle action increases record life, decreases breakage. Easy to load it leis you enjoy almost three quarters of an hour of uninterrupted enterEasy to load it leis you enjoy almost three quartars with replaceable needle. Boasting many fine features usually found only in much costlier players, this portable phonograph delivers features usually found only in much cosiner plays. Uses 12SL7CT, 35L6 and 3525 tubes. the maximum in convenience and pieasure. sise leatherette. Self-locking hinges hold Sturdy case covered in attractive peperetes on 110 volts, 60 cycle, AC ouly. Shipping lid open when chds.
weight 20 pounds.
c22652. Your Cost, lots of 3, each
\$33.95 Your Cont, aingly

## WIRELESS RECORD PLAYER <br> With Antomatic Changer

* Play Through Any Radio
* No Connecting Wires Required

No connecting wires . . . yet you reproduce automatically through any radio within 75 feetl You can pul a stack of 10 twelve-inch records or 12 ten-inch records on the urntable and hear them reproduced through any radio in the house-even your car radio if it is within range. Volume and quality of reproduction in controiled by your home radio you have tuned to the wireless player. Uses quiet trouble.proot automatic record changer with Hghtwoight crystal pickup. Quickly adjusted for 10 -inch or 12 inch records with off-on reject switch conveniently located. Sixe $121 / 2$ inches by 11 inches by $81 / 2$ inches. Shipping weight 18 pounde.
C22651. Wireless record changer for $105-125$ voli, 60 cycle, AC only. $\$ 28.95$ Your Cost
phonograph C22656. Same as above except is a wired model. Plugs into standard phonogra lack. Operates on $105-125$ volt, 60 cycle, AC only. Shipping woight 16 pounds. $\$ 23.95$ Your Cost

## PORTABLE ACOUSTIC PHONOGRAPHS

## Hand Wound-Does Not Need Electric Current

Here is the portable phonograph you've always wished for-one you can play anywhere. Spring wound, it's perfect for picnics, summer homer, play rooms, etc. This new acouutic phonograph plays both 10 -inch and 12 -inch records with remarkable tone quality. The sturdily bullt wood case is lightweight, easy to carry or pack with luggage. It is covered with extra heavy duty leatherette and has a leather carrying handle. Strong hinge holds top open when records are being played. Lid has special handle. Strong hinge holds top open When rectler has apring type cover. A special compartment for carrying records. Need of the turntable. Winding handle of spring wound model is detachable and tits in a special carrying slot inside when not in use. Mound model precision made with "On". "Off" switch for turntable. Strong snap type locks Motor is precision made when not in use. Your choice of either spring wound or electric model.
C22657. Spring wound motor. Shipping weight 14 pounds.
Your Cost
$\$ 16.95$
C22658. Electric motor. Operates on 110 volts; 60 cycle, AC only. Shpg. wt. 14 lbs Your Cost



RCA Wire Recorder
Anyone, without previous recording experience, can make accurate, fine guality recordings. Merely plug cartridge in, turn on power and record or play! is required and it is not necessary to handle the wire. Recordings may be erased at your discretion and cartridge used for new recordings an indefinite number of times. Absolutely fool-proof! Timing dial built into cartridge is calibrated in minutes running time for both wires. Notationil of recording sequence can be made for future reference
LIGHTWEIGHT-PORTABLE-Carry it from room to room, office to office, or take it with you on your business trips. Weighs but $241 / 2$ pounds. A built-in SIMPIng handle permits carrying the instrument with ease.
Sions are PLUG IN CONNECTIONS-Microphone and Power cord connecat the rear of recorder. Terminals provided for connecting an external speaker Records the speaking or singing voice, or instrumental music. Ideally suited for: SCHOOLS-Educational institutions of all types will find numerous uses in music departments, speech group and foreign language classes.
BUSINESS MEN-Executives will find this Instrument a "third hand" in the recording of timely notes, interviews and conferences.
PUBLIC SPEAKERS-Public speakers, actors, clergymen and dramatiste can not find anywhere a more useful assistant in their daily work. Improvement of diction, enunciation, and delivery is assured through self-study.
MUSICIANS - For artists in all phases of musical endeavor, the wire recorder Black Platic for perfecting technique, studying performance, and rendition. and $93 / 4$ inches high. Complease measures $93 / 4$ inches wide. $121 / 2$ inches deep, microphone on 6 -inch desk stand microphone cable, power cord and plugamic Cet. No. C22539. Shipping weight 28 pounds. Your Ceat

WEBSTER Wire Recorder
Webster Model 80. Completely portable all-purpose recorder and playback unit using "Magnetic Wire Recording" principle. No needles to change, no blanks to watch-just flip a switch and stert recording. So simple a child can switches and involved operating procedures. For dictation in business offices, machine will do work of several cylinder-type recorders because of ease of erasing. Automatic erase operates at touch of unit ideal for on-the-spot ability to record continuously for one hour makes recorder or are required.
Mames. A single word or are permanent and can be replayed thousands of volume and tone controls tor reco program can be easily erased. Wide range and 3-tube amplifier for quality, self-contained playback. External speaker can be plugged into front panel. To amplify output for public address or other purposes an external amplifier and speaker can be connected.
Housed in attractive case, which when closed resembles an expensive leather covered overnight bag. Complete, ready to record, includes: Recording Mech(two 15 min, and one 30 min.). Measures: $173 / \theta^{\prime \prime} \times 113 / \beta^{\prime \prime} \times 71 / 2^{\prime \prime}$ with case closed. Cat. No. C22508. Shipping weight 32 pounds. © 49 Your Coit
C22507. Wire Recording Mechanism only, for building your own portable recorder or for permanent installations.
C16300. Extra 15 min apool C16301. Extra 30 min . spool C16302. Extra 60 min. spool
C16303. 10-ft. input cord assembly for connecting to radio. C16304. 10-ft. output cord assembly for external speaker or amplifier
MEISSNER Recorder-Phono
-Radio and Amplifier System


It's easy to make fine recordings with this high quality unitl A high fidelity cryetal cutting head assures faithful recording of program material and an excellent crystal microphone is furnished for natural sounding, lifelike recording. Normal and overload indicators simplify control of input levels and permit anyone to cut perfect discs. Easy to follow directions are given in the instruction Rad
Radio broadcasts recorded by simply switching radio to one of the recording channels. Separate volume controls for the microphone and radio input channels to the recorder allow programs to be mized and blended with recording studio technique. Two turntable speeds, 78 and $331 / 3 \mathrm{rpm}$, provide for up to 10 -inch disc recording and le-inch playback, with full control of tone and volume. band with excellent sensitivity and selectivity. Amplifier serves as announcer or public address system. With the microphone provided, the set is always ready for use before small gatherings. Provision made for connecting extra speaker where greater volume is required.
Everything you need is furnished with Radio-Phono-Recorder. Built-in radio and amplifier are equipped with full set of seven tubes; crystal "hand or stand" Complete unit, with cover is only $191 / 2$ inches square, $91 / 4$ inches high. Sturdy wooden case, with heavy airplane luggage finish is durable and attractively modern. Storage compartment for records in removable lid. Take the Radio-Phono-Recorder-Amplifier System with you wherever you go. Just pluginto any 115-volt, 60 -cycle source.
Cat. No. C22580. Shipping weight 52 pounds.
Your Coat

## REASONS WHY YOUR BEST BET FOR AMPLIEIERS IS CONCORD

## A Complete Line to Choose From

Your best bet for amplifiers is CONCORD because you have a complete line to choose from. Whether you need high power or low power, a portable or permanent system, a single record player or automatic changer you will find the one to fill your needs. And all at prices far below what you would expect to pay for top quality equipment.

## You Get Everything You Need Ready to Operate

Your best bet for amplitiers is CONCORD because all Concord amplifiers and systems come complete and ready to operate. You get everything you need including cables, connectors and plugs. All you have to do is set it up and plug into the electric outlet.

## Free Technical Service to Help You

Your best bet for amplifiers is CONCORD because at Concord an expert staff of engineers skilled by years of experience in all phases of radio, electronics and public address systems stand ready to assist you free of charge. No problem is too big or too small. All you have to do is write and ask, it's absolutely FREE!

## 27 Years of Dependable Service

Your best bet for amplifiers is CONCORD because you are dealing with a company that has been in the radio and sound business for over 27 years. You can buy with utmost confidence of receiving dependable service, fine performance and true reproduction. For you are buying a product of proven quality-proven by years of use.

You Can Pay for It While You Use It Your best bet for amplitiers is CONCORD because it's thrifty and easy to buy them on Concord's Time Payment Plan that lets you pay for the amplitier while you are using it. Yes, your credit is good at Concord. It's simple, it's easy-you can buy all of the wonderful new equipment you want with only a small down payment and take a year to pay the balance.

A. Complete Line Of Amplifiers To Choose From


Free Technical Advisory
Service To Help You


Backed By 27 Years Of Experience


## Have Enough Power To Do The Job

 The following information will serve as a guide in choosing the size (wattage) of amplifier required for various installations. Determine the seating capacity or room volume in cubic feet for indoor systems or the area in square feet for outdoor systems, refer to the chart below and the last section will indicate the recommended wattage of the amplifier to use. The first column of the last section is the required wattage for instal. lations with low noise levels, such as funeral homes, hospitals, quiet offices and warehouses. The second wattage column, where normal room noise is encountered, as in small restaurants, large offices, residential areas, light or medium manufacturing. The last column is for locations with very high noise levels such as heavy manufacturing, including boiler factories, pneumatic riveters, steel mills, large stadiums and outdoor street advertising or announcing.| Seating Capacity | Area Coverage |  | Required Watts |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indoors | Outdoors | Quiet | Normal | Noisy |
| $\begin{array}{r} 750 \\ 1500 \end{array}$ | $280,000 \mathrm{cu} . \mathrm{ft} .$ $600,000 \mathrm{cu} . \mathrm{ft}$ | 15,000 sq.ft. | 7.5 | 11.25 |  |
| $\begin{aligned} & 1500 \\ & 3000 \end{aligned}$ | $600,000 \mathrm{cu} . \mathrm{ft} \text {. }$ | 30,000 sq. ft . | 15 | 22.5 | 30 |
| 4500 | 1,800,000 cu.ft. | $60,000 \mathrm{sq} . \mathrm{ft}$ $90,000 \mathrm{sq}$. | 30 45 | 45 | 60 |
| 6000 | 2,400,000 cu.ft. | 120,000 sq.ft. | 45 | 67.5 | 90 |
| 7500 | 3,000,000 cu.ft. | 150,000 sq.ft. | 60 75 | 90 112.5 | 120 |
| 9000 | 3,600,000 cu.ft. | 180,000 sq.ft. | 90 | ${ }_{135}^{112.5}$ | 150 180 |

## Use The Right Microphone In The Right Place

 Fidelity is the accuracy with which a microphone reproduces sound. The wider the range, the more normal will be the sound from the speakers. In general, where conditions of feedback are likely to be en-countered, a uni-directional type of microphone is best. Bi-directional, or velocity, types are recommended for studio and recording purposes but not for outdoor work, as serious distortion is introduced by the effects of wind. Crystal microphones are considered good all around instruments except where temperatures of 120 degrees or more are encountered. Dynamic types are more rugged and can be used indoors or outdoors, but are generally more expensive than crystal microphones. For complete information on uni-directional, bi-directional and semi-directional microphones see the microphone section in the following pages.
It is always advisable to locate the microphone of a sound system in such a position that the least amount of sound from the loud speakers will re-enter the mike. Wherever possible, operate the microphone as close as possible to the amplifier or try to keep the length of the microphone
cable as short as possible.


Select And Locate Speakers Carefully
When selecting a speaker or speakers, it is advisable to have the total wattage ratings of the speakers equal to or greater than the wattage output of the amplifier you have selected. If intended to use a 30 -watt amplifier, a 10 -watt speaker can be used by itself, but it would not be capable of handling the full output of the amplifier. Therefore more 10 -watt speakers would be recommended, or if one speaker only is to be used, we would recommend one with a 30 -watt rating. All speakers
shown on our speaker pages have a power handling rating shown on our speaker pages have a power handling rating indicated in watts. All speakers should operate in some kind of enclosure, to protect the speaker and act as a sounding board. Several types of enclosures or baffles are available and fully described on the page listing baffles. Speakers should be mounted in such a manner that they will reproduce the sound to the desired location only Remember sound can be distributed by wire more easily than by air. Consequently an announcement or call made into a microphone at a location such as a telephone switchboard can be conveyed to various selected locations in a large building by merely placing the speaker in the proper area. It is recommended to use more speakers in order to distribute sound properly and tend to saturate the area with sound rather than have it blast from one speaker and create unnatural effects. For instance, in a large church with a high dome and ceiling and hard walls, one or two speakers would cause the sound to reflect from the walls in all directions and possibly create an echo effect as well as distortion. By using two or more speakers on each side of the church walls and not too high from the floor, a soft mellow effect would result with the sound properly distributed only where it is required, that is, in the seating area and not at the dome or ceiling.


## Choose Accessories To Fill All Youx Needs

After selecting an amplifier with the proper wattage and determining the number and location of speakers and microphones, decide whether a phonograph will be required and if an output indicator is necessary. The Concord Multiamp Amplifier is available with a built-in output level indicator and can also be equipped with a single record phono top or an automatic record changer, giving you all the features you need in one unit! Regardless of whether you need a portable or permanent system, a large or small unit, you can find the correct sound equipment to fill your needs in the following pages. If you have a special P.A. problem consult Concord's free Technical Advisory Service for the help of expert
sound engineers.

## PORTABLE SYSTEM

* Ideal for pitchmen, store demonstrations and lecturers
* Compactly designed, lightweight-it's really portable
* Conservatively rated at 7 watts output
$\star$ Covert audiences up to 700 people
Here is an amplifying system that has been especially designed to fill Here is an ampliying system that has been espectally designed the whall audience coverage. Here is a low power amplitier with the dependa. bility and fine performance of a large unit.
Soparate Inputs For Microphone and Phonograph. Fader confor microphone-phonograph controls volume and lets you change from one to the other smoothly, easily, as you desire. Almosi any external type phonograph can be used.
Compact Design Makes Carrying Easy. Lightweight with everything in one case it'e really portable. The 8 -inch PM speaker is mounted in a strong, leatherette covered, wooden case. This case also holds the amplifies and the microphone. Four strong snap locks hold the lid securely closed when being carried.
The 7 Wett Amplifier has a recessed, indirectly illuminated front panel and is mounted in an attractively styled cabinet. Output transformer is mounted in the amplifier so that a aecond speaker can easily be added. Tubes consist of 1-6SL7, 1-6L6 and 1-5Y3. Extremely low hum level- 60 db below rated output, 102 db gain on microphone channel, 70 db gain on phono channel, output impodance tapa at 4 and 8 ohms. Has one fader volume control, one tone control and rotary "On"."Off" switch. Steol cabinet has a burgundy wrinkle finish and is open at the back for easy access to chassis.
Cat. No. 2-100. 7 watt Reliance Amplifier complete with tubes, inetruc. tions and all necessary comnecting plugs. Sh. wt. 18 lbs . 21.75 Your Cost
stom shown at
Cat. No. 2-101. 7 watt Reliance Portable Amplitior System shown at the right. You get everyihing you need ready to operate. All you have to do is set it up. System consists of 7 watt Reliance Amplifier complete with tubes, all necessary connecting plugs, Shure model 18 -teat of cable microphone with cable, 8-inch P.M. speaker with amplifier. Shipping mounted in portable case that also horght pounds.
weigh Your Cast


## PERMANENT SYSTEM

$\star$ Ideal for clubs, recitals, and amall gxoups
$\star$ Output transformer is mounted in the amplifier

* Sepaxate input* for microphone and phonograph
* You get everything you noed-a complete systern

For all around dependability and superb pertormance here is a truly remarkable value in a low power amplifier. lts 7 watts output cover audiences up to 700 people making it an ideal aystem for clubs, restaurants, small halls, music recitals, call systoms, schools, offices o anywhere that a limited area is to be served. Compactly designed, it is built of the finest materials and components and expertly engineered to the highest standards of performance.
A Complete System. You get everything you need including amplifter, speaker, wall baffle and microphone, speaker cable and micro phone cable. All you have to do is set it up.
The Amplifier. The 7 watt amplifier is the same fine quality Reliance amplifter described in the portable system above. The tone control has broad variation to suit your preference or the acoustics of the place where the amplifier is to be used. With the output tranuformer mounted in the amplifier a second speaker can eavily be added. Overall frequency sesponse is from 70 to 10,000 e.p.s.
The Spenker. The speaker is a Concord PM 8-inch with extremely fine trequercy response. It has 35 feet of speaker cable.
The Wall Baffle. The fabricoid wall baffle is designed to accommodate the 8 -inch speaker. It is sturdily built and correctly angled to provide coverage over a wide area.
The Microphore. Shure Model 718A Versatex complete with 7 feet of cable. Has an RFfilter

Cat. No. 2-102. 7 watt Reliance Deluxe Permanent System shown at the right. All you have to do is set it up. You get everything you need ready to operate. System consiste of 7 watt Reliance Amplifier complete with tubes and all necessary connecting plugs, Shure model 718A Versatex microphone with cable, fabricoid covered wall baffle and B-inch P.M dynamic speaker with 35 feet of cable. Shpg. wgt. 32 lbs Your Cost
$\$ 32.80$
Cat. No. 2-103. Same as $2-102$ above except with 28 -inch spakers 70 feet of cable and 2 wall baffles. Sh. wt. 42 lbs.
$\$ 38.95$
Your Cost
22.) A top

Cat. No. 22047. Microphone Floor Stand. (Shown on page the syatem quality, chrome-plated, telescopic stand for use with either ol Shipping above. Height is adjustable from 35 inches to 68 inches. Shipping
weight 19 pounds. Your Cost

# Reliance <br> 7 Watt AMPLIFIERS and SYSTEMS 



## 15 and 30 watt CONCORD DELUXE

## Compare These Features With Any Other 15 Watt Amplifiex

- TTubes
* 15 Output Impedances
* 2\% Distortion
* 2 Dual Purpose Inputs


## Flexibility of Input and Output

Two dual purpose input channels are provided, each of which has two input facks, one for microphone and another for phono player inputs. Thus the amplifier can operate with 2 mikes or 2 phono inputs simultaneounly, or 1 phono and 1 mierophone. Microphone and phono inputs may be mixed with the smoothness of broadcast studio equipment. The microphone input gain of 110 db . is more than enough to match any high quality milcrophone or other input device. Power output is conserv. atively rated at 15 watts output. It has only $2 \%$ distortion at normal rated output and at peak power.
Fifteen output impedances are provided in order than an exact imped. ance match may be effected with any output device or line; thereby affording greater efficiency and consequently requiring less power to cover a given area. An imprinted chart is permanently screened on the bottom coves plate linting impedances (see "SPECIFICATIONS"). Bass-Treble type tone control is provided, affording a tonal range from a deep mellow bass to a crisp high treble. This well tapered tone control will make possible the compensation of acoustical differences.

## Advanced Circuit Denign

High gain tubes and parts are mounted on shock absorbing mounts to prevent microphonic noises that frequently occur with amplifiers when rubber shock mounting is not used. Input stages are coupled to the output stage by the transformer method which provides better overload performance. The 15 watt output atage employs the patented beam focusing circuit which affords great elficiency of power conversion. The resulting high quality output of this amplifier is truly remarkable and is to be equalled only in higher power amplifiers at far greater coat. Streamline Design Cabinet
Cabinets are constructed of sheet steel and cast aluminum for lighter weight and better heat dissipation. Handles are cast into the cast aluminum sides, thereby eliminating the old style protruding handles which are ugly and add to the overall sire. Cabinets are finished in two-toned burgundy enamel and wrinkle with polished aluminum borders for decorative effects. Knobs are of a contrasting ivory tone. Amplifier top is arranged to allow for maximum ventilation.

Phonograph Top Available. The top panel of both the 15 and 30 watt models can be removed and replaced by a new panel housing the phono motor. This panel is drilled beneath the phono turntable in order to provide adequate ventilation for the motor and the amplifier. All con nections come lrom a panel on the back for protection againgt damage. Available in Permanent and Portable Syrtems. You can buy aither the 15 or 30 watt amplifier only, or, you can get either one in a complete portable or permanent syatem that's ready to operate.

## 30 Watt Concord Deluxe Amplifier

Designed to cover indoor audiences up to 3000 people and outdoor areas up to 60,000 sq. It. it's an ideal unit for ballrooms, railroad terminals, churches and theatres. It has the same universal type inputs, focused beam circult, modern cabinet and other features of the 15 Wat Concord Deluxe described at the left except for power, impedance taps and some other specifications shown below

## Specifications of $\mathbf{3 0}$ Watt Concord Deluxe Amplifiex

30 watts, 70 volts Normal Powes Output. $5 \%$ Distortion. 40 watts Peak Power Output. 2 Microphone Inputs. 2 Phono Inputs 60 db Phono Gain. 105 db Microphone Gain. 55 db Hum Level. 50.10000 c.p.s. Frequency Response. Bass-Treble Tone Control. Two gain controls with phono and microphone input on each. 4, 8, 166 ohms output impedances. Operates on 110 watts at 117 volts, AC, 60 cycle. Tubes: 2784, $1-757,4-6 \mathrm{~V} 6$ and $2-6 \mathrm{X5}$.
Size: $15^{\prime \prime}$ by $10^{\prime \prime}$ by $8^{3} h_{0^{\prime \prime}}$. With phono: $15^{\prime \prime} \times 10^{\prime \prime} \times 10 K_{t^{\prime \prime}}$.

## Accessories for Concord Deluxe Amplifiers

Cat. No. 2-107. Accessory Phonograph Top for Concord Deluze Am. plifiers (see D on opposite page). Shipping weight 9 pounde. \$11. 50
Cat. No. 20077. Deluxe All-Steel Projector (se日 B on opposite page) for 12-inch speaker. Can be used with any Permanent System. Shipping weight 13 pounds. Your Cost, each.
$\$ 10.53$
Cat. No. 20056. 12-inch Leatherette Coverad Wood Wall Baffles (see C on opposite page). Can be used with any of Permanent Systema Shipping weight 6 pounds each. Your Cont; aach................. $\$ 4.10$

## SPECIFICATIONS

## 15 Watt Concord Deluxe Amplifier

Normal Power Output 15 watts; Peak Power 30 watts
Distortion
$.2 \%$ at 15 watts
each at 110 db .
Microphome Channels-2
Phono Channels-2
Bass-Troble Tone Controi.
Hurn Level............ 55 db . below full signal
Frequency Response. .... 50 to 10000 c.p.s.
15 OutputImpedances: 1.3 2.7, 4, 5.3, 8, 16 , $125,167,180,200,250,415,460,500$, and 600 ohms.
A.C. Line Power Requirements: 117 volts, 60 cycles, 70 watts; with phono 84 watts.
Tube Line up: 4-6SJ7, 2-6V6 GT, 1-6X5.
Dimerriont: $15^{\prime \prime}$ by $10^{\prime \prime}$ by $83 / 6^{\prime \prime}$.
With Phone: $15^{\prime \prime}$ by $10^{\circ \prime}$ by $10^{\circ} / 6^{\prime \prime}$.



## 15 Watt Concord Deluxe Amplifiers and Systems

Cat. No. 2-105. 15 Watt Concord Deluxe Amplitier (khown on page at left) with tubes, instructions and necessary con necting plugs. Shipping weight 22 pounds.
$\$ 37.50$ Your Cost.
Cet. No. 2-108. 15 Watt Concord Deluxe Portable System (shown above). You got everything you need ready to operatel All you have to do is set it up. Syatom consists of IS Watt Concord Deluxe Amplifier, two 12 -inch Alnico V G.E. PM speakers with 70 feet of cable and mounted in carrying casen that also hold the amplifiers. Shure model 707A20 microphone (see B on opposite page) with 20 feet of cable and a floor stand. Shipping weight 70 lbs. $\$ 78.50$
Cat. No. 2-109. Same as $2-108$ above except with a Turner model 22 X microphone (see E on opposite page) with 20 feet of cable instead of the Shure model 707A20. Sh. wt. 70 lbs. Your Cost
$\$ 81.65$
Cat. No. 2-110. Same as 2-108 above except with a Electrovoice model 610-20 microphone (see C on opposite page) with 20 feat of cable, instead of the Shure model 707A20. Sh. wt. 70 lbs. Your Cost
Cat. No. 2-115. 15 Wat Concord Delure Permanent System Com Cat. No. 2-115. 15 Watt Concord Delux Permanent System. Com plete, ready to operate. All you have to do is set it upl Syatem consists of 15 Watt Concord Deluxe Amplifier, two 12-inch G.E. PM speaker (see A below) each with 35 feet of cable. Shure model 707A20 micro phone (see B on opposite page) with 20 feet of cable and a floor stand. Shipping weight 63 pounds.
$\$ 64.80$ Your Cost
Cat. No. 2-116. Same as 2-115 above except with a Turner model 22 X Cat. No. 2-116. Same aspone (see En opposite page) and 20 leet of cable instead of the Shure model 707A20. Shipping welght 63 pounds.
. $\$ 67.95$
 $610-20$ microphone (see C on opposite page) with 20 feet of cable in. stead of the Shure model 7O7A20. Shipping weight 63 pounds. Your Cost.

## 30 Watt Concord Deluxe Amplifiers and Systems

Cat. No. 2-106. 30 Watt Concord Delure Amplifier (shown on page t left) with tubes, instructions and necessary connecting plugs. Shipping weight 25 pounds.
$\$ 54.95$

## Your Cost

Cat. No. 2-111. 30 Watt Concord Deluxe Portable System (shown above). You get everything you need ready to operatel All you have to do is et it up. System consists of 30 Watt Concord Deluxe Amplifier do 12 G Alnico V PM speaters with 70 feet of cable and wo mo7A20 inicrophon (see B on opposite page) with 20 feet of cable and
 Your Cont
Cat. No. 2-112. Same as 2-111 above except with a Turner model 22X microphone (see E on opposite page) with 20 feet of cable instead of the Shure model 707A20. Shipping weight 73 pounds.
Your Cost.
$\$ 99.10$
Cat. No. 2-113. Same as 2-111 above except with a Electrovoice model $610-20$ microphone (see C on opposito page) with 20 feet of cable, ingtead of the Shure model 707A20. Shipping weight 73 pound Your Cost
Cat. No. 2-118, 30 Watt Concond Delure Permanent System Com plete, ready to operate. All you have to do is set it upl System consists of Whatt Concord Delure Amplitior, two 12-inch G.E. PM speakers (see A below) each with 35 feet of cable. Shure model 707A20 microphone (nee B on opposite page) with 20 leet of cable and floor stand. Shipping weight 66 pounds.
Your Cost
$\$ 82.25$
Cat. No. 2-119. Same as 2.118 above except with a Turner model 22X microphone (see E on opposite page) and 20 teet of cable instead of the Shure model 707A20. Shipping weight 66 pounds.
Your Cost
$\$ 85.90$
Cat. No. 2-120. Same as 2.118 above ercept with a Electrovoice model
$610-20$ microphone (see C on opposite page) with 20 feot of cable instead of the Shure model 707 A 20 . Shipping weight 66 pounds. Your Cost


32 Watt Amplifier and System
For the finest moblle installatione-here are doluxe system that have everything, 32 watts of power is provided at leas than $5 \%$ distortion. 35 watts of power is available when needed.
Three separate input chanmelg: two for high impedance miorophones; one for high impedance phonograph. All can be mired and possible control of frequency response to compensate for the varying conditions encountered in mobile sound work. This exclusive feature permits individual boonting or attenuation of the bass and treble registers.
Completely eelf-contained. The contant apeed phono-motor is protected by a hinged cover. A str-volt DC and 115-volt AC power supply is built in. Changeover is automatic and foolproof. A standby switch on the illuminated sloping control panel disconnect. B supply, but keeps increased and the syatem is ready at all tumes for inntant use. Provision is mado for standby operation from a remote point. Nothing has been spared in making these systems the very tinest in universal mobile sound syetems. Used indoors or out, on 6-volt DC or 110 -volt AC, they will provide rugged, faulless, high quality performance.
Cat. No. 2-122. 32 Watt Mobile Amplifier with phono for operation on 6 -volt DC and 115 -volt AC, 60 cycle. Complete with tubes and 6 -volt and 115-volt power cables. Shipping weight 60 pounds. \$142. . 400
Cat. No. 2-126. 32 Watt Mobile Amplifier Syatem. (Shown above.) Congiats of 32 Watt Mobile Amplifier, 2 University Projectors each with a $25-w a t t ~ d r i v e r ~ u n i t ~ a n d ~$
Han-D-Dynamic microphone with 20 oable and a Turner model 9D
fable. (See $A$ below.) Shipping woight 93 pounds. with 20 feet of cable. (See A below.)
Sour Cond Your Cost.
Cat. No. 2-127. Same as $2-126$ above except with a Eleotrovoice model 950 Cardax (see C bolow) and 20 feet of cable instead of the Turner model Cont...D-Dynamic miorophone. Shipping weight 95 pounds. Cat. No. 2-128. Same as 2.126 above excopt with a Shure model 55 Unidyne (see B below) and 20 feet of cable Instead of the Turner model 9D Han-D-Dynamic microphone. Shipping weight 97 pounde.
Your Copt.

19-23 Watt Amplifier and System
Can be operated on dither a 6 volt atorage battery or on 115 volts AC. Conversion from on power supply to the other is automatic and foolproof. Rated as a 20 -walt amplifier, actually produces 23 watts on AC current and 19 watte on DC current at less than $5 \%$ divtortion.
Twe input channels are provided: one for high impedance microphone; one for the built-in constant speed phonograph. The 2 ohannola have gain controls and can be mired and iaded. The tone compensator effects individual control of troble and bass frequencies.
Two power switches, mounted on the four-color control panel, permit separate control of amplifier and phono-motor supply.
inside and Out-here is a thoroughly engineered amplitier. Two-tube rectifier circuit, push-pull output, eauily accessible controls and connectors, and terminal board mounted components.
parars and Out-These mobile systems are perfect for rallies, fairs, parades and ntraightforward indoor or outdoor PA work.
Cat. No. 2-121. 19.23 Watt Mobile Amplifier with phono for operation on 6-volt DC and 116 -volt AC, 60 cycle. Complete with tubes and 6 -volt and 115 -volt power cablen. Shipping woight 46 pound.
$\$ 98.49$
Cat. No. 2-123. 19-23 Watt Moblle Amplifier Syatem. (Shown above.) Conasts of 19.23 Watt Mobile Amplifier, 2 heavy duty GE 12-inch PM speakers each with 35 teet of cable, 2 spun steol sound projeotors and
a Tumer model 9D Han-D-Dyamio microphone. (See $A$ below.) Shipping woight 93 pounds. \$148.40 Your Cont
$\$ 148.40$
Cat. Ne. 2-124. Same as $2-123$ above except with a Electrovoice model 950 Cardas (see C below) and 20 teet of oable inatead of the Turaer model 9D Han-D-Dynamic microphone. Shipping weight 95 pounds.
Cat. Ne. 2-125. Same at $2-123$ above except with a Shure model 55 Unidyne (see B below) and 20 feet of cable instead of the Turner model 9D Han-D-Dynamio microphone. Shipping woight 97 pounds.
Cat. No. 22047. Adjustable Floor Stand. (See D below.) Ad $\$ 161.75$ from 35 inohes to 68 inches. For use with any mobile syntem. Shipping weight 19 pounds.
.54 .69
SPECIFICATIONS - MODEL 2-122
POWER OUTPUT: 32 watte at less than $5 \%$. Paak power: 40 watts.
FREQUENCE RESPONSE: $30-12,000$ cycles plus or minu: 2 db .
GAIN: Microphone: 120 db . Phono: 70 db .
HUM: AC: -70 db ; 6-volt DC: -60 db .
INPUT IMPEDANCE: Microphone channels (2), 500,000. Phono channel (1), 500,000 ohms. OUTPUT IMPEDA NCE: 4-8-15-250-500 ohms. Available at terminal etrip and two built-in speaker sockets.
POWER CONSUMPTION: 120 watt, 117 V AC: 28 amp. 6 V DC.
TUBES: Total 8: 3-6SF5, 2-6SL7GT, 2-6L6G, 1-5U4G.
DIMENSIONS: 16 inches long, 16 inches wide, 101/4 inches high.


SPECEFICATIONS - MODEL 2-121
POWER OUTPUT: AC: 23 watt at $5 \%$; DC: 19 watte at $5 \%$. Peak power: AC: 39 watta; DC: 30 watts.
FREQUENCY RESPONSE: $30 \cdot 14,000$ cyales plus or minus 2.5 db .
GAIN: Microphone ohannel: 109 db . Phono channel: 67 db .
HUM: AC: Fund: -66 db ; Mic.: -55 db . DC: Fund: - 69 db ; Mic.: -58 db .
INPUT IMPEDANCE: Microphone ohannel (1): 500,000 ohme. Phono channel (1): 500,000 ohms.
OUTPUT IMPEDANCE: 4.8-15.250-500 ohms, available at both terminal strip and two speaker mockets.
POWER CONSUMPTION: 90 watts, 117 V AC; 17.5 amps, 6 V DC. TUBES2 Total 6: 1-6SJ7, 1-6SL7GT, 26L6G, 2-6X5GT.
DIMENSIONS: $151 / 2$ inches long, 10 inches deep, $121 / 2$ inches high.


Plug-in power
 distortion


It expands with your needs


Add-A-Unit Chassis


Dual tone control

## Engineered for Tomorrown AvailableToday its Exclusive ar CONCORD

On the following pagea Concord presents it's Multiamp Amplifiera. An entirely modern line of amplifiers ....modern in conception and design... modern in construction ... modern in performance. These Multiamp Ampliffers are not prewar models in a new cabinet but are completely new inside and out. For all of the engineering "know how," the technical skill gatned in over 15 years of work with sound systems has gone into Multiamp Ampliffers step by step to create an amplifier that if amaxingly new and belter in performance. The entire Multiamp line is an ontirely now and original concept in amplititer design. Jupt line is an ontirely now and original concept in ampliter design. Jugt compare the many fea
Plug-in Power For More Wattage At Less Cost
When you want more power you aimply plug-in additional inezpensive power stages. Instead of requiring three different amplifiers to cover power ntages. Instad of requiring hreed onfy one with inerpensive 30, 50 or 75 watt jobs you now need onty one with inerpensive you can have 30,60 or 75 watt power in one case.

## Dual Tone Controls For Delicate Tone Shading

Every Multiamp Amplifier has eeparate bass and treble tone controls. You can accentuate or attenuate high or low frequencies without You can accontuate or aftenuate high or low frequencies without affecting the opponite trequency range, By attenuating both controls intelligibility. With this dual tone control you always have purity of tone even at full volume. You get fatthful reproduction of even the mont delicate tones.

## 15 Output Impedance: For Greater Flexibility

You can match any combination of speakers indoors or outdoors. Whether your problem involves extra apeakers, a special line, or some new piece of equipment such as a recorder you can eanily and quickly solve it if your amplitier is a Concord Multamp. The 15 output impedancer are $1.3,2.7,4,5.3,8,16,125,167,180,200,250,415,460$, 500 and 500 ohms. Inputs are provided to accommodate up to 2 microphones and 2 phono pickups.

## Patented Focused Beam Circuit For Greater Efficiency

In conventional beam power circuits, under heavy load, during the portion of the cycle in which the plate potential drops considerably below the screen potential, electrons are diverted from their normal path and attracted to the screen resulting in excessive screen current (overload), distortion and shorter tube life. In Multiamp Amplifiers
this offect is greatly reduced by applying an initial plate potential appreciably higher than the screen potential and further supplying the screen voltage from a resistance network. This lowern the screen potential under heavy loads, resulting in fewer electrons being attrocted to he screen, or diverted from the focused path thus avolding screen overload, dietortion and ecreen deterioration. This resulte in more than $50 \%$ additional undistorted output power and longer tube life, constant plate current, quality comparable to a elass A triode, extreme stability, practically no driving power and only $2 \%$ harmonic diatortion at the rated output. The cost is actually lower than a stand ard circuit giving less output.

## EXPANDABLE-It Grows With Your Needs

Regardless of how mall a Multiamp unit you start out with and regardless of how your needs change, your Multiamp Amplitier will never become obsolete. For the exclusive Add-A.Unit feature lets Multiamp grow with your needs, You can easily and quickly add an accessory phono player top, neon output indicator, automatic record changer, power itages or booster amplitier. You can increase a 30 watt Multiamp Amplitior to 60 or 75 watts and a 45 watt Multiamp Amplifier to 75 or 90 watte dimply by plugging in a power stage. You don't have to buy a new amplifierl

## Sturdily Constructed For Years and Years of Use

You can depend upon Multiamp Amplifier for faithful service year after year because not even the smallest detail has been overlooked. All input and output jacks and connectore are recessed for protection. All high gain atagen are shielded from the output and power stages insuring a low hum level. Carrying handles are recessed in the cast aluminum onds. The top is ventilated. The indirectly illuminated front panel has a amooth burgundy finish with ivory nomenclature. The rest of the cabinet has a two-tone wrinkle burgundy finish with aluminum trim. A matching chart for the 15 output impedancea is printed on the bottom cover plate. The multiple ohassis makes it easy to service unit by unit.

## Multiamp's Value Has Been Proven By Use

Botore a single Multiamp Amplitier was made, all of the designs and parts were tested and compared with other amplifiers by akilled sound enginears. Then, a little more than a year and a half ago, Multiamp Amplifiers were offered to Concord'e customers. The acclaim of thousands of users during the first 18 months has proven what the laboratory technicians discovered-that Concord Multiamp is the best amplifier you can buy.


Amplifier in case


Amplifier case closed


Speaker case closed

## SPECIFICATIONS*

## 30 Watt Multiamp Amplifier

Output: 30 Watts, Normal, 60 Watts Peak Power.
Distortion: Total Harmonic, $2 \%$ or Less.
Channels:
2 high gain microphone channels
2 phono or program channels
Gain:
Microphone Channels 116 db .
Medium Gain Channels 80 db
Tone Controls: 2-1 Bass, and 1 Treble, 25 db range.
Hurn \& Noise: Mike channels: 60 db below 30 watts
Frequency Range 30 to 10,000 cycles adjustable.
Impedance:
$1.3,2.7,4,5.3,8,16,125,167,180,200,250,600$ ohms. Tube lineup: 2-6SO7's, 1-7F7, 1-7A4,4-6V6's \& 2-724 Line Drain: @ 117 volts, 60 cycle A.C. is 120 watts, with phono 140 watts
Dimensions:
$181 / 2^{\circ} \mathrm{W} \times 141 / 4^{\circ} \mathrm{D} \times 103 /^{\circ} \mathrm{H}$, with phono $123 /^{\circ} \mathrm{H}$, with changer $1^{\circ}{ }^{\circ} \mathrm{H}$

## 45 Watt Multiamp Amplifier

All Specifications same as above except:
Output, Normal 45 watte, 90 watts Peak Power
Lime current, 117 volts, 60 cycles, 165 watts, with phono 185 watts
Trube Lineup, 2-6SO7's, 1-7F7, 1-7A4, 6 6V6's and 2-5Z4's
*All specilications shown on the Concord Amplifiers are based on using tubes having RMA average values, and line voltage set in the 120 volt tap position.

## It's Portable, It's

* Plug-in power up to 90 watts
$\star 15$ separate output impedances
* Individual bass and treble tone controls
$\star$ Only $2 \%$ harmonic distortion at rated output
* All accessory equipment fits into the base cabinet
* Available in portable and permanent gystems
* 30 watt for audiences up to 3000 ; 45 watt up to 4500

Here in the flexible amplifier that you've always warted-an amplifier that grows with your needs. For here is a 30 watt amplifier that can be increased to 60 or 75 watts and a 45 watt amplifier which can be increased increased to 75 ort 75 watts and a 45 watt amplifier which can be increased "Add-A.Unit" feature of Concord's Multiamp Amplifiers makes the expense of a new amplifier unnecessary when a higher output is needed. You don't even need a new cabinet, for these power stages are built as integral plug-in units requiring only a screwdriver to change the overall output wattage of the amplifier.
Universal input and output. The inputs accommodate up to 2 microphones and 2 phono pickups, Input and output jacks and connectors are recessed to protect them from damage. Skillful designing of these units has shielded the high gain stages from the output and power stages to insure the lowest possible hum level. The 15 separate output impedances make it easy to match any combination of lines or speakers. The 15 output impedances are 1.3, 2.7, 4, 5.3, 8, 16, 125, 167, 180, 200, 250, $415,460,500$ and 600 ohme.
Individual controly for bass and treble reproduction make pos. sible delicate tone shading and full bodied volume as you can attenuate or accentuate either the high or low frequencies without affecting the opposite frequency range. By attenuating both of these controls it is opposite frequency range. By attenuating both of these controls it is possible to limit the response of voice trequencies for maximum intelof the many features that make Concord Multiamp Amplifiers "tops" in the PA system field
All accessory equipment fits into the same cabinet at the amplifier. You can add a phono top or an automatic record changer top and a visual type output meter and have one compact unit with all of the controls on the front panel within easy reach of the operator. The accurate visual type output meter enables even the inexperienced operator to monitor remote speakers and maintain proper output level. Essentially it consists of two neon indicators, one marked "Normal," and the other marked "Overload." A calibrated dial ollows the operator to set the output at any predetermined value of the total amplifier output. When this preset level is reached, the first neon indicator lights. When the pre-set level is overloaded, the second neon indicator lights. Thus any operator can easily keep a close check on actual performance.
Portable system amplifiers are housed in a two piece carrying case attractively covered in handsome tan simulated rawhide leather. The pair of 12 -inch PM dynamic apeakers are housed in bass reflex enclosurea for perfect bass response. These enclosures are so designed that they form a two-piece carrying case covered with the same material as the amplifier case. Each speaker has a 35 -foot cable with male and fomale plugs.
Multiamp Amplifiers are the product of the finest engineering skill, nothing has been overlooked. The burgundy smooth tone front panel is illuminated by indirect lighting. Carrying handles are recessed in the cast aluminum ends. The top panel is ventilated. An output impedance chart is printed on the bottom cover plate. Cabinets have a twotone burgundy wrinkle tinish and polished aluminum trim. A line two-tone burgundy wrinkle inish and polished aluminum trim. A line needs as they are expandable. Just Add-A-Unit as needed!

## AMPLIFIERS $_{\text {and }}$ SYSTEMS

## Add+A+Unit 30-45 Watt Power Stage

## Add $+\mathscr{A}+$ Unit Output Indicator

## Add $+\mathscr{A}+$ Unit Phonograph Top <br> Add+ft+Unit Record Changer

## Permanent, It's Exclusive at Concord

## 30 Watt Multiamp Amplifiers and Systems

 Cat. No. 2-200. 30 Watt Multiamp Amplitier. With tubes, instructions and connecting plugs. Shpg. wt. 38 lbs .$\$ 86.25$ Your Cost

4 on page
Cat. No. 2-205. 30 Watt Multiamp Portable System. (Shown on page at left) You get everything you need ready to operate. All you have to do is set it upl System consiste of 30 Watt Multiamp Amplifier in carrying case, two 12 -inch G.E. PM soakers in carrying cases. Electrovoice Crystal microphone model 910-20 (see $A$ below) with 20 .feet of cable and a floor stand. Shpg. wt. 116 lbs .
$\$ 142.60$

## Your Cost

Cat. No. 2-206. Same as 2-205 above except with a Shure model 737A Monoplex Crystal microphone (see B below) and 20 -feet cable, in stead of Electrovoice $910-20$ microphone. Shipping weight 116 lbs. Your Cont
$\$ 146.60$
Cat. No. 2-207. Same as 2-205 above but with a Electrovoice model 950 Cardar Crystal microphone (see C below) and 20 -feet cable instead of Electrovoice $910-20$ microphone. Shpg. wt. 116 lbs.
. $\$ 149.00$
Your Cost. No. 2-212. 30 Watt Multiamp Permanent Systom. You get everything you need including 30 W att Multiamp Amplifier (shown on page at left), complete with tubes, connectors and, 70 ft. speazer cable, (wo heavy duty 12 -inch G.E. PM speaker (see G below). Electrovoice microphone model 910-20 (see A below) with 20 -feet of cable and floor stand. Shipping weight 70 pounds.
$\$ 114.95$ Your Cost
Cat. No, 2-213. Same as 2-212 above but with a Shure model 737A Monoplex Crystal microphone (see B below) and 20 -feet of cable. Monoplex Cleastrovoice $910-20$ microphone. Shpg. wt. 70 lbs . Your Cost
$\$ 118.95$ Your. No. 2-214. Same as 2-212 above but with a Electrovioce model 950 Cat. No. 2-214. Same as 2-2 12 above but with a Electrovioce model 950 Cardaz Crystal microphone (see C below) and 20 -fee
of Electrovoice $910-20$ microphone. Shpg. wt. 70 lbs.
Your Cost
$\$ 121.45$

## 45 Watt Multiamp Amplifiers and Systems

 Cat. No. 2-201. 45 Watt Multiamp Amplifier. With tubes, instructions and connecting plugs. Shpg. wt. 47 lbs$\$ 95.75$

## Your Cost

hown on page at left) You get everything you need ready to operate. All you have to do is set it upl Syatem consiste of 45 Watt Multamp Amplifier in carrying case, two 12 -inch GE P.M. opeakers in carrying cases. Electrovoioe Crystal microphone model $910-20$ (see A below) with 20 -feet of cable and a floor stand. Shpg. wt. 120 lbs .
Your Cost Your Cost
Cat. No. 2-209. Same as $2-208$ above but with a Shure model 737A Monoplex Crystal microphone (see B below) and 20-feet of cable instead of Electrovoice $910-20$ miorophone. Shpg, wt. 120 lbs . Your Cost
. $\$ 156.10$
Cat. No. 2-210. Same as 2-208 but with a Electrovoice model 950 Cardax Cryatal microphone (see C below) and 20 -feet of cable, instead of Electrovoice 910-20 microphone. Shpg. wt. 120 lbs. Your Cost
.$\$ 158.50$
Cat. No. 2-215. 45 Watt Multiamp Permanent System. You get everything you need including 45 Watt Multiamp Amplifier (ehown on page at left) complete with tubes, connectors and 70 ft . of speakers cable, two heavy duty G.E. 12 -inch PM speakers (see G below), Electrovoice Crystal microphone model $910-20$ (see A below) with 20-feet of cable and a floor stand. Shpg. wt. 74 pounds.
$\$ 124.45$ Your Cost
Cat. No. 2-216. Same as above but with a Shure model 737A Monoplex Crystal microphone (see B below) and 20 -feet of cable, instead of Electrovoice 910-20 microphone. Shpg. wt. 74 lbs. Your Cost
$\$ 128.45$
Cat. No. 2-217. Same as 2-215 above but with a Electrovoice model 950 Cardax Crystal microphone (see C below) and 20 -feet of cable 950 Cardax Crystal microphone (see Cobelow) and $20-\mathrm{feet}$ instead of Electrovoice 910-20 Microphone. Shpg. wt. 74 lbs. $\$ 130.95$

## Accessories For Multiamp Amplifiers and Systems

Cat. No. 2-202. Phono Player accessory top for Multiamp Amplifiers. (Shown on page 29) Shpg. wt. 10 lbs
$\$ 11.75$ Your Cont
for Multiamp
Cat. No. 2-203. Automatic Record Changer Accessory Top for Muluamp Amplifiers. (Shown on page 29) Shpg. wt. 19 lbs . Will not fit in portable
system.
Your Cont. Yyour Cost
Cat. No. 2-204. Neon Output Indicator for Multiamp Amplifiers. (Shown on page 29) Shpg. wt. 2 lbs .
Your Cost
$\$ 4.75$

Cat. No. 20051. Walnut Wall Baffle. (See F below) Designed to emphasize bass responses. They spread sound over wide areas deal for use with most permanent syatems. Shpg. wt. 8 the Your Cost

## In Paire

ach $\$ 5.25$
Cat. No. 20017. Deluxe All-Steel Projector (see E below) For use with wall batfleakers. Designed to direct sound and carry it farthy of the Permanent systems above. Shpg. wt. 13 lbs.


# 60 



## SPECIFICATIONS*

60 Watt Multiamp Amplifier
Output: 60 Watts, Normal, 120 Watts Peak Power
Dittortion: Total Harmonic, $2 \%$ or lese
Channels:
2 high gaia microphoae channels
2 phono or program chanaels
Gain:
Microphone Channele 116 db .
Modium Gain Channela 80 db
Tone Controls: 1 Bass equalizer and 1 Treble, 25 db raage. Hum a Noise: Mike chanaele: 60 db below 60 watts.
Frequency Range 30 to 10,000 cycles adjustable.
Output impedances:
$1.3,2.7,4,5.3,8,16,125,167,180,200,250,415,460$, 500 , and 600 ohms.
Tube lime up: 2-6SQ7's, 1-7F7, 1-7A4, 8-6V6GT's and 4-724's Lime Drain: (a) 117 volts, 60 cycle A.C. is 200 watts,
with phono 220 watts.
Dimensions:
$181 / 2^{\prime} \mathrm{W} \times 141 / /^{\prime} \mathrm{D}$ 上 $103 / /^{\prime} \mathrm{H}$, with phono $123 / /^{\prime} \mathrm{H}$, with changer $16 \frac{1}{4}$

## 75 Watt Multiamp Amplifiez

All Specifications same as above except: as follows: Output: 75 Watts Normal, 150 Watts Peak Power
Line Drain: (a) 117 volts, 60 cyele A.C., is 245 watts,
with phono 265 watts.
Tube lire-up: 2.6SQ7'm, 1-7F7, 1-7A4, 10.6V6 GT's, 2-724's, and $2-524$ s

* All specifications shown are based on using tubes having RMA average values and line voltage set in the 120 volt tap position.


## They're Powerful-

* Only $2 \%$ total harmonic distortion at rated output
$\star 15$ individual output impedances
* Separate treble and bass tone controls
* Can be used indoors or outdoors
* All accessories fit into the same cabinet
* Designed for those who want power and flexibility
* 60 watt covers audiences up to 6000
* 75 watt covers audiences up to 7500

Concord 60 and 75 watt Multiamp Amplifiers mean power . . power to cover the entire crowd, so that everybody can easily hear... power enough for fair grounds, athletic fields, halle and factories. . . power that brings every sound, very note, every tone to every ear. Hंere are 60 and 75 watt amplifiers with separate bass and treble tone controls, 15 individual output impedances and all of the other many famous Multiamp teatures.

All accesmory oquipment fits into the aame cabinet as your amplifier. You can add a phono player top or an automatic record changer and vinual type outputindicator and still have a single compact unit with all of the controls on the front panel.
When more power is what you need additional output stages can be utilized as booster amplifiers. A monitoring opeaker of the PM type can be mounted on the grill on the front panel of the cabinet to be used With these booster unitg. These units will stack on top of each other and connect with the original amplifier so that almost any situation can be handled in one installation. For additional details on power stages and booter amplifiers for Multiamp Amplifiers see the following pages.
A neon output indicator is only one of the many Add-A-Unit accessories that can be easily inetalled in these amplitiers. For information on this visual type output meter see the preceding pages.
The single player phono top is an accessory that when combined a Multiamp Amplifier opens the door to a new world of high fidelity musical reproduction. Churches, chapels and mortuaries that require top quality humless and distortion fres reproduction of organ music, bells and chtmes will find this phono top and a Multiamp Amplifier the ideal combination. Skating rinks, dance pavilions and other users of dance music recordinge will enjoy the faithful reproduction of even the highest notes. Anyone can aady install this player phono top on any Mulkamp Amplifier. The only tool you need is a screwdriver. This single record player top ha a high quality crystal pickup and a single apeed motor.
The utomatic record changer top plays 10 twelve inch records or 12 ten inch records automatically, with the completion of the last record it atops automatically. It is an accessory that can be quickly installed on any Multiamp Amplifier. This unit is ideal for supplying background or dance munic in restaurants or other places that denire continuous entertainment as you may have thirty minutes of uninterrupted music from ten inch recordf. Stores will find it just the thing for ballyho or sales pro. motion purposes. The secord support is of the single shelf type. The unit has a single speed 78 r.p.m. motor and a true tangent tone arm with a high quality crystal pickup.
The modern design cablnete have cast aluminum sides with recessed hamdles, illuminated front panel, two-tone burgundy finish and all of the other features found in the 30 and 45 watt Multiamp Amplifiers. 60 and 75 watt Multiamp Amplifiers are also available in portable systems. Write to our Technical Advisory Service for details.

## AMPLIFIERS

## They're Expandable -They're Economical

60 Watt Multiamp Amplifiers and Systems

Cat. No. 2-218. 60 Watt Multiamp Amplifier. Complote with tubes, tnstructions and connecting plugs. Sh. wt. 51 lbs .
$\$ 120.95$ Your Cost
Cat. No. 2-220. 60 Watt Deluxe Multiamp Permanent Syotem. (Shown on page at left). You get everything you need. All you have to do is zet it upl Syatem consists of 60 wati Miltiamp Amplifler, 4 Univeratity trumpets and driver units each with $35-\mathrm{ft}$. of apeaker cable, floor stand and Electrovoice Model V1 Velocity microphone (see C below) with 20 -ft. of cable. Shipping weight 120 pounds.
\$288.25
Cat. No. 2-221. Same as $2-220$ above but with a Shure Sonodyne Model 51 Dynamic microphone (see B below) intead of Electrovoice V1 Velocity microphone. Shipping weight 120 pounds Your Cost
$\$ 288.00$
Cat. No. 2-222. Same as 2.220 above but with a Turner U9S Dynamic microphone, (see A below) instead of Electrovoice V1 Velocity microphone and $20-\mathrm{ft}$. of cable. Shipping weight 120 pounds. Your Cost
$\$ 292.30$
Cat. No. 2-226. 60 Watt Multiamp Permanent System. Everything is ready to operate. All you do is set it up. Systom conaists of 60 watt Multiamp Amplifier, 4 heavy duty 12 -inch GE PM speakers each with 35 -ft. of speaker cable (see E below), floor atand and Electrovoice Model V1 Velocity microphone (see C below), with 20-ft. of cable. Shipping weight 99 pounds.

S171.25 Your Cost
$\$ 171.15$
Cat. No. 2-227. Same as $2-226$ above but with a Shure Sonodyne Model 51 Dynamic microphone (see B below), instead of Electrovoice V1 Velocity microphone. Shipping weight 99 pounds. Youz Cost
$\$ 171.50$
Cat. No. 2-228. Same as 2.226 above but with a Turner U9S Dynamic microphone, (see A below) instead of Electrovoice V1 Velocity microphone, and $20-\mathrm{ft}$. of cable. Shipping weight 99 lbs.
Your Cost
$\$ 175.80$
Cat. No. 2-202. Phono Player Accessory Top for Multiamp Amplifiers. (Shown above.) Sh. wt. 10 lbs.
$\$ 11.75$ Your Cost
Cat. No. 2-203. Automatic Record Changer Accessory Top for Multamp Amplifiers. (Shown above). Will not tht in portable systoms. Shipping weight 19 pounds.
$\$ 30.75$
Cat. No. 2-204. Neon Output Indicator for Multiamp Amplifiers.
(Shown above.) Shipping weight 2 pounds.
Your Cost
$\$ 4.75$

75 Watt Multiamp Amplifiers and Systems
Cat. No. 2-219. 75 Watt Multamp Amplifier. Complete with tubes, instructions and connecting plugs. Sh. wt. 58 lbe.
$\$ 130.40$
Cat. No. 2-223. 75 Watt Deluxe Multiamp Permanent System. (Shown on page at left). You get everything you need. All you have to do is set it up. System consists of 75 watt Muitiomp Amplifier, 4 University trumpets and driver units each with $35-\mathrm{ft}$. of speaker cable, iloor stand and Electrovoice Model V1 Velocity mlarophone (sea C below) with $20-4 t$. of cable. Shpg. wt. 127 lbs.
$\$ 297.70$
Cat. No. 2-224. Same as $2-223$ above but with a Shure Sonodyne
Model 51 Dynamic microphone (see $B$ below) inatead of Electrovoice V1 Volocity microphone. Shpg. wt. 127 lbs.
Your Cost.
$\$ 297.45$
Cat. No. 2-225. Same as 2-223 but with a Turner U9S Dynamic micro. phone (see A below) instead of Electrovoice V1 Velocity microphone and $20 . \mathrm{ft}$. of cable. Shipping weight 127 pounds. Your Cost
Cat. No. 2-229. 75 Watt Multiamp Permanent System. Everything ie ready to operate. All you do is set it up. System consiste of 75 watt Multiamp Amplitier, 4 heavy duty 12 -inch GE PM speakers, each with 35-ft. of speaker cable (see E below), floor atand and Electrovoice Model V1 Velocity microphone with 20 . ft. of cable. Sh. wt. $106 \mathrm{lbs} . \$ 181.20$ Your Cost

Cat. No. 2-230. Same as 2-229 above but with a Shure Sonodyne Model 51 Dynamic microphone, instead of the Electrovoice V1 Velocity microphone (see B below). Shipping weight 106 pounds
Your Cost
$\$ 180.95$
Cat. No. 2-231. Same as 2.229 above but with a Turner U9S Dynamic microphone (sen A below) instead of the Electrovoice Vl Velocity microphone and $20-\mathrm{tt}$. of cable. Shipping weight 106 pounds.
Your Cost
$\$ 189.15$
Cat. No. 20051. Walnut Wall Bafte. (See Gelow). Desiqned to emphasize bass responses it spreads the sound over wide areas. Ideal for use with any permanent syatem. Ship. wt. 8 lbs. each. Your Cost
each $\$ 5.25$ In pairs.
each $\$ 4.95$
Cat. No. 20077. Deluxe All-Steel Projector. (See F below). For use with 12 -inch spoakers. Designed to direct nound and carry ft farther than wall bafflez they create a arisp penetrating tone. Uee with any aystem whove. Shipping woight 13 pounda.
Your Cost.
$\$ 10.53$


# 90 wnm MUTIAMP AMPLIFIRR 




## Complete System for High Power Installations

* Multiple chagais
* 15 output impedances
* Only $2 \%$ harmonic diatortion
* Individual bass and treble tone controls
- Ixput accommodate up to 2 micro. phones and 2 phono plekup

Here is an amplifier that has power enough for every type of operation indoors or out. Here is a superbly engineered unit that's packed with the newest and best developments for outstand. ing performance in high power amplifiers. Here is a Concord 90 Watt Multiamp Amplifier.
Regardless of how your requirements may change this amplifier never becomes obsolete because it has all of the famous Multiamp features. You can quickly and easily add a 30 to 90 watt booster amplifier, a phono player top, output indicator, automatic record changer or any of the many Multiamp accessories. The 15 output impedances allow you to match almost any combination of lines and speakers. The indsvidual bass and treble tone controls plus a maximum of $2 \%$ harmonic distortion ingure faithful reproduction of even the most delicate tones and allows you to limit the reaponse of voice frequency for greatest intelligibility. The multiple unit chassis makes it easy to service unit by unit. Get the power you need, order a Multiamp Amplifier today.

Cat. No. 2-232. 90 Watt Multiamp Amplifier. Completo with tubes, instructions and all necessary connecting pluge. Shipping woight 65 pounds.

Cat. No. 2-233. 90 Watt Multiamp High Power Amplifier System. (Shown above.) You get everything you need, there's nothing else to buy. System consists of a 90 Watt Multiamp Auy. System consists of a 90 Watt Multiamp 25 watt driver unit and 35 feet of cable, a Shure 25 watt driver unit and 35 feet of cable, a Shure
model 55 Unidyne microphone with 25 feet of cable (see $A$ above) and a floor stand. Shipping weight 130 pounds.
\$316.25
Cat. No. 2-234. Same as $2-233$ above but with an Electrovoice model 726 Cardyne Dynamic microphone, (see B above) instead of the Shure model 55 Unidyne microphone. Shipping weight 130 pound. Your Cost
$\$ 318.25$
Cat. No. 2-202. Accessory Phono Player Top for Multiamp Amplifiers. (Shown on page 29.) Shipping weight 10 pounds. Your Cost
$\$ 11.50$
Cat. No. 2-203. Accessory Automatic Record Changer Top for Multiamp Amplifiers. (Shown on page 29.) Sh. wt. 19 lbs .
$\$ 30.75$
Cat. No. 2-204. Accessory Neon Output Indicator for Multiamp Amplifiers. (Shown on page 29.) Shipping weight 2 pounds. Your Cost.
$\$ 4.75$

# MULTIAMP ADD-A-UNIT CENTRALIKED SOUND SYSTEMS <br> Unlimited Output... Unlimited Input Channels Immediate Delivery! 

Concord Multiamp Add-A-Unit Amplifiers make it possible to assemble in a matter of minutes what would ordinarily be custom built systeme with unlimited output waftage requiring technicians hours to install. Equipment with power outputs greater than 100 watts or with facilities for special inputs, impedances and other features which vary with each installation were always considered to be in the custom built class. This in turn meant extremely high costs and little or no flexibility once the equipment was manufactured to special requirements. But the extreme flexibility of Concord's Multiamp Add-A-Unit Amplifiers makes thls custom built equipment standard stock items! Facilities for unlimited wattage output, phono players, automatic record changer, output indicator and many other accessories are available and may be included in a stacked cabinet assembly as illustrated at the left... and all at the low cost of regular stock items instead of the usual high cost of custom built installations.
Solve your sound system problems the easy, economical way by Installing Multiamp Add-A.Unit Amplifiers. Write to Concord's free Technical Advisory Service for complete details of how to fill your public address needs to perfection.


## Multiamp Booster Amplifiers and Accessories

## (D) Multiamp Plug-In Power Stages

Multiamp plug-in power atages are the same high quality output stages uned with the 30 and 45 watt Multiamp Amplitiers. Like all Multiamp Amplifiers they have a maximum harmonic distortion of only $2 \%$ at rated output. These units may be used to increase the power output of any 30 or 45 watt Multiamp Amplifier almply by plugging it into the basic unit. This installation takes only a lew seconds and does not require the use of any epecial tools or the assistance of a technietian. require the use ot any apecial tolt ures fous 6V6 and two $7 \mathrm{Z4} 4$ tubes. The 45 watt Multiamp power stage uses four 6V6 and two 5Z4 tubes. The 45 watt Muitamp power stag $43 / 4$ inches deep by $51 / 2$ inches high.
Cat. No. 2-237. 30 watt Multiamp plug-in power stage (see D above) complete with tubes. Sb pg . wt. 16 lbs .
$\$ 36.65$ Complete wit
$\$ 36.65$
Cat. No. 2-238. 45 watt Multiamp plugin power stage (zee $D$ above) complete with tubes. Shipping weight 18 pounds.
Your Cost
(C) Multiamp Booster Amplifiers

Multiamp Booster Amplifiers are designed for use with Concord Multiamp Amplifier to increase the power output of the unit to which they are added by values to total up to 270 watts of output. Amplifiers with this extremoly high output are especially designed for use in baseball parks, race tracks, stadiums and all other outdoor or Indoor locations paruiring great sound coverage. Booster Amplifiers come in 30 and 45 watt power output. Thetr harmonic distortion is only $2 \%$ at the rated 45 watt por output. They have 15 outputimpedances and allof other Muliamp features described in the preceding pagen. Boostor Amplifiers are dontical to the Multtamp Power Stages described above but in addition includes a cabinet that is of the rame modern design as the Multiamp Amplifier cabinet. This cabinet has provision for a monitor speaker. The bottom is designed to recess and atack on top of other Booster Amplifiers. 30 watt unit can be increased to 60 or 75 watta and the 45 watt unit to 75 or 90 watte by adding plug-in power stages.
Cat. No. 2-235. 30 watt Boostor Amplifier (see C above) complete with tubes. Shipping weight 36 pounds.
$\$ 61.45$

## Your Cost.

Cat. No. 2-236. 45 watt Booster Amplifier (see C above) complete with tubes. Shipping weight 38 pounds. Your Cost

## (B) Portable Bass Reflex Speaker Enclosure

Two 12 -inch permanent magnet dynamic speakers are housed in these eflez enciosures to insure perfect bass response. The enclosures are so designed that they form a two-piece portable carrying case attractively covered in handsome tan simulated rawhide leathor. Each speaker has 35 for here receptacles guard conneotore againat damage. Overall size: 14 inchea by $191 / 4$ inches by $211 / 4$ inches.
Cet. No. 22055. Shipping weight 25 pounds.
Cat. No. 22
$\$ 14.50$

## © Portable Multiamp Amplifiez Caryying Case

Covered in the same fine material it matches the speaker enclosures described above. Top can be completely removed, so that the amplifier is easily accesnible, simply by opening the four strong anap locks. Two sturdy handles covered in simulated leather make carrying easy. All corners are protected by metal ahields and bottom has metal feet. Overall size: 15 inches by $151 / 2$ inches by 20 inches.
Cat. No. 22057. Shipping weight 17 pounds.
Your Cost.
$\$ 9.75$

## (A) Combination Amplifiez and 12-inch Speaker Caryying Case

A carrying case that holds two 12 -inch speakers plus an amplitiar Made of $\%$-inch thick plywood covered with beautitul tan simulated rawhide leather. Lock-corner construction with metal corner shields for added protection. Four snap locks hold case securely closed. Sirmulated leather handles make carrying easy. Amplifier fits on a board that slides in or out of the case quickly and eanly. Although this case was designed for Concord Deluxe Amplifiers it will hold any amplifier that is 15 inches by 10 inches by $81 / 4$ inches. Overall size of case: $141 / 4$ inches by $181 / 4$ by 10 inches by 8 in inches $211 / 2$ inches.
inahes Ny 21/22. Shipping weight 24 pounde.
$\$ 11.25$ <br> \section*{Your Cost <br> \section*{Your Cost <br> (c) Combination Amplifier and 8 -inch Speaker Caxrying Case}

A carrying case that holds an amplitier and an 8 -inch speaker. Beautful tan simulated rawhide leather covers strong $1 / 4$-inch plywood. Lockcorner construction, 4 sturdy snap locks and a thick simulated leather oarrying handle make it a caşe you can trusi with your equipment. Overall size: 12 inches by 11 incheu by $151 / 2$ inches. Overall size: 12 inchet by 11 inchet by $151 / 2$
Your Cost
\$6.95


Master Selective Systems


Fig. 1 ter Station may call any Sub-Station indi vidually, or may call all Sub Stations simul taneously. Sub-Stations may call Master but not each other. Nlaster Selective Systems feature: Silent Operation-shuts out all sounds from Sub-Station locations when not in use.

How to Estimate Cable
Measure distance between Master Station and each Sub-Station, then order equivalent to the total footage of these distances.


Fig. 11
Master Selective Systems consist of one Master Station and up to ten SubStations. You can build your system progressively beMinning with the Master Station and one Sub-Station, and adding other Sub-Stations as the

## tive System

An unusually versa-
tile, low-cost intercommunication system offering complete privacy of conversation and flexibility to meet any requirement in industry, offices, institutions, etc. Constituts entirely of Master Station units so that several separate two-way conversations may be carried on simultaneously. Any one Master Station may talk to any other Master Station
at will. Masters may call one another regardJess of whether station being called has power "On" or not.

How to Estimate Cable
Simply measure distance between Master Units starting from any one Master to the second, to the third, etc., until you reach the last station in the system, then order equivalast station in the system, the thetal footage of the distances,

Combination Master System


The ultimate in flexibility. This system consists of 74 and Sub-Stations in any combination desired. You may start with Two Stations (at least one must be a Master) and add Stations as needed. Master Stations may call any other Master or Sub-Stations. Sub-Stations may answer Master but cannot talk to each other nor can they originate calls to Master Stations. All Masters may have Sub-Stations in common or any Master Station may have individual Sub-Stations.

## How to Estimate Cable

Measure cable from Master to Master. Otder total of these distances in Master type cable. Measure Sub-Station cable from Sub-Station to nearest Master only.

## TALK-A-PHONE SPECIAL DELUXE

Far Reaching Power-person called at Sub-Station can answer at distances of 40 ft. from the unit. Either Master Stations and Sub-Stations may be operated at disand Sub-Stations may be operated at dis-
tances of up to $250(0)$ feet from each other. tances of up to 2500 feet from each other.
Fconomy is stressed in the operation. MasFconomy is stressed in the operation. Mas-
ter Stations can be operated for as litile as 15 c per month in Electric Current. Master Station Units are housed in at tractive walnut wood cabinets measuring $934^{\circ}$ wide $x$ $6^{\prime \prime}$ deep $\times 63 / 4{ }^{\prime \prime}$ high. Shpg, wt., 8 lbs. SubStations have durable Nletal Cabinets $5 \frac{8}{4} \times$ 33/4 $\times 7^{\prime \prime}$. Shpg wt., 3 lbs. Special DeLuxe Systems operate on 110-115 volts AC or DC

## Master Selective System

 See Figure 1Model KR-505 Special Deluxe Master Handles one to five stations. With tubes and instructions. Shpg. wt. 9 bs
C20100
Your Cost
$\$ 2495$
Model KR-4010-Special Deluxe Master. Handles one to ten stations. Complete with tubes and instructions. Shpg. wt. 9 lbs. C20101-
\$29.95
Your Cost
tation. Shpg. wt.
Model RU-433S-Sub-Station. Shpg. wt. 11 lbs.
$\$ 8.25$
C20102-Your Cost
er 10 ft . 52 c

## Super Selective System

See Figure 2
You may begin with two Masters and add Units up to a total of ten as desired. Thus as many as five complete two-way conversations may be maintained simultaneously. Model KS-6010-Special DeLuxe Super Selective Unit. Two to ien units may be used. With tubes and instructions. C20103-
$\$ 31-50$

## Your Cost

C16007-Cable for above. Per 10 ft . Your Cost. .

## Combination System See Figure ${ }^{3}$

The Special MeLuxe Combination Model utilizes either Masier Stations or SubStations in any Combination.
Model KC-8050-Snecial DeLuxe Master Station. Handels one to five stations. With c20104-Your Cost....
tubes and instructions.
Model UC-8215-Sub-Station unit C20105Your Cost

9725
C16012-Cable. The proper cable for in-ter-connecting KC-8050 Master Stations. Per 10 ft . Your Cost
$\$ 1.70$
C16005-Cable. The proper cable for con-C16005-Cable. The proper cable for connecting UC-821S to KC-8050 Master Sta-
tions. Per 10 ft . Your Cost $\ldots . . .{ }^{\text {. }}$.

\section*{TALK-A-PHONE DELUXE SYSTEMS

The finest in Inter-Communication-both in performance and appearance. Powerful Amplifier delivers $2^{1}$ watts, allows person at Sub-Stations to answer 50 ft from unit. Silent Feature cuts out all noise originating at Sub-Station. yet permits Sub-Stations to originate calls to the Master Stations. Privacy Earphone (optional) automatically disconnects speraker when earphones used. Beautifully finished walnut cabinets, finished back and front, 12 "x $6 \frac{1}{2}$ "x $5^{3} 8^{\circ}$. Shpg. wt. 10 lbs. Sub-Stations in matching walnut wood cabinets $7 t^{\prime \prime} \times 3,3 / 4{ }^{\prime \prime} x$


## Master Selective Systems See Figure 1

Model KR-40-Deluxe Master Station, for use with up to ten Sub-Stations. With tubes, 10 instructions and junction box. Shpg. wt.
C20106-Your Cost
$\$ 545$
Model KR-40-C - With Privacy Earphone.
C20107-Your Cost.
$\$ 43.50$
 C20108-Your Cost.
Model RU-43M-DeLuxe metal Sub-Station.
C20109 Your Cost. . . . . . . . . . . . . \$11. 25
C-16000-Cable for connecting Sub-Station to either type Master. Per 10 ft . Your Cost.

\section*{Super Selective Systern

## Super Selective Systern See Figure 2

Model KS-60-DeLuxe Super Selective Master Station. From two to ten may be used. Com, lete with tubes, instructions and junction box. Shpg. C20110
$\$ 3495$
Model KS-60-C - With Privacy Earphone. Modef KS-60-C - With Privacy Earphone.
C20111-Your Cost. . ........... $\$ 43.50$ c16007-Cable for connecting stations. Per 10 ft . Your Cost . . . . . . .......... . $\$ 2.00$

## Combination Systems See Figure 3

Model KC-80-Deluxe Combination Master for ten Station use. With tubes, instructions and junction box. $\$ 3825$ c20112- 0 045 Cost
Model KC-80-C - With Privacy Earphone. C20113-Your Cost............... $\$ 46.95$ Model UC-82. Sub-Station Unit for above in wood cabinet. C20114-Your Cost.
$\$ 11.25$
Model UC-82M-Same as above but in metal cahinet
C20115-Your Cost.
$\$ 11.25$ C16009-Cable. The proper cable for in-ler-connecting to KC. 80 and KC-80-C C16005-Cable. The proper cable for connecting UC-82 and UC-82M Sub-Stations to KC-80 or KC-80-C Master Stations. Per 10 ft . Your Cost
52c

All Deluxe Systems shown on this page are available in Underwriters Listed Models at small additional cost.
Pushbutton Operated Models also available. Write for quotations on your specifications.

(A) Model 630. Moving coil dynamic. Acoustalloy diaphragm. Ifigh quality reproduction of speech and music, indoors and outdoorsFlat frequency response from 40.9000 cps. Out put - 53 db . Tilting head for directional or nondirectional use Built-in cable connector and switch. Complete with 20 ft . cable. Shpg. wt (A) C13505-Your Cost
\$21.46

(B) Model 605. Dymamic for general sound work, paging, cal!, dispatch systems, recording and communications. Flat frequency response from $50-7500 \mathrm{cps}$. Output -57 db . Acous: lloy diaphragm. Iead at fixed tilt of $22^{\circ}$. Satin chrome finish. Complete with 8 ft cable and connectors. Hi impedance. Shpg. wt. 5 lbs.
C13785-Your Cost
$\$ 14.41$
C13784-Your Cost. With 20 ft . cable. $\$ 15.29$

(B) Model 905. Crystal. Same design and -5 characteristics as Model 605, except for -54 db output. High capacity moisture sealed crystal.
C13723-With 8 ft . cable.
Your Cost.
$\$ 9.70$
C13724-With 20 ft . cable. Your Cost. $\$ 10.58$
(C) Model 610. Dynamic. For ham rigs, public address and paging systems. Quality repro duction of voice and music. Acoustalloy diaphragm. Substantially flat frequency response service indoors and outdoors. Head at $15^{\circ}$ fixed tilt. Satin chrome finish with 8 ft . cable. C13725
Your Cost
$\$ 17.35$ C13726-With 20 ft . cable. Your Cost $\$ 18.23$
(C) Modei 910. Crystal. high quality. high C. capacity moisture sealed crystal. Same design and characteristics as Model 610, except for -48 db output.

8 ft . cable.
$\$ 13.23$
(D) C13728 With 20 ft cable Your Cost. 514.11

(D)Model 600-D. Hand-Field Speech Dynamic. Designed for clear, crisp speech transmission in communications, public address, and recording. Extremely rugged for use indvors or out at temperatures from Acoustalloy diaphragm. Frequency response and relay Panel. Output -55 db . Push-to-talk switch operates mike 6 ft . of cable. Black phenolic case. Iti-impedance. C13729-Your Cost
C13730-As above with switch lock
521.46

## SEMI-DIRECTIONAL MICROPHONES

Semi-directional microphones are pressure microphones that respond to variations in souind pressure. They include Crystal. Dynamuc. Carlon and Condenser gererating elements. These are substantialt; non-directional although they tend to become directional at the higher frequencies. For a microphone of $216^{\circ}$ diameter directivity starts at about 2000 c.p.s. and increases with frequency.
Pressure microphones are excellent all-purpose instruments where conditions of room reverberation. acoustic feedback and ambient noise are not too severe. The better quality types are desirable for broadcast announcing and remote pick-up, public address amateor communication and recording. Recommended for outdoor as well as indoor work.


## (c)

microphone that offers quality performanoe ai low cost. Frequency respone from $60-8000$ cps. Output - 52 db . With 15 ft . cable. Ht impedance. Similar in appearance to Modet 707-A. C13631-
Your Cost

## \$1156



Model 51 Sonodyne. Pressure dynamic microphone. For general purpose use. Operates on principle of moving coil element in magnetic freld. Peakfree response $60-10,00$ cps . Switch on front of case for output of 56.1 db at 40 ohms -56.8 db at 250 ohms, or -55 dt at Hi-impedance. Rich Pearl Gray finish. With 20 ft . cable and connectors. Shpg. wt. 5 lba
C13432
Your Cost. . . . . . . . . . . . . . .
e. Designed for

Model 76-8. Lapel Mike. Designed for public address, lecturing, and portable transmitters for intelligible speech reproduction Pressure-actuated diaphragm type crystal microphone. Prequency response $40-6000 \mathrm{cps}$ Output -57 db . With laped clip, 25 ft . of cable Output -57 db . With laped clip, 25 ft . of cable
Dia. $13^{\circ}$. Hi-impedance. C13638-Your Cost
\$15-83
(E) Model 718-A. "versatex". Diaphragm type sealed crysta! mike in RF protective resistor. Frequency response $60-8000 \mathrm{cps}$. Output -53 db . Ideal for Hams. paging systems. home recording, and low cost P.A. systems. In heavy maroon shock resisting plastic case. With 7 ft . cab li-impedance. C13629 Your Cost
\$5.8:

## CONTACT MICROPHONES



## AMPERITE KONTAK MIKES

## For All Musical Instruments

Faithfully Reproduce the Vibrations of any Musical Instrument Reproduce the entire audible range without introduciny any annoying peaks. Used extensively by many famous name bands. Increase timbre - create new effects. Available, as illustrated with (B) or without ( $\Lambda$ ) hand volume control. For use on regular mike channels of any high impedance input amplifier lhaving 60 dh . or higher gain. Moisture proof rubber cases may be attached to any musical instrument. Average shpg. wt. 4 ths, each.
(A) Without Volume Control ( $1 \times 3 \times 1$ ')

Stock No. Model Range Level Cable
C13675 SKH $40-6000$ c.p.s. -40 db . $15-\mathrm{ft}$.
$\$ 7=\begin{gathered}\text { Your } \\ \text { Cost } \\ =0\end{gathered}$
(B) With Volume Control ( $3 \times 1 \times 5 / 8{ }^{\prime \prime}$ )

C13650 KKH $40-6000 \mathrm{c}$ р.s. -30 db . $25-\mathrm{ft}$ \$10.5? C13687-Strap for flat top guitars. Your Cost.

(C)
"KF'I Foot Volume Control

(C)Provides smooth control of volume by foot action. For any high impedance Kontak mike. Size: $9 \times 21 / 2 \times 212^{\prime \prime}$. Supplied with $15-1 /$ cable. Shpg. wt. 4 lbs.
\$1058?

## LGP Input Transformer

(D) Matches 50 or 200 ohms to hi-impedance input. Standard for close C13608-Standard-Your Cost C13609-Laboratory-Your Cos
.$\$ 5.38$

## TURNER Contact Mike

Model MM Provides amplified volume from any stringed instrument without feed back. Volume control built in

Model MM, complete with $20-\mathrm{ft}$ cable. C13757Your Cost
C13758-W Your Cost


## TURNER MICROPHONES


#### Abstract

(A) Model 33D Dynamic. For amateur work, recording, and orchestra pickup. $90^{\circ}$ tilting head for semi- or non-directional use. Specially designed aluminum diaphragm, quality Alnico magnet. Frequency response $30-9000 \mathrm{cps}$. Output - 54 db . Satin chrome finish. With 20 ft . cable and connectors. Hi-impedance. C13752 -Your Cost. \$15.88


(A)
Model 33X Crystal. Shock mounted. moisture sealed. Rochelle salt crystal, barometric compensator. Design and other characteristics same as model 33D except -52 db output.
C13753-Your Cost.
\$14.41Challenger Models. Inexpensive, practical microphones for genB) eral purpose work. For inexpensive public address, and paging systems, amateur rigs, home recorders. Crystal models, have shock mounted, moisture sealed Rochelle salt crystals, barometric compensators and wind gag to prevent blasting. Dynamic has specially designed aluminum diaphragms. All with 7 - ft . cable, and are hi-impedance. Model CD Dynamic. Frequency response $50-7000 \mathrm{cps}$. Output -52 db. Satin chrome finish.

## C13763-Your Cost.

\$11.47
Model CX Crystal. Frequency response $50-7000 \mathrm{cps}$. Output -52 db . Satin chrome finish.
$\$ 9.55$

## C13765 -Your Cost

$\qquad$
Model BX Crystal. Frequency response $50-6000 \mathrm{cps}$. Output -52 db . Attractive Brown enamel finish.
c13764 -Your Cost.
\$6.38
(C) Model U9S. Professional type dynamic. For remote broadcast, directional pickup. Specially designed aluminum diaphragm. Erequency response $40-90(1) \mathrm{cps}$. Output -52 db . Baked gun metal finish. With 20 feet cable and connectors. Hi-impedance.
C13754 -Your Cost
\$23.52

(D)Han-D Crystal or Dynamic. For stage work, amateur, and call systems. Can be mounted on floor or desk stand, has suspension hook for hanging. Slide contact on-off switch. With 7 ft . cable and connectors. Satin chrome finish. 1 li -impedance Model 9D Dynamic. Frequency response $60-7000 \mathrm{cps}$. Out put -52 db . C13760
Your Cost
$\$ 15.88$
Model 9X Crystal. Frequency response 0.7000 cps . Output -52 db .
Model 9X Crystal.
C13759-Your Cost
$\$ 13.82$
(E) Model 22D Dynamic. For amateurs, call and paging systems, general use indoors and outdoors. Ninety degree tilting head permites semi- or non-directiona operation. Quality Alnico magnet. Frequency response $50-9000$ cps. Output -54 db . Satin chrome finish. With 7 ft . cable and connectors. Hi-impedance. C13751
Your Cost
$\$ 1499$
(E) Model $22 \times$ Crystal. High quality, humidity protected crystal. Mechanical shock proof mounting. Equipped with automatic cteristics as model 22 D except out put of -52 acte
db.
Ci C13750 -Your Cost
s11.76
(F) Model 20X Crystal. New light weight, low Model 20X Crystal. New lightweight, lowteurs and , paging systems. Shock mounted "Metalseal" Rochelle salt crystal. Barometric compensator. Frequency response $50-7000$ cps. Output -54 db . Rich Brown enamel finish. With 7 ft cable. Ui-impedance. $\$ 758$
c13768 -Your Cost........... 57
$\qquad$ . . $\$ 8.73$

## ASTATIC

(G) Model T-3 new improved crystal, superb A response for amateur rigs, recording, and use. Output -52 db . Chrome plated finish. With cable, spring cable protector, and connecttor. Hi-impedance. Shpg. wt. 3 lbs. C 13670
Your Cost
s16.08
Model GT-3. Model T-3 microphone with Grip-To-Talk stand. Shag. wt. 5 lbs. C13525-Your Cost

Model JT-30. Inexpensive. All-purpose crystal microphone. Especially suited for
 amateur, home recording, and portable sound systems. Frequency response from $30-10,000 \mathrm{cps}$. Output is .52 db . Mounted on combination hand and desk stand, with heavy die cast interlocking base. Finished in Opalescent Gray and Bright Chrome grille. Complete with concentric cable connector, Hi-impedance. Shpg. wt. 4 lbs


27 -Your Cost
s9.97

## MICROPHONE ACCESSORIES


(1)

(®)

(M)

(c)

Speco "Max-Mixer" Mike Input Mixer for adding and mixing two or more mikes than provided by regular input of amplifier. 3 individually controlled hi-imp. inputs. With 6 ft . cable, mike connector, and phone plug adaptor.

## - Your Cost

Mike Dust Cover keeps dust, grit, moslure from working parts. Permits use of sensitive mikes in windy areas by elimination of wind howl. Reproduction is $95 \%$ true with cures in place C13450 -Your Cost.
(1) Carbon Granules extra fine quality guaranteed non-adulterated. Sufficient for refilling one two-bution carbon mike. Your Cost.
(M) Mike Springs of finetemperedsteel. Dia C13402 -Your Cost

(N)

©

(B)

(B)

(1)
(N) (O) Mike Base Flanges and Extension yous Rods widely used for neat inconspicpit, speaker stands, amateur rigs and pelephone switchboards. Fits all standard 5 mike mounts. Available in male or female types. Base ia. 114, 3 mounting holes with $7 / 8^{\circ}$ mounting centers. Extension rods male on both ends.
C13350 -Male Flange. Your Cost ..... 30c C13351 -Female Flange. Your Cost ....30c C13352- $6^{\circ}$ Extension Rod. Your Cost. . 44e C13353-12" Extension Rod. Your Cost 59c
(P) Shure A83A Switch can be quickly attached to any cable-connector type Shire microphone. Bakelite arrow knob. No wiring required for installation.
C13594-Your Cost....
s. 2.56
(R) Mike Cable Clip made of nickel plated to microphone stand
to microphone stand.
(S) Shure Input Transformer high quality (S) cable type. For use where long lengths of mike cable are required, without loss of high frequencies. Matches 40 and 250 ohm mikes to hi-imp. input. $188^{\circ}$ dial. $\times 27 / 8^{\circ}$. With 7 ft. cable.
C13673 -Your Cost
$\$ 7.70$
(T) Desk or Floor Stand Clutch. Improved clutch action barrel, threaded to fit standard ${ }^{\prime \prime} 8^{\circ}-27$ male threaded tubing $3^{\prime \prime}$ long. Mereby remove old clutch arrangement and screw latest device to outer tubing for adjust mint. C13355 -Your Cost

Mike Adapters, for adapting special mike fittings to standard stands.
${ }^{5}{ }^{6}-27^{\circ}$ female to ${ }^{2}$ male pipe hr. (RCA). C13367 -Your Cost. $1 / 8{ }^{\circ}$ female pipe to ${ }^{5} 8$ " 27 male. C13368 Your Cost $29 c$ $84^{\circ}$ long $58^{\circ}-27$ male running tor. C13369 -Your Cost 15c ${ }^{5}{ }^{5 \prime \prime}-27$ female to $3 / 8^{\prime \prime}-27$ female coupling. C13370-Your Cost.

## midioflulition

## ELECTRO-VOICE



A CARDYNE. Eliminates unwanted sounds. reduces background noise, stops feedback increases working distance from microphone New Mechanophase principle gives wide angle front pickup over wide frequency range, dead at rear. New Acoustalloy diaphragm insures wide flat response. Will withstand extremely severe operating conditions for both outdoor and indoor use in remote broadcasting, disc, and film recording, and public address. Substantially flat response from $40-10,000 \mathrm{cps}$ Output -53 db . Alnico V magnet. Satin chromium finish. Standard mike stand threads Built-in on-off switch. Complete with 20 ft . cable, plugs. Hi-impedance.
C13718-
$\$ 34.9$ Your Cost.
(B) Cardax. Moisture sealed crystal element Cardioid microphone with new Mechanotional pickup and relatively high gain. Dual frequency response. Selector switch varies response for hi-fidelity sound pickup or extra crispness of speech. Output -57 db on flat curve, -48 db on rising curve. Compact rugged construction for indoor and outdoor use in public address, recording and communications. Titting head. Built-in on-off switch. Satin chromium finish. Complete with 20 ft . cable and plugs. Hi-impedance. Your Cost
s23.23

## AMPERITE

(C)
Pressure Gradient Dynarmic. Elipsoid Satinckup pattern. $40-11,000 \mathrm{cps}$, -56 db . Satin chromium finish. Built-in on-oft switch. C13610-PGH High impedance C13613-PGL 200 ohms Your Cost, Either C13611-PGAH. As above, but foot cable. High-impedance. Your Cost.
13607 -Plastic Ba

Your Cost Each. $\$ 18.82$ | $70-8000$ | cps. |
| :---: | :---: |
| $\$ 12-$ |  | $\$ 1470$

## UNIDIRECTIONAL MICROPHONES

Cardioid, meaning "Heart Shaped," is a term applied to unidirectional microphones, describing their pickup pattern. These are excellent all purpose instruments that give wide angle $135^{\circ}$ front pick-up and null back response. Lowered room reverberation, random noise and acoustic feedback decreases or eliminates many serious causes of distortion and volume level limitations. Both crystal and dynamic types are available, as well as combination velocity-dynamic.
These microphones, live at the front dead at the rear, solve many sound and broadcast installation problems. Especially desirable for overcoming feedback and audience noise. Can he used in or out of doors, for music or speech, broadcast, recording, public address, or communications.


## SHURE

(D) Model 737-A. Monoplex high output Super Cardioid. "Metal Deal crystal, with "Shure Uniphase" principle. For public ad dress, communications, and all types of recording. Frequency response from $60-10,000 \mathrm{cp}$ - over wide range angle at front. Rear response down approximately 1.5 db . Output -53 db . Complete with 20 ft . cable and connectors. I'inished in Pearl Gray. High impedance. Swivel head. C13431-
s17.05

## (E) <br> Model 55. Unidyne moving coil dynamic, with new "Shure Uniphase" principle. For public address and recording. Flat response from 40 to $10,000 \mathrm{cps}$. Impedance selector switch at rear of case to allow selection of Low, Medium or lligh impedance. Output is -56.1 db into 10 ohms. -56.8 db into 250 ohms, and -55 db into 35,000 ohms. Titting head adjustment. Complete with 25 ft . of cable and connector plug. Shpg. Wi. 7 lbs. C13689 <br> Your Cost <br> \$32.34

(F) Model 556 "Broadcast". Super-Cardinid type unidirectional mov(ing coil dynamic microphone. Unidirectional characteristic obtained by "Shure Uniphase" principle. Especially designed and lested to meet the requirements of the broadcast studio. Kandom noise pickup) reduced $73 \%$. Spring suspended in case to reduce mechantical vibration pickup. Frequency response from 40 to 10.0010 cps . Switch at rear of case for selection of Low. Medium or 1 ligh impedance. Dutput - 56.1 db at 40 ohms, -56.8 db at 250 ohns and 55 db at 35000 ohms. Tilting head adjustment Complete with 7 ft . cable, and connectors. Shpg. wt. 6 lbs. Your Cost
\$49.98

BI-DIRECTIONAL MICROPHONES

In the usual form this type is known as Velocity or Ribbon. They respond to the diference in pressure on the front and back of a thin ribbon suspended in a magnetic field. They are bi-directional for all frequencies. Live at the front and back and dead at the sides, lop and hottom. They can be worked from the front or back or both simultaneously. Pickup from the front or back decreases as the angle of pickup is increased. It is usually considered that an included angle of $90^{\circ}$, both front and rear, is a usable range. The discrimination against
sound at the sides reduces random noise pick-up, acoustic feedback and room reverberation by a ratio of nearly $2: 1$ over semi- or nondirectional microphones. This almost doubles working distances.
Velocity microphones characteristically have excellent bass response and are ideal for orchestra or solo pickup. Unwanted sounds may be minimized by orientating microphone so that its side faces the sound
source


## AMPERITE

Studio Ribbon Microphone, for broadcast ing, recording, and public address. Will not become "boomy" on close talking. Pickup angle $120^{\circ}$ at front and back with practically no frequency discrimination. Kuggedly constructed for indoor or outdoor use. Not affected by wind. Frequency response from 10 $11,000 \mathrm{cos}$. Output -56 db . Chrome finish. Complete with switch, 25 ft . cable and connectors. Shpg. wt. 8 lbs.
C13616-R80 H. Hi-impedanc C13617-R80 L. 200 ohm $\$ 4$ Cour 04

Model RBHG Ribbon. Frequency response from $50-11,000 \mathrm{cns}$. Output -65 db . Chrome finish. Complete with switch, 25 ft . cible and cable connectors. Shipg wt. 8 lbs. C13620-RBHG Hi-impedance.
C13621-RBLG 200 ohms. Your Cost Each
\$24.70
Model RSHG Ribbon, for public address, and recording. Frequency response from $70-8,000 \mathrm{cps}$, Output -60 db . Baked enamel finish Complete with switch, 12 ft . cable and cable connector. Shpg. we. 8 lhs . C13623-RSHG Hi-impedance.
C13624-RSLG 200 ohms.
Your Cost Each.
\$18.82
vibration Locking, tilting one piece cradle. Frequency response sub stantially flat from $40-10.000 \mathrm{cps}$. Built in On-Off switch, in "off" position shorts transformer secondary. Output -62 db . Finished in clurable Bronze Gun metal. Complete with 20 ft . cable and connectors. Shpg. wt. 5 lbs.
Your Co
Your Cost
\$26.46


## ELECTRO-VOICE

(A) Model 425 Floor Stand. One hand finger tip operation. Press hutton to raise or lower shaft between $37^{\circ}$ and $66^{\circ}$ automatically locks when button is released. New type adjustable 3 legs base with 17 spread gives firm support. Two legs adjustable, for placing Ilush against speakers stand, or stage. Folds up for portability. Modern streamline design, rich satin chrome finish. Standard $3 / 8 "-27$ thr. Shpg. wt. 9 lbs C 22049 Your Cost
s14.41
Model 430 Floor Stand. Press button with finger, raise or lower with other hand, between $36^{\circ}$ to $65^{\prime \prime}$, automatically locks. Three legged base with $17^{\circ "}$ spread. Two legs adjustable for flush mounting against stage. Legs removable to inake compact package. Attractive rray finish, extension shaft finished in satin chrome. Shp C22048
Your Cost
8.82
(B) Model 423-A6 Desk Stand. Sturdy desk or table stand. Round die cast base, rubber buttons prevent scratching surtaces. Finished in satin chrome. Base dia. $4 \frac{5}{\%^{\prime \prime}}$, stem riser $6^{*}$. Shpg. wt. 11 h C13538
Your Cost
\$2.35

## ASTATIC

Grip-to-Talk Desk Stand. Built-in micro-movement switch op-Grip-to-Taik "esk Stand. Buil-in micro-movement switch oppaging and call systems. Fits 3-prong Astatic mikes. Telephone black aase, chrome plated tube $81 /{ }^{\prime \prime}$ highYour Cos
$\$ 6.44$

## CONCORD

(F) Quality Floor Stand. Smooth, adjustments, from $35^{\prime \prime}$ to $63^{\circ}$ - Positive prip friction clutch firmly locks stand. Base dia. 10", fin ished in black wrinkle, chrome plated uprights. Shpg. C22047
Your Cost
$\$ 4.69$
(E) Lecturers Neckstand. For lecturers, demonstrators, and teachers, fits comfortably around neck leaving hands free. Flexible gooseneck has $: \mathbf{R}^{*}-27$ thr. Weighs only 12 oz
C13451-Your Cost
\$1.95

## ATLAS MICROPHONE ACCESSORIES


(A)

> (A) Boom Stand. For suspending mike over speakers" table, or stage. Adjustable to weight of any mike Height from $48^{\circ}$ to $72^{\prime \prime}$. Boom arm $63^{\prime \prime}$ long, can be easily removed. Base dia. $17^{*}$, chrome and gun metal finish. Chrome plated uprights. Shpg. wt. 35 lbs. $C 22059$ Your Cost
> \$32.34
(B) Baby Boom Arm. Quickly attaches to foor stand. Universal swivel for adjusting and locking in position. Adjustable for weight of any mike. Length 32 C22060 -
Your Cost
$\$ 4.12$
(C) Bracket Clamp. Can be used directly as milw support, or with baby boom arm. Can be clamped to overhanging edge of a tabie, desk, or piano. Chrome finish. Length $6^{\circ}$
$\$ 1.76$
(D) Flexible Gooseneck. Attached to any mike stand. Used where moderate adjustment required. Male and female ends have $5 / 8^{\circ}-27$ thr. Chrome finish. Length $13^{\circ}$
C13372-Your Cost

# Mighuthunt actessonies HIGH RREPRODUCERS Fioulrr 


(B)

(A)

Co-Spiral Speaker
desk-kevolutionary new speaker efficiency and wide range achieved withonly one voice coil and with no cross-over net work. Reproducing range is $\mathbf{4 0}$ to $\mathbf{1 6 , 0 0 0}$ cycles.
Full is watts of power-handling capacity. Uses two acoustic sections, one of which is a 15 " seamless molded curvilinear cone of new design for reproducing lowest bass; the other section, for extended high tones, is a mathematically designed acoustic spiral which gives 90 degrees of high-frequency dispersion. This brand new and patented method of high-frequency propogation is the differential diffuser called the SILVER SPIRAL.
Input impedance is 16 ohms. Overall di ameter is $15 y^{\prime \prime}$. Net weight 23 lbs , includ C21314- Ansico 5 magnet. $\$ 4704$
DeTire Reflex Cabinets
(B) 52 D -Superb cabinet, distinctively modern, designed to harmonize with quality furnishings. Rare woods tinished by naster craftsmen. Port opening, hidden by grill cloth, engineered to Bass-Reflex design equations for balanced low-frequency response. Drums. tubes, lowest voice tones reproduced with startling real 52 series and others. Solid construction, lined with acoustic material. No false resonance. $24^{* \prime} \times 17^{\prime \prime} \times 35^{\prime \prime}$. Shpg. wt. 75 lbs. C21318 Mahogany
 C21319-IBleached Blonde $\$ 7(4)$
Your Cost, Either......

## Coaxial Speaker

(C) P-52A-Firequency response 30-16,000 cps, $\pm 5 \mathrm{db} 50-12,000 \mathrm{cps}$. "Room pres ence" living, vital realism. An assembly of 4 units: $15^{\circ}$ bass speaker; high-freq. speaker with small precision built diaphragm; 8 -cel horn unit; and 1200 cpss cross over net work that divides highs from lows and channels each to the proper speaker. Eliminates acoustic cross-modulation. l'ainstaking tests before large selected and discriminating audi ences have developed perfect balance and blend throughout the entire audible spec trum. Rugged. precise construction plus Xinicu 5 maknets totaling 960 oz give this speaker the fidelity and efficiency needed for ideal FM reception, broadcast station monitoring. sound motion picture reproduction and laboratory uses. Power input: 20 watts. Input impedance: 16 ohms Hi-freq. horizontal distribution 80 degrees; vertical distribution
degrees. Size $15^{\prime} 2^{\prime \prime}$ dia.overall, $10^{\prime \prime}$ deep. Wt. 301 bs. $\${ }^{\prime}$ degrees. Size 15 " dia
C2i315-Your Cost.

## Coaxial Unit in Cabinet

Consists of Model 1152A coaxial speaker described above mounted in same cabinet as described below. Cabinet sturdily constructed of heavy, rigid, vibration-proof plywood and lired with moistureresistant material to eliminate spurious resonance. Carefully designed release port beneath cone relieves back-pressure and reinforces fronta wave. Attractive, conservative modern design with beautiful gossy c21316-Your Cost.
s155.82

## Separate 2-Way Speaker System

(D) P-5211F-Differs from P-52A system in that completely separate
low and high frequency units are employed. Separation of these units and mounting low frequency unit in Model 52 U base rellex cabinet (described above) and high frequency unit on top of cabinet. makes max imum efficiency possible from each speaker. Since space is no longer a
 lower and more effective crossover frequency is selected. Separate field units are provided for each speaker. These heavily powered units provide perfect balance and performance from deepest bass to highest overiones, withoul emphasizing some frequencies or leaving out others. The feeling of "I'resence" and the true neaning of "High-Fidelity" are realized in this superb instrument. Characteristies: power input 20 realized in this superb instrument. Characteristics: power input 20
watts; input impedance 16 ohms; crossover frequency 800 cycles; frewatts: input impedance 16 ohms ; crossover requency $\quad \pm 5 \mathrm{db} 40-12,000 \mathrm{cps}$; distribution. quency response $30-16,000$ cils; $\pm 5$ db $10-12,000$ cps; distributions. Alnico 5 permanent magnet. Size: cabinet $26 \times 15 \times 34^{\prime \prime}$ high, overall height $43^{\circ}$. Net wt. 90 lbs. Slupg. wt. 130 lbs .
C21317-Your Cost..
$\$ 183.13$

JENSEN Type "J't Coaxial Hi-Fi Speakers
(A) Efficient dual speaker -assemblies with conc type "iwceter" fine mounted in the cone assembly of the "woofer" Ideal for FM and The $15^{\prime \prime}$ models incorporate a built-in two channel network providing high and low-pass channels with attenuation of $10: 20 \mathrm{db}$ per octave; hish and low-pass channels with attenuation of $10: 20 \mathrm{db}$ per octave;
also furnished with four-position High Frequency Control Switch on a $36^{\prime}$ cable ("roll-off"' control of high range). $12^{\prime \prime}$ model has simple bridg $36^{\circ}$ cable "roll-off" control of high range). 12 " model has simple bridg-
ing type network that affords good wide-range performance; no range ing type net work that affords good wide-range performance; no range
control switch with this model. These units can be used with enclosures contro

## Model IAP-60. 15-inch Speaker

Professional type. Range 50 to $12000-15000$ c.p.s. Efficiency 3 db higher than ot her $15^{\prime}$ models. Input impedance 500 ohms. Nax. input $14-15$ watts. Integral two-channel network. With 4 -position H.F
control. Shpg. wt. 24 lbs . c19007-Your Cost
\$55.53

## Model JHP-52. 15-inch Speaker

For all general applications. Range 50 to $12000-15000$ c.p.s. Maximum input 12-14 watts. Input impedance 500 ohms. Integral 2-channel
network. 4-position H.F. control. Shpg. wt. 23 lbs .
C19002-Your Cost.

## Model JCP-40. 12-inch Speaker

Replaces $12^{\prime \prime}$ speakers in radios and phono-radio combinations. Range 50 to 10000$) 12000$ c.p.s. Max. input $8-10$ watts. Input impedance ${ }_{n}$ ohms. Has simplified bridging type network (no 11.F. control) Shpg. we. 16 lhs.
C19008-Your Cost
\$19.60

## H.F. Level Control

Simplified fidelity control for Model JCP-40 Coaxial speakers. Easily 16 ohms, $i 5$ wat des level high frequency response. Can also be used as 16 ohms, is wat ts le vel control. Shpg. wt. 2 lbs . C9010-Your Cost.
s1.96
$\dagger$ Extra heavy magnet.
(C) Field Coil Speakers

| Stock |  |  |  | Field | Output | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Model | Size | Watts | Ohms | trans. | Cost |
| C18953 | F $4-\mathrm{x}$ | 4* | 2 | 2800 | E | \$3.18 |
| C18956 | F 4 -X | 4* | 2 | 450 | E | 3.03 |
| C18954 | F 5-X | 5 | 21, | 2800 | E | 3.35 |
| C18955 | F 5-X | 5 * | 21 \% | 1800** | E | 3.29 |
| C18958 | F 5-X | 5* | 21. | 450 | E | 3.15 |
| C18961 | F 6-X | 6 ' | 3 | 2800 | E | 3.41 |
| C18981 | F 6 -X | $6^{\prime \prime}$ | 3 | 1800** | E | 3.47 |
| C18983 | F 8-W | 8 | 4 | 2500 | D | 4.00 |
| C18959 | F 8-W | 8 | 4 | 1800** | D | 3.97 |
| C18984 | F 8-W | 8' | 4 | 1000 | D | 3.91 |
| C18985 | F10-S | $10^{*}$ | 9 | 2500 | D | 7.64 |
| C18962 | F10-S | $10^{*}$ | 9 | 1500 |  | 7.47 |
| C18987 | F12-S | 12* | 10 | 2500 | $\dagger$ | 8.73 |
| C18963 | F12-S | 12' | 10 | 1500 | $\dagger$ | 8.58 |
| $\dagger$ Fixed <br> 承「apper | dance 300 o | put tra | formers | commen |  | 8.58 |

## JENSEN Standard Series Speakers

A complete line of replacements for radio receivers, low power public address systems and intercommunication equipment. Highly efficient Alnico 5 magnets insure unlimited life. lium bucking coils built into field coil models. All models less transformers. A complete listing of output transformers will be found below. P4-X through P8-U 3-4 ohm V.C. P8-S through P12-T $6-8 \mathrm{ohm}$ V.C. All Dynamics $3-4$ ohms V.C.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \\ & \text { C18960 } \end{aligned}$ | (B) P. M. Speakers |  |  | Output trans. E | Your |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model | Size | Watts |  |  |
|  | $1{ }^{1} 4$ - ${ }^{\text {d }}$ | 4' | 2.0 |  | \$2.44 |
| C18952 | $\mathrm{I}^{2} 5-\mathrm{X}$ * | 5 | 2.5 |  | 2.91 |
| C18968 | 1) 5-X | 5* | 2.5 | E | 2.53 |
| C18969 | 1' 6 -W | 6 | 3.5 | E | 3.32 |
| C18970 | P 8-U | 8 | 6.0 | D | 4.91 |
| C19076 | P 8-S $\dagger$ | 8' | 8.0 | C | 7.60 |
| C18971 | P10-T | $10^{\prime \prime}$ | 8.0 | C | 6.26 |
| C18972 | P12-T | 12" | 9.0 | C | 6.97 |



(ㅁ)

## JENSEN Peri-Dynamic Projector

(A) Projectors are complete assemblies of PM speaker and acoustic A) system. Usually good frequency response from $1(16)$ to 5500 cycles. For music or voice reproduction. Suitable for indoor or outdoor use. Power handling capacity 15 watts average, 25 watts max. Voice coil impedance 8 ohms. Bell dia. $241 / 2$ depth, $30^{\circ}$. Shyg. wL. 30 ibs. C19004-Less stand.
48.51

Your Cost.
C19005-JENSEN EA-5 adjustable stand for projector above. Your Cost

## JENSEN Rypex Projectors

E pecially suitable for speech reproduction and commercially acceptable music reproduction. Sturdy steel encased unit, plus reflex horn construction insures dependable operation under aillweather conditions. Finished in durable baked two-tone gray lacquer. Increased efficiency in the region above acoustic cut-off. Type $1 \mathrm{H}-20$. Horn only. Bell diam. 2034. Depth $16^{3 \%}$. Acoustical ength, 4 It. Nominal acoustic cut-off, 165 cps . Stand coupling flange tapped for ${ }^{3 / 4}$ " pipe thread. Shpg. wt. $18 \frac{1}{4}$ lbs. C18926-Your Cast.$\$ 16.46$ Type II21. Horn oriy. beil dia.. $2434^{\circ}$. Depth, $201 /{ }^{\circ}$. Acoustical lengith, 5 ft . Nominal acoustic cut-off, 140 cps . St lhs.
C18927-Your Cost.
\$21.05

## JENSEN Type " ${ }^{\prime \prime}$ / Annular Driver Units

(C) U-20. PM type. Rate at 15 W . average, 25 W . max. Normal voice C18919- ${ }^{\text {or }}$ music input. 16 ohm V.C. Diam. $61^{\circ}$. Depth $37 /{ }^{7}$ Your Cost.
24.11

Fixed Impedance Transformers, encased in metal cans; will not mount directly on speaker.
C18922-500 to 16 ohms. Core size, $7 / 8 \times 1 / 8^{\prime \prime}$. . . . . . . . . . Each 54.26
C18923-500 to 8 or 16 ohms. $11 / 4 \times 11_{4}^{\prime \prime}$.
Each 11.93

## Stands and Supports

Adjustable Stand. Sturdy cast fitting with three-leg base, for mountiny projector on wall or other surface. Horizontal and vertical adjustment.
\$1.76
C18924 Your Cost
$\$ 1.18$ on pipe mast. 8,4 pipe thread on both ends. C18925-Your Cost. ds.

## JENSEN "Speech-Master"

(D) AP-10: Desk type PM speaker employs Peri-Dynamic principle. For desk or wall mtg. Has "tilt" adjustment and sturdy base. Dustproof, fully enclosed. Internal bracket for ${ }^{1} x^{2}$ transformer. It. $63^{3 / 4}$; dia. $5^{2}$; d. $5^{\circ}$. With $36^{\circ}$ cord. Gray finish, satin chrome trim. 4 ohm voice coil. Wit. 6 lbs.
$\$ 8.17$ C18929 Each
${ }^{5} 6.64$ cutout. Wt. 4 lbs
C18930 Each

## Speaker Accessories <br> Kainer Deluxe All-Steel Projector

(K)Constructed of heavy spun steel alloy and will accommodate all types of $12^{\prime \prime}$ speakers with or without transformers. Rear housing has back pressure release. Overall length, $20^{\circ}$. bell, $17^{\prime \prime}$; flare extension, $11^{\circ}$. Screened breather opening. Finished in baked art metal grey. Fixture (welded to bafle) is tapped to fit standard $1 /^{\circ}$ pipe. Base has a tilting dog-toothed adjustment. with swivel and lock nut. Shpg. wt. 13 lbs


C20077-J-12 (less base).
Your Cost
c20078 Brack ............... $\$ 10.53$ Your Cost. Your Cost
erproof cover
1.03

## Car-Top Horn Carrier

(L) Waterproof plywood and angle iron consiruction. 1 suction cups and gutter hooks with adjustable straps. $8 x$ $4612=$ Shpg. wt. 8 lbs.
C 20028 -Your Cost.
$\$ 4.63$

## UNIVERSITY Reflex Projectors

(E) High efficiency exponential air column type projectors. Heavy-gauge all metal spun horns. Compact and easy to install. Incorporate design features that insure superior acoustic results. Non-resonant rubber rims with each unit. Will handle 25 watts output. Complete with universal " $U$ " type mounting bracket. Finished in hatteship grey. Waterproofed for outdoor use. Less drivers.


Stoek Model Bell Ingth. C.P.S. Shpg. Your
No. No. Dia. In. Cutofi Wt. Cost $\begin{array}{lllllll}\text { C20049 } & \text { PH } & 20^{\circ} & 16^{\circ} & 140 & 10 \text { lbs. } & \$ 17.05 \\ \text { C20047 } & \text { L. } & 25^{\circ} & 21^{\circ} & 115 & 15 & \text { libs, } \\ 26.17\end{array}$ $\begin{array}{ccccccc}\text { C20047 } & \text { L.H } & 25^{\circ} & 21^{\circ} & 115 & 15 \text { lbe, } & 26.17 \\ \text { C20046 } & \text { SMH } & 15^{\circ} & 12^{\circ} & 180 & 6 \text { lbs. } & 14.41\end{array}$

## UNIVERSITY Driver Units

(F) Built to the most exacting standards of precision engineering. All employ quality Alnico magnets to insure peak efficiency. New one-piece molded Pbenolic diaphragm, immune to extreme temperature changes and corrosion. Units use the exclusive University rim centering" construction for perfect alignment, and greater efficiency. Alignment not affected by shock or vibration. Entire assembly in hermetically sealed housing. Standard thread fits all standard projectors, Model thread fis all standard prolectors. Model SAH and PAH have VC impedanceof 160 hms
Stock Model Range Cap. Sh. Your No. No. C.P.S. Watts Wi. Cost C21300 MAII $100-6000 \quad 12 \quad 21 / 4 \$ 14.70$ $\begin{array}{llllll}\mathrm{C} 21301 & \mathrm{SAH} & 90-6000 & 25 & 5 & 21.76\end{array}$ * Heavy duty model, tlux density $23 \%$ higher than SAH.

## UNIVERSITY Industrial Paging

## Speakers

Compact intercommunicator "booster" speaker having extremely bigh projecting power. Clear sound output overcomes factory noises, Can be used as Talk Back speakers n intercom systems. High sensitivity permits nitiating or answering calls at a distance from he speakers. For industrial plants, terminal yards, docks and loading platforms. Complete with adjustable mounting bracket.
Stock Mod. Cap. V.C. Freq. Shng. Your No. No. Fatts Imp. Resp. Wt. ILbs. Cost $\begin{array}{llllll}\text { C19349 MIL } & 5 & 8 & 400-9000 & 31 / 2 & \$ 14.70 \\ \text { C19348 IB8 } & 12 & 8 & 300-6000 & 5 & 19.99\end{array}$ $\begin{array}{llllll}\mathrm{C} 24015 \mathrm{CR} & 19 & 16 & 250-6000 & 9 & 24.70\end{array}$


## UNIVERSITX $360^{\circ}$ Radial Projectors

(H) "Infinite Baffle" sealed acoustic chamber is responsible for the added base response afforded; cone is properly loaded. Give uniform coverage in all horizontal directions ( $360^{\circ}$ ). Easity mounted; single point suspension. Projection angle is about $15^{\circ}$ down for most effective sound placement. Other features: Alt-Metal weatherproof construction; "rubber tire" rims; "floating rubber" cone mounting; back pressure "breathers."

| No. | Model | Cone Diam. Height Weight Each |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| c24016 | RBP8 | $8^{\circ}$ | $18^{\circ}$ | $9^{\prime \prime}$ | $9 / b s$. |
| 11.52 |  |  |  |  |  | $\begin{array}{lllllll}\text { C24016 } & \text { RBP } & 8^{\circ} & 18^{\circ} & 9^{\prime \prime} & 9 \text { lbs. } & \text { S11.52 } \\ \text { C24017 } & \text { RBP12 } & 12^{\prime \prime} & 27^{\prime \prime} & 1^{\prime \prime} & 19 \text { lbs. } & 20.58\end{array}$

## UNIVERSITY Radial Speaker

J) Model IBR retlex air column horn with radial deflectors and built-in hermetically sealed driver. Particularly recommended as "Talk Back" speakers for.intercom systems. 1 tigh sensitivity eliminates chose talking, calls can be initiated or answered at a distance from speaker. For paging and call systems in factories, warehouses or outdoor locations where $360^{\circ}$ coverage is required. Frequency coverage $300-6000$ cycles. Power capacity 12 watts. Impedance 8 ohms. Bell dia. $9^{\circ}$, height $11^{\prime \prime}$. Shpy. wt. 5 lbs.
Your Cost


UNIVERSITY Accessories
(M) C21305-Model 2YC Connector for connecting two-driver units to any trumpet. Your Cost. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 55 .88
(N) C21306 Model PMA Adaptor for mounting trumpet on pipe
(O) C21304 Model TS-10 Stand for University Trumpets.

Your Cost.
$\$ 23.52$
Line Matching Transformers weather proofed for outdoor use. $\begin{array}{lllllll}\text { No. } & \text { TypuNo. } & \text { Primary Imp. } & \text { Sec. Imp. } & \text { Watts } & \text { Cost } \\ \text { c5898 } & 5101 & 500-1000-1500-2000 & 8 & 12 & \$ 7.35\end{array}$ $\begin{array}{lllllll}C 5898 & 5101 & 500-1000-1500-2000 & 8 & 12 & \$ 7.35 \\ C 5899 & 5402 & 250-500-1000 & 1500-2000 & 4-8-16 & 25 & 11.76\end{array}$

# Concord SPEAKERS And BAFFLES 


(B)

(C)

(D)


## CONCORD Walnut Baffle

(A)Here is something ultra-new in quality of heavy seven-ply vencer plywood paneled with a handsomely cut one-quarter plywood front panel. Two grooves on both sides of bafle give extended back-wave when
 at 10 and 5 ash deep at bottom. $\$ 5.25$
C20051 Each Lots of 2 Each
$\$ 4.95$

## Dual Speaker Case

## (B) Houses two speakers up to $12^{\circ}$ in diam.

 Opens into two halves, each serving as an efficient bafle. Sturdy plywood with strong handle, black leatherette covering. Metal bumpers top and bottom. Plated snap lock Single speaker case similar to above. Size C22061 Your Cost........... \$4. $\mathbf{1 4 5}$

## CONCORD Walnut Baffles

Efficient enclosed speaker baflies with correctly angled front faces 10 provide coverage over a wide area. Sturdily built of selected wood. Brown leatherette covered. Average shpg. wit. 6 lbs .
No.
Speaker

| No. | Speaker | II. W. D | Each |
| :---: | :---: | :---: | :---: |
| C20060 | $6^{6}$ | $81 \leq 2 \times 71 / 2 \times 48$ | 51.59 |
| ${ }^{\text {c } 20042}$ | $8^{\circ}$ | 101 2x 9613 | 1.90 |
| C20055 | $10^{\circ}$ | 14 15 $\times 12$ $\times 12$ | 75 |

## Walnut Paging Baffle

(D) A beautifully polished walnut baffe for (D. deluxe paging systems. For any standard $8^{\circ}$ PM speaker. Frieze grille cloth. $11^{\circ}$ high, $10^{\circ}$ wide, $611^{\circ}$ deep at top and 3 bottom. Shpg. wt. 6 lbs
$\$ 3.15$

## UNIVERSAL Line and Tube Transformers

E) For use with Concord and other speakers. push-pull, universal tine any tube, single or push-puil, universal line transformers match voice coil to $501,100.1500$ or 2000 -ohm line Average shipping weight each 2 lbs.

| Wattage | Univ. Line | Univ. Tubbe | Each |
| :---: | :---: | :---: | :---: |
| 18 | C19190 | C19194 |  |
| 24 | C19191 | C19194 | $\$ 1.52$ |

## No. Output Transformer-5-Watt

C1964 2.000 ohms 25B6,25L6, etc
C1965 5,000 ohms 25A6, 43, etc.
C1967 10,000 ohms 41, 6C6G, 6A4-LA
Your Cost Each,
Any Type

## Universal Tube to VC Transformers

C1954-4 Watt for up to $6^{\circ}$ speakers.. . . . . . . . . . . . . . . . . . . . . . . $\$ 0.87$
C1955- 8 Watt for up to $10^{\circ}$ speakers. . . . . . . . . . . . . . . . . . . . . . . . . . . 97
C1956-18 Watt for $10^{\circ}$ to $12^{\prime \prime}$ speakers 1.30

## GE Public Address Speakers

Newly designed Alnico V P. M. speakers incorporate the latest engineering developments in scientific tone for assurance of longer life. Each is electrical test or assurance of longer life. Each is checked acoustically in a sound-proof booth. Recommended for use With public address systems and for replacement in
C19351 is the $25-$ watt speaker used in all Concord home radios. C19351 is the 25 -watz speaker used in al Concord public address sys output and will not warp. Molded cones assure hich fidelity and brilliant frequency response. Plated finish protected by new Lusteron treatment. Assembled with universal transformer mounting brackets.

| Stock |  | Alnico V | V.C. |  | Shpg. | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | ---: |
| No. | Dia. | Magnet Wh. | Imp. | Wattage | $W_{\mathrm{L}}$. | Cost |
| C19350 | $12^{\circ}$ | 6.8 | 8 | 12 | 7 | $\$ 10.00$ |
| C19351 | $12^{\circ}$ | 9 | 8 | 25 | 8 | 12.05 |



## CONCORD

## Dynamic Speakers

A quality line of speakers for general replacement pur poses. Speakers are also rec ommended for use with in tercommunications systems, light public address work, radios and record players


Can also be used as replacement for automobile radios. When properly baffled, Concord speakers have a substantially radios. When properly from 100 to 4500 cps . All use high quality permanent magnets and formed one-piece cones.

| Stock | Dia. | Field |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { No. } \\ & \text { c19279 } \end{aligned}$ | Inches | Ohms | Watts | Shpg. Wt. | Your Cost |
| C19265 | 3 | 150 2750 | $\stackrel{2}{2}$ | 3 | \$1.68 |
| C19115 | 4 | 450 |  | 3 | 1.68 |
| C19261 | 5 | 6 volt $\dagger$ | 212 | 3 | 1.78 |
| C19262 | 5 | 6 volt ${ }^{4}$ |  | 3 | 2.49 |
| C19263 | 5 | 3000 | 21 | 3 | 2.39 |
| C19264 | 5 | 3000 * | 212 | 3 | 2.39 |
| C19117 | 6 | 1800 | $21 / 2$ | 3 | 2.43 |
| C19118 | 6 | 1000 | 312 | 4 | 2.92 |
| C19119 | 6 | ${ }_{1800}$ | $31 / 2$ | 4 | 2.92 |
| C19120 | 6 | ${ }_{2500}$ | $31 / 3$ | 4 | 2.92 |
| C19121 | 8 | 2500 | $3 \cdot 2$ | 4 | 3.03 |
| C19124 | 8 | 1800* | 4 | 6 | 3.63 |
| C19292 | 8 | 2500 | 4 | 6 | 3.63 |
| C19125 | 10 | 1000 | 8 | 6 | 3.63 |
| C19285 | 10 | 2500 | 8 | 7 | 5.83 |
| C19126 | 12 | 1000 | 8 | 7 | 5.83 |
| C19127 | 12 | 2500 | 12 | 9 | 6.97 |
| * Tapper | 00 ohm |  | + 6 V Auto | 9 | 6.97 |



PM Speakers
quality permanent magnet speakers. Each High in sensitivity a comparable field coil type. used formeability Alnico $V$ and Alnico III magnets plated utmost efficiency. One-piece seamless cones metal rames. Voice coil impedance 3.2 ohm up to $8^{\circ}$ size, $6-8 \mathrm{ohms}$ above $8^{*}$. All supplied less out


Dia

| Stock | Dia. | Watts |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Inches | nor. | plk. | Depth | Shpg. | Your |
| C19155 | 2 | 1 | 2 | 121 \% | 1. | \$1.75 |
| C19268 | 3 | 2.5 | 4 | $21 / 8$ | 2 | 1.75 |
| $C 19269$ | 5 | 3 | 4.5 | 219 | 3 | 1.89 |
| C19270 | 6 | 4 | 6 | 21516 | 3 | 2.35 |
| C19271 | 8 | 5 | 8 | 313 | 4 | 3.70 |
| C19290 | 10 | 8 | 10 | 615 | 6 | 5.65 |
| C19272 | 12 | 9 | 12 | 69 | 7 | 6.45 |
| C19258 | $4 \times 6$ | 3 | 4.5 | $2^{1 / 2}$ | 1 | 1.89 |

QUAM Alnico V PM Speakers
Utilizes the new Alnico $V$ magnet-recent development providing maximum performance with minimum weight. Widely used for AC-I)C radios, record-players, inter-office and auto receivers. High conversion factor. $\mathbf{3} 2 \mathrm{ohm}$ V.C. Less Trans.


| Stock |  |
| :---: | :---: |
| No. | Dia. |
| C19310 | $4^{\prime}$ |
| C19312 | $4^{\prime}$ |
| C19313 | $5^{\prime}$ |
| C19315 | $5^{\prime}$ |
| C19316 | $6^{\circ}$ |
| C19318 | $6^{\prime}$ |
| C19319 | $8^{\prime}$ |
| C19320 | 8 |
| C19321 | $10^{\prime}$ |
| C19322 | $12^{\prime \prime}$ |
| C19323 | $12^{\prime \prime}$ |

## QUAM Electro-Dynamic Speakers

Designed and constructed for use as radio replacements. All conform to RMA slandard dimensions and are equipped with the Quam Ad-justa-A-Cone voice coil suspension. Field coils are manufactured from carefully selected and tested materials, garanteeing long life under adverse climatic conditions.


Available in both dynamic and PM types, these highly efficient R M A Standard $4 \times 6$ speakers are for general replacement purposes. Depth $21 / 4^{*}, 3.2 \mathrm{ohm}$ V.C. Less Transformer. Alnico V C19300--Each

| Your | Cost |
| :---: | :---: |
| .$\$ 2.62$ | C190-ohm Field |

Your
Cost $\begin{array}{r}\text { Cost } \\ . \\ \hline 3.12\end{array}$

## (A) (B)

## Speaker Repair Service

Speakers reconditioned with Carron seamless cones. Install new voice coil and align. Dust and other causes of noisy reproduction removed. P'M's remagnetized. Delivery approx 30 diys. Approx. costs are:


Cones not in Carron listing can be sent in for
duplication. Approx. costs are:

## Speaker Shims

(A) Non-Magnelic Monel shims. 4 each. $004^{*}$, . $016^{\circ}$. On8, $010^{\circ}$ shims. In plastic case C19649-Your Cost
$24^{\text {c }}$

## Universal Field Coils

(B) Fits 5 " and $6^{\prime \prime}$ speakers. Spacing washers, (B) tubes and directions with coil. Size: Type A $2^{\prime \prime O D} \times 3 / 4^{-1 "}$ long, hole $3 / 3^{" 1} 1^{\prime \prime}$. Type 131 $3 / 4$ ODx $3 / 8-3 / 8$ long, hole $1_{2} "-3 / 4$. C19461 our Cost Ohms Type B Your Cost


WALSCO Speaker Cone Patches Specially fabricated material and adhesive for permanent cone repair. 12 assorted patches.

24
C19647-Your Cost
WALSCO Flocked Grille Screening
Protective grille for radio, intercom phonograph speakers. Will not tear, split or fray $\begin{array}{cccc}\text { Stock No. } & \text { Size } & \text { Color } & \text { Your Cost } \\ \text { C19487 } & 8 \times 11 \text {. } & \text { Brown } & \$ 0.32\end{array}$ C19489 18×24 Brown 1.12

## Speaker Grille Cloth

Handsome frieze, $50^{\circ}$ wide, cut to your specified length.
C20949 Per Yard. Your Cost C19496. 12x12". Your Cost

## Voice Coil Dust Felts

(C) Felt discs used on voice coils to keep dust of 25 .
C14745-Your Cost
$24^{4}$

## Cement Kit

(D) An efficient cement kit for speaker cones, voice coils, r.f. coils and chokes. One bottle of all-purpose cement, one bottle of thinner, and brush. C19499- Your Cost

44


# Carron SPEAKER REPLACEMENT Cones and Accessories 

CARRON EXACT DUPLICATE

## REPLACEMENT SPEAKER CONES

(E) Seamless one-piece cones that duplicate the original units. Feature enduring, non-resonant quality. Voice coils are accurately wound and firmly attached to cones and are also exact duplicates of the originals. Only Popular numbers are listed below: we can supply on order any round or oval cone not shown below-give make and model of receiver, or send in your old cone with voice coil and spider attached.

Stock Carron Model No.
No. No.
4' Speaker Cones
C19563 1562 Emerson AX211, 4×5-324
C19606 156.4 Emerson C T275, 6J5, 368 U
C19366 1.553 Gen. Elec. H508
C19372 1555 Oxford (Fada 105-134B, RCA
C19369 1616 Utah 4A106A
C19370 1619 Zenith 49AG385
C19371 1620 Zenith 49U334
Your Cost, Each.

## $5^{\prime \prime}$ Speaker Cones

C19411 1417 Airline 62-475, Arvin 18
C19441 1626 Chevrolet 985538(Spkr. 41045)
C19445 136 Chevrolet 98
$\begin{array}{llll}\text { C19445 } & 1373 & \text { Crosley } 516 \\ \text { C19446 } & 1589 & \text { Crosley 719E } & \text { C-648- }\end{array}$
$\begin{array}{lll}\text { C19446 } & 1589 & \text { Crosley 719E, C-648-A } \\ \text { C19543 } & 1489 & \text { Emerson A130, A132, A148, } 149\end{array}$
$\begin{array}{lll}\text { C19543 } & 1489 & \text { Emerson A130,A132, A148,149 } \\ \text { C19462 } & 1584 & \text { Emerson D-L-330 }\end{array}$
C19578 10.13 Jensen T3 (Crosley 175, 343)
$\begin{array}{llll}\text { C19463 } & 1507 & \text { Jensen PM15DS, } 115 S \\ \text { C19466 } & 1387 & \text { (Quam-Nichols (Air King 260) }\end{array}$
Your Costs Each. . . . . . . . . . . . . . . . . . . 81c
6" Speaker Cones
C19576 1285 Jensen F6R (Belmont 77\%) Your Cost, Each

## 7' Speaker Cones

C19474 1583 Chevrolet 985-536\$1, 29
Your Cost, Each................
C19504-1617 Zenith 49AB341 \$ $\$$ East, Each ..............

## 8' Speaker Cones

C19612 1411 Jensen C8R, PNI8C C19506 1200 Magnavox 15,11 ), 48C, 158 C19485 1548 Jensen PM8DS, PM18GS
\$1.4.3
Your Cost, Each
10" Speaker Cones
C19501 1000 Atwater-Kent No. 15142, 55 C19532 1060 Majestic (53, 90, 91, 101

Your Cost, Each
1.46

## 12' Speaker Cones

C19510 1035 Jensen D7, 1) $(111 / 4$ )
C19701 1384 Jensen PM112C
C19613 1.144 Jencen PM112B
C19533 1062 Majestic G5, 131, 132 C19641 13 ti6 Jensen A12

Stock Carron
No. No.
$12^{\circ}$ Speaker Cones Model No.
C19520 1642 Utah 12PG17A, 12J43-B
C19521 1664 Utah G-12-P, 12PPH15-C
C19522 1483 Utah G'13, F12P
Your Cost, Each.
For Philco Sets
4" Speaker Cones
C19534 1542 TH-4 (Pt. No. 36-1469) C19538 1587 TP4, TP12, PT25 59 5 Your Cost, Each
C19682 $1244^{5}$ Speaker Cones 54,57 (Pt.No. 36-3029) C19552 1203 5,5T (Auto) (Pt. No. 02861) C19703 1343 FT9 (Ford) 816 (Pt. No. 363526)

Your Cost, Each
$65^{4}$
C19549 1500 Speaker Cones
$\begin{array}{lll}\text { C19550 } & 1455 & \text { F1540 }\end{array}$ (Ford), (Pt. No. 45$\underset{2608)}{\text { F1540 }}$ (Ford), (Pt. No. ${ }^{45}$ Your Cost, Each.
7" Speaker Cones
C19516 $1557^{7} 1708$, F194D
Your Cost, Each..........................
C19681 1246 34B, L (Pl. No. 36-3157)
C19671 1245 6, 7, 8, 9, 10 (Pt. No. 36-3159) Your Cost,
Each..
8 Speaker Cones
C19547 1079 20, 21 ( $\mathrm{P}_{\imath}$. No. 02625)
Your Cost.
10'Speaker Cones
$\begin{array}{lll}\text { C19529 } & 1248 \\ 160 \text { Speaker Cones } \\ 14 \mathrm{LZX} & 1{ }^{\text {² }} \text {. No. 02625) }\end{array}$
C19400 $1078 \quad 87,40,41,65$ ( Pt . No. $36-3170$ ) Your Cost,

12" Speaker Cones
C19551 153939 40, 39-45 (Pt. No. 36-4089)
Your Cost................................ . . $\$ 1.46$

## For RCA Sets <br> $5^{5}$ Speaker Cones

C19406 1236 R28, 300, 301, 100 (It. No. C19554 1091 M134, M105 (Pt. No. 9023) Your Cost, Each
$9^{7}$ Speaker Cones
C19405 1124 R32, 52, RE45, E35 (Pt. No. Your Cost 10801)
Your Cost. .

## CABINET REPAIR ACCESSORIES



Shellac Patch Sticks
(A) For repairing cabinets. All are $7^{\circ}$ long: C15523-Liight Walnut C15524-Dight Walnut. C15525-Black.

## Your Cost, Each <br> $29 \%$

## C15526-Maple.

## Plastic Cabinet Cement

Repairs Bakelite or Plaskon molded radio cabinets. Dries fast and holds securely. 2-oz. bottle.
Your Cost


## GENERAI Scratch Stik

(B) Handy pocket stick for servicemen, reiiffy. Cos scratches rom radio cabinets in a iiffy, Contains filler and scratch polish.
Your Cost, Each.

## Scratch Remover Kit

(C) Combination kit of 6 colors, popular (C) shade of wood Scratch-Stik fillers and 2 bottles scratch remover liquid-walnut and clear. Works on all types of light and dark clear. Works on all types of hish and dark HoOd.
C15530-Your Cost

## Cabmet Repair Kits

(D) Handy kit, ideal for radio shops, stores, trucks, etc. Small brushes in caps of all bottles make quick patching of damaged cabinets easy. Ril coniains bottle each of: Ivory spirit enamel, light and dark, dark brown lacyuer enamel, wainut sipirit stain, polish renewer, French varnish; 3 sheets garnet finishing paper, stecl wool, polishing cloth and instructions. Shpg. wt. 3 lbs. C15527-
$-6$
(E) For use on plastic, bakelite or wood cabinets. 9 shades of shellac sticks, bot tles of light and dark oil stain, bottle of metal shading lacquer. Magic Scratch Remover, alcohol lamp, spatula, touch-up brushes, steel wool, etc. Very easy to use. Shipg. wt.
3 libs.
c15521-Your Cost. . . . . . . . $\$ 2.5$
Cabinet Touch-Up Kit. Same as ahove, less Scratch Remover, shellac sticks, lamp and snatula (stains only) Wt. 2 lbs. Snatula (stains only)

$\left.\left\lvert\, \begin{array}{c}\text { RECORD } \\ \text { CHANGERS }\end{array}\right.\right)$
CRESCENT Automatic Record Changer
A new improved single post changer with the features you would hardly expect to find in the low price field. Simple, single control, plays ten $12^{\prime \prime}$ or twelve $10^{\prime \prime}$ records automatically. Rejects any record desired, or vermits optional playing of records manually. Only three moving parts while changing. Fast ... changes records in 5 seconds. "Childproof' -tone arm may be moved at any
 time without damage. Has self-starting, 78 RPM, 110 volt 60 cycle AC. heavy duty motor, and $9^{\circ}$ turntable covered in velvet flox. Will operate satisfactorily on any record regardless of age. Complete with $30^{\circ}$ lead wires, and plugs, and simple instructions, for easy connecting. Finished in two-tone brown with attractive plastic trim. Will decorate any radio. Requires only $54^{\prime \prime}$ head room and fits any cabinet with $121 / 2^{" x 161 / 4 " ~ c h a n g e r ~ a r e a . ~ S h i p p i n g ~ w e i g h t ~} 12 \mathrm{bs}$. C22503- Your Cost
\$15.95

## GENERAL INSTRUMENT Record Changer

Foolproof mechanism, designed to give the maximum convenience and pleasure with a minimum of attention and care. Will play manually and automatically change up to 10 twelve inch or 12 ten-inch records. Fast change over time assures a short wait between records. Discs last longer due to the feather weight pickup used-only 114 oz. needle pres sure. Heavy duty dependable motor of 78 RPM is cushion
 mounted for silent operation. Records drop on velvet brown flox turntable. Requires a mounting base $11^{\prime \prime} \times 12^{*}$. Overall height $61 /{ }^{\circ}$ above the mounting plate and $2^{\prime}$ below. For use on 115 volts AC, 60 cycle. Complete with mounting hardware. Shipping C22556 Your Cost
\$16.95

## WEBSTER Record Changer

Simple in design and operation, it provides manual or automatic playng of ten standard $12^{\prime \prime}$ or twelve $10^{\circ}$ discs with a minimum of wait ing time between records. Home recordings or "inside out" records up to $12^{\circ}$ size may be played man ually. Shuts off automatically after the last record has played. Lightweight pickup less needle has a $36^{\circ}$ lead. The unit has a 110 volt. 4 pole. heavy duty, 60 cycle motor
 Supplied complete with mounting template, instruction manual, and all mounting hardware for standard $5 / 8^{\circ}$ board. Dimensions: $14^{\circ} \times 14^{\circ} \times 9^{\circ}$ overall. Shpg. wt. 17 lbs.
C22500-Model 56-Your Cost
\$26.66
New Junior Model similar to above but last record is repeated instead of automatic stop. Dimensions $127 / 8^{\circ} \times 12^{\prime \prime} \times 9^{\prime}$ overall. Allow additional $1 / 2^{\prime \prime}$ front, side and rear for $12^{\circ}$ record clearance. Shpg. C22501
Model 50-Your Cost
\$21.17

## WEBSTER Intermix Changer

The Model 70 changer is handsomely styled to harmonize with fine furniture; operating mechanism is attractively concealed. Simple to operate and easy to load and unload. All parts are sturdy and of precision manufac ture, assuring years of dependable enjoyment. Rim drive type, with rubber-tired idler wheel that is in contact with the drive rim and sleeve only when the changer is in operation. thus eliminating
 thump caused by flats forming on the idler wheel during long periods of non-use. Removable spindle for casy unloading of played records. Plays $1 \frac{1}{6} 8^{\circ}$ stack of $10^{\circ}$ and $12^{\prime \prime}$ records intermixed, or full stack of either. Base size: $1 t^{\prime \prime} \times 14^{\prime \prime}$, height above main plate $8^{\circ}$ when fully loaded. depth below plate $21^{\prime \prime} \mathbf{1}^{\circ}$. Shpg. wt. 18 lbs.
C22504 -
Model 70-Your Cost.
$\$ 4244$


# AUTOMATIC RECORD CHANGER <br> $\star$ Lightweicht <br> -SMAEI SERE <br> +NO GEARS <br> * $11 / 4$ oz. NEEDLE PRESSURE 

This changer is a simple, gearless, foolproof mechanism, designed to give the maximum convenience and pleasure with a minimum of attention and care. This machine will piay and antomatically change a series of up to twelve 10 -inch records of ten 12 -inch fecords of the 78 r.p.m. type having an eccentric stopping groove. Recordings sold today for home use are of this type. Very old records that do not have an eccentric stopping groove can be played semai-automatically by operating the reject lever at the conclusion of each selection. The free floating tone arm incorporated in this machine employs a crystal pickup of the hi-fidelity type. Needle pressure $11 / 4$ oz. Conventional removable needle. Turntable is brown flox coated. Entire unit is finished in beige and brown enamel. Overall size: $103^{3}$ by $121 / 8^{\circ}$ by $8^{\circ}$. Requires $6^{\circ}$ ahove motor board and $2^{\prime \prime}$ below motor board. Complete with mounting hardware.
C22560-Your Cost
\$19.46

## Base for above Record Changer

Wood mounting base for use with above record changer. Walnut finish. Mounting holes and clearance cutout already provided. Provides a complete portable unit ready to attach to a radio. Size, $125^{\circ} \times 11^{3} 16^{\circ} \times 25^{\prime \prime}$.
C22361-Your Cost.
${ }^{\$ 1.95}$

## GARRARD Record Changer



Gartard's new Deluxe "Mixer" record chanser which plays both $10^{\circ}$ and $12^{\prime \prime}$ records in any assortment. any combination. Record changing is per formed simply, efficiently, and silently. 1 -ounce high-lidelity crystal pickup. with frequency response from 30 to 8500 c.p.s. The permanent jewel stylus will last for years of normal playing. The motor is silent and sturdy, built to give powerful but regutar governed running. Special spring mountings for full thating nonmicrophonic installation. Overall dimensions with a full $12^{\circ}$ record supply are: $15^{*} \times 13^{*} \times 5!$ !. Shpg. wt. 21 lbs. C22550-A.C. Model-100/130 V. 60 cycles C22552-is above, but magnetic head. Less needic
\$69.50 As above, but with G.E. Variable Reluctance pickup. amplifier.
\$69.50
22554 Your Cost
\$89.50

## VM Automatic Intermix Changer



The modet " 400 " record changer is an inter-mix model handling ten $12^{\prime \prime}$, or tweive $10^{\circ}$ or anm ten records intermixed. Gives positive intermix action. Automatically shuts off after last record has been played. Quick. quiet record changing cycle is quiet record changing cycre is gently lowered on spindle step. Eently lowered on spindle siep. Mounting space required is $13^{\text {Ls }}$ " ${ }^{*}$ wide, $12,4^{\circ}$ long, and an overall height of $73 / 8^{*}$. C22557- i
$\$ 28.73$
VM Model 401. Combines Model 400 Intermix chanser with heauti fully styled birch and maple hase. Complete with 6 ft . power cord and 4 ft . shielded cord for radio attachment
C22558
Your Cost.
\$32.75

## Record Changer Bases

Sturdily constructed all-steel bases for use with Wehster record changer Models 50,56 and 70 . Attractivery finished in dark brown wrinkle Gnish to harmonize with any surroundings. Mounting brackets welded in place for changer. Nion-scratch felt feet permit placing on tahle fops. other polished surfaces. Measure $133 / /^{\prime \prime} \times 1334^{\prime \prime} \times 1 / 1^{\prime \prime}$. Shpg. Wt. 5 lbs.

C22355-For Wehster Model 50.
$\$ 3.12$
22356-For Wehster Nodel 50

## WALSCO Standard Test Record

For immediate audible adjustment of record changers. Solves problem of adjusting set down position of the pick up and for proper tripping through series of tones at beginning and end of record. Playing time less than 40 seconds. Stroboscope on rim of label indicates 78 rpm at 60 cycles. Highest quality material. Designed to RMA and NAR standards. Precision checked for perfect flatness, concentric ness and correct groove depth.
C21880-10-in. record.....50.88 c21882-12-in. record
\$1.32
C21881-Set of six. ......... 4.80 C21883-Set of four
54.80

G-I Rim Driven Motor
(A) Model LX. Made by General Industries. Insulation turntable motor and mounting pless bronze bearings Twople hir quiet operation. $9^{\circ}$ urntable. 78 rem. 60 cycles. Wi. 8 lbs.
s. 4.08

## G-1 RM4 Recording Motor

(B) Constant speed ( 78 r.n.m.) self-starting motor and tale Red and table in one plane. Depth $2^{\text {is }}$ is below plate. 110 volt 60 cycles. Shipping weight 13 lbs.
C22528-Your Cost
$\$ 9.90$

## Constant Speed Motor

(C) Model CX. Gear Drive. $78 \mathrm{r} . \mathrm{pm}$. phono motor for Fully en $41 / 8 \times 31 / 8^{\circ}$ deep. For $110 \mathrm{~V}^{6} 60$ cycles. With $10^{\circ}$ turntable and all hardware. Wt. 10 lbs C22525-Each

## Dual Speed Motors

Model D. Powerful, governor controlled, gear drive motor that will maintain a uniform speed under normal variations in voltage and load. Lever yple speed regulator and lever shift to 78 or 33 . RPM . Fully enclosed With silent helical cut gears running in a hath of oin in a sealed housing. 10 turntable. Shpg. wi. 13 los nished with mounting hardware. Shpg.
## C22530-

 C22533-As$\$ 15.90$

## Automatic Stop

For any above notors with $8^{\prime \prime}, 9^{\prime \prime}$ or $10^{\circ}$ iurntable. C22540-Each.

## ALLIANCE Even-Speed Phono-Motor

 (C) Model 80 . Rim-drive phono motor. $9^{\prime \prime}$ turntable. air-cooled. For $10^{\prime}$ and $12{ }^{\prime}$ records. 110 V .60 Vt. 4 lbs. C22545-Your Cost
$\$ 3.75$

# Phono Motoris . Accessories <br> WEBSTER M-15 Phono Motor 

(F) lleavy duty shaded 4 pole motor, improved rim drive, flock. For manufablure heavily cushioned with long fibre flock. For manufacture, replacement or home construction of record players. Operates on 105-125 Shpg. wt. 5 lbs.
C22505- Your Cost
$\$ 3.82$

## G-1 Dual Speed Recorder

 and Play-Back Unit(H) Cuts records up $1010^{\circ}$ dia. at 78 or $331 / 3$ r.p.m. Plays (-1) records up to $12^{\circ}$ dia. at 78 or $33^{1}{ }_{3}$ r.p.m. To shift motor from one speed to another, merely turn the speed change dial. Heautiful walnut wood grain linish on steel base plate. Streainlined plastic trin on pickup and cutter arms attractively engraved with legends "Reproducer" and "Recorder." Convenient depth of cut adjustment. Dynamically balanced rim drive type motor. Compensating switch operated by speed change dial. Assembly includes dual speed motor, $10^{\circ}$ weighted turntable, cutting mechanism, crystal pickup, compensating switch, pickup and cutter arm rests, drawn steel base plate. $15^{\circ}$ wicle, $11^{1}$ " front to back. 110 V .60 cycles. C22516-
\$28.95
Your Cost ........................... at 78 r.p.m C22517 Your Cost
.524 .51

## G-I Record Changer and Recorder

(G) Cuts records up to $10^{\circ}$ dia. Plays twelve $10^{\circ}$ or ten $12^{\circ}$ records automatically. Only necessary to lower the culting arm over the record disc 10 start the recording operation. Convenient depth of cut adjustment on top of cutting arm. Self-starting, dynamically balanced, recording type motor. Non-jamming record handling fingers ing iype motor. Non-jamming record handing not extend past record lead-in space. Handles which do not extend past record lead-in space. Handles records with either run in or osciliating trip grooves. Shock mounting provides isolation of entire assembly crom the cilinet. Brown iridescent finish. Furnished with sping mounting hardware. Base plate $14^{\circ} \times 14^{\circ}$ C22515 Vnenr Cost


High Gain Phono Amplifier

(J)
A three tube hi-fidelity ampliter with an additional stage of amplification for use with low output, high quality pickups. Includes volume control and built in output transformer. Uses new miniature tube 1 ypes 12AT6, 50135 and SEW. Snuall size of 3 long, $314^{\prime \prime}$ wide and 3 ! ligh make the unit especially desirable for portable phone players and all applications where space is at a premiun. For $110-1 \angle 0$ voles, AC or 1 C . Speaker socket and shielded phono input socket built into chassis- just plug in. 5 ft.
line cord. Complete with tubes. C22547-Your Cost

## \$4.95

## Phono Oscillator

(K) Compact new design using series plate modulation. Uses only 2 tubes instead of he usual three tubes. Easy to install and operoscillator plays records connect directly simply starting record player and tuning in the orcillator on the radio as you do your favorite station. 1 las tuning adjustment to assure a "clear channel" on your dial. Oscilassure is amatically turned off when phono motor is shut off. Permits remote playing of records, and gives high quality reproduction. Complete with tubes.
C22546-Your Cost
$\$ 5.83$

## Stroboscopic Speed Checker

(1) When placed on turntable and illumdicates correct speed at 78 or $331 / 3$ r.p.m. dicates
E197-


## Tone Arm and EPead

(M) Exact replacement for $95 \%$ of all nonclectronic reprotucers in service today akes standard replaceable strel, alloy or cacus phono needles. Excellent for construction of children's phonographs. St urdily construc ed of alloy die casings for long years of use. inished in black and polished nickel. Arm has mounting plate. For up to $12^{\prime \prime}$ records. Shpg. wi. 2 lis C13415-llead only 13416 - Arm only

## ICA Record Player Switch

Used for quickly connecting record players, F.M. and relevision attachments into the audio amplifier of radio receivers. I'rovides change over from radio to record players without introducing hum. Cuts ou phono position. C12699 Your Cost.
$\$ 1.32$

## Record Player Cabinet

(N) Install your own record player or changer (N) in this attractively styled handsomely finished mahogany cabinet. Large enough to house any record player with a lase not over $12 \times 12^{\prime \prime}$. Will also accominodate a 3 or 4 -tube amplifier and a $4^{\prime \prime}$ or $5^{\prime \prime}$ oval speaker. Constructed of mahogany veneer and selected hardwoods. Finished in reddish-brown mahogany color. Only a limited quantity a a vailable -get yours now! Size $151 / 8 \times 1536 \times 8 / 1_{2}$. Shpg. wt. 10 lbs . wB7072-
Your Cost
$\$ 7.95$


Record Player
Easily connected to any radio receiver. Beautiful repreduction of favorite records, with full richness of tone. Volume is depentent on full richness of tone. Volume is depentent on
radio to which it is connected. Will play radio to which it is connected. Will play records pertecty otru audio section and speaker of largest or smallest receiver in your
house. Featherweight, true trackir, crystal house. Featherweight, true trackir, crystal
pickup will play both $10^{\circ}$ and $12^{\text {, }}$ records. Constant speed phono-motor insures accurate reproduction. Single connection to radio or amplifier and speaker is all that's necessary Attractive sturdily constructed cabinet Size: $12^{\prime \prime} \times 11^{\prime x} 4^{\prime \prime}$. for use on $105-125$ volt 60 cycle AC only.
C22654.
Your Cost
\$10.95

## SHURE

## Magnetic Recording Head

(Not Illustrated). High quality, wide response record cutter, for home recording equipment. Standard replacement for thousands of magnetic cutters and with minor circuit changes will replace crystal cutting heads. Designed to operate directly from voice coil winding of output ransformer, highly sensitive recording element. Match 4-8 ohm voice coil windings. No mounting brackets. Tapped mounting holes facilitate re-use of brackets on old unit Size: $2,3 / 4 \times 1 / 8 \times$ $3_{4}^{-}$" with needle screw and 4 -inch flexible leads. Less stylus. Shpg. wt. 8 oz. \$ 75 C13799-Your Cost... Lots of 6, Each

©


## GE PRE-AMPLIFIER

(3) A new compact low voltage audio pre amplitier for use with the G-E Pick-Up. Employs a shock mounted 6SC 7 tube in an equalizing circuit. Plate and filament power are obtained from the associated receiver or amplifier $15^{\prime \prime}$ insulated leads furnished. $12^{*}$ shielded lead and pluy for connecting to input of amplifier. Finshed in G-E Staybrite Lusteron Measures $3^{3} 8^{8} \times 3^{5} 8^{5} \times 1 \frac{1}{2}$. Shpg. wt. 2 lbs. Complete with tube. wt. 2 bs. Complete with tube.
C13465
Your Cost........


## CALTRON Pickup

## (H)

New high quality phonograph pickup. Incorporates a vibrating reed magnetic cartridge with a needle point pressure of only 1 oz. Especiaily designed for use where high quality reproduction and long record life are important. Output 2.5 millivolts. lmp. 100 ohms. Shpg. wt 10 oz $\underset{300 \mathrm{P}, \text { Each }}{\mathrm{C136}} \mathbf{\text { Model }} \mathbf{\$ 8 . 8 2}$

## Pre-Amplifier

## (J)

Model 404. For use with radio and amplifiers having the Caltron pick-up described above. Delivers 1 volt of undistorted output. Uses 1 - 6 SC 7 Shpg. wt. 13 oz.
E13472-Less tube $\$ 5.88$

## Replacement Cartridge

Model103P. A vibratingreed mag. netic pick-up cartridge in streamlined plastic case. Not affected by weather. Inmpedance 100 ohms. Output 2.5 millivolts. Shpg. wt. 3 oz . C13469-
Each.
$\$ 5.00$

## ASTATIC Studio

## Master " 400 "

(E) Professional type crystal recording stur broadcast and recordings. Swivel base may be raised or lowered to desired
 low friction pivots assure constant needle pressure Low vertistant needle pressure. Low vertical inertia insures ideal tracking even on warped and distorted records. Atractively designed with long, slender curved lines. offset head for low tracking error. Astatic Nylon 1-J cartridge with semi-permanent sapphire-tipped replaceable needle. frequency response from 50 to $80 \% 0 \mathrm{cjss}$. Dutput 1 volt. Needle pressure $1^{\text {! }}$ oz. Over all lensth 121, s $^{\prime \prime}$. Finished in light bis
$\$ 1402$

## GE Variable Reluctance

## Cartridge

The Latest development in magnetic pickups! Extremelv small mass of moving parts, plus outstanding design. gives a fre quency response and fidelity limited only by record itself. Like higb fidelity, high quality microphones, its output is low. 11 millivolts at 1000 cps . A pre-amplifier is needed between the pickup and phono input. Needle pressure from $3 / 4$ to 1 in 1 oz. is adequate. Reduces humi level; increases record life. Mounts by two No. 3-48

 ${ }^{3}{ }^{\circ}{ }^{9} 13464^{\circ}$. Your Cost.
$\$ 4.67$


## ASTATIC Pickups

(K) Model S-8: Light Weight straight arm type with ballbearing mount. Fine response. For up to $12^{\prime \prime}$ records. $8^{\circ}$ arm.

## C161- <br> C161-Cos

$\qquad$ s6.56
(L) Model AB-8: Offset-head. axial cushioning. Brown finish Internally damped crystal. Shpg. wht. 3 ils.
c119-Your cost $\$ 5.56$ ASTATIC "508" Series (M) Model Nylon-508 employs the new Nylon I-J crysta cartridge with semi-permanent sapphire tipped replaceable needle. Spring counter balanced to nsure correct needle pressure of $1^{1}$ ºz. Gracefully curved to give moderate offset for low tracking error and balanced side wall pressure. Frequency response from 50 to 8000 cps . Output 1 volt. For 10 and 12 inch records. Finished c13410- $\$ 10$ Hat Your Cost
$\$ 10.11$
Mode! 508 employs an L-71 cartridge. Other characteristics same as above.
C13411-
$\$ 9.47$

## ©

 $\frac{x+3}{x}$
## AUDAX Model 73A

(A) Uses the newly developed (A) tuned ribbon reproducer with replaceable sapphire tipped stylue. For playback of lateral recordings up to $12^{*}$. Linear fre quency response from 50 to 10,000 cycles. Output of -30 db . Im pedance 200 ohnss. Needle pres sure less than 34 oz . Finished in hronze and chrome.
Your Cost.... \$39.10
(A) Model 74A. For lateral re characteristics same as for 73 A Finished in French gray and chrome.
C13459-
$\$ 48.80$
Note: Bath above available in 500 ohm impedance

## AUDAX Model R-55

(A) Tuned ribbon reproducer for Has easily replaceable sapphire tipped stylus. Frequency reppone is nat within 21 do fromponse 8000 cycles ${ }_{8} 000$ cycles. Output of -20 db . veedie pressure less than $10 z$. Inpedance 200 ohms
bronze and chrome.


## AUDAX Microdyne

Model D-38H-New relay action principle places reso nance of moving system beyond audibility, eliminating harsh peaks. Exciter inertia several hundred times less than in ordt nary pickups. Flat within +2 db to 7500 cycles. Rising bass curve to about 8 db at 50 cycles. Exceptionally low vibratory momen um. Tip pressure about 39 rams. May be used with JEWEL OINT. Black and chrome finish 12.8 long. 500-onm imp.

## C13458-

$\$ 29.25$

## AUDAX Equalizer Filter

-or use with Audax Mode R55, $73 A$ and $74 \AA$ pickups or any 200 ohms output pickup Has live positions, covering NAB Orthocoustic, vertical. 78 1RPM and filter positions. Your Cost
$\$ 48.80$

- Rerncesmer hat mont ing C13470.
Your Cost
$\$ 15.99$
Replacement head mounting for Model $73 \Lambda$ and 74 A pickups.
C13471-Your Cost..... $\$ 35.69$ C13471-Your Cost ..... $\$ 35.69$ pedances on special order.


## BRUSH Crystal Pickup

Eliminates usual needle chuck and set screw. Employs small permanent polished sapphire stylus, bringing the mechanical imped ance of the vibratory system to a very low value. Response is flat within $\pm 2 \mathrm{db}$ to 6000 cps ., has slightly rising characteristic to 10.000 cms . Will drive conventional two stage amplither. Taupe and brown finished. $14^{*}$ ooverall, for up to $16^{*}$ records. With equalizer. Shpg. wt. 8 libs. $\xrightarrow{\text { C13 }} 1342$ Cost
$\$ 29.40$


SHURE "Muted Stylus" Pickup
(N) Muted Stylus crystal pickquietness Has with amazing needle muted sapphire needle for longer record life Faithful tracking gives clear, fuller tone qualities, and very low surface noise. Ideal for high quality home phonographs, high quality home phonographs, coin operated machines and similar applications. Needle force is 1 oz Output voltage 1.8. Your C

## Your Cost

s5.88

## SHURE "Glidez" Pickup

(0) High 1.4 V output combined his with low bes weight make this one of the finest pickups at its price! Response 60-60n0 CPS Changeable needle. Up to $12^{*}$ records. Shpg. wt. 8
C13417-Medel
93 A . Your Cost $\$ 3.59$
Model 93 AN. Same as above bur with quiet sapphire point needle Your Cost.
5. 16

## Tone Equalizez

(P) Recommended for use with all crystal pickups. Four positions: bass, medium, hi-fidelity,
and off:-Your Cost 9 C13475-Y

## WEBSTER Crystal Pickups

(R) Excellent design and performance. Balanced to irack at needle pressure of less than 2 oz . Frequency response from 40 oz . 8500 cps . For $10^{\prime}$ and $12^{\prime \prime}$ records. 8500 cps . For $10^{\circ}$ and $12^{\prime \prime}$ records. enamel finish.
Model AE-10. With natural sapphire tip needle. C523

## Your Cost

$\$ 2.70$
Similar to above pickup but less needle.
Your Cost $\qquad$ \$2.35
Model AC-10-1. Frequency response from $50-7000 \mathrm{cps}$. Needle pressure 2 oz
C530.
Your Cost
\$1.95

## WEBSTER "AJ-1" Cxystal Pickup

(S) Precisely balanced pickup ousalloy needle. Practically no record wear to needle changing. Streamlined bakelite arm. 16 grams pressure. .5 V. output. Shiplong weight ${ }^{1}$ lb C427-Model AJ-1 \$1.89

| $\longrightarrow$ | Co |  |  |
| :---: | :---: | :---: | :---: |
| (4) |  | Co | $\otimes$ |
| (B) | (E) | $(\mathbb{H}$ |  |

## LONG LIFE PLAYBACK NEEDLES

(A) Precious Metal point needle with offset shank. For maximum sides without changing.

884
C199 Your Cost Each
(B) RELIANCE 4000 play needle. Plastic case. Low surface noise

Your Cost Each
etal ellip-
C. Permo Point 2000 play needle with pa

C164-Your Cost Each
$50^{\text {f }}$
Reliance Permanent Point Needles, 2000 plays
394
C165-Your Cost Each
(D) Fidelitone "Floating Point" needle filters record scratch. 3 to 6 (D) months average use. ( 1000 or more sides.) Ilatinum point. Ideal for changers.
C227-Your Cost Each.
504
(D) Deluxe Fidelitone "Floating Point" needle. As above, but good for C478 Yours.
$\$ 100$
(J) Tran cription metal alloy needfe. Long life, high-fidelity. Semipermanent self-lubricating point. 40 to 50 hours on standard records, longer on home recordings.
C286-Your Cost Each

(1) Sapphire Tipped Playback Needle! Permanent needle-plays 2000 commercial records with
C448-Your Cost Each
$\$ 1.15$
RCA-Victor "One Grand" Needle
1 igh quality semi-permanent needle. Good for 1000 plays. Minimum wear and surface noise.

## STANDARD PLAYBACK NEEDIES

(J) Red shank needles for acetate recordings. Individually shadow C433-led
C433-1'ackage of 100 . Your Cost. .
(K) Filter moint highly polished surgical steel needle. Shadow tested (1) Low surface noise. 10-15 plays.

C209-Package of 10 . Your Cost
(J) lligh fidelity, shadow tested steel needle. Each good for 10 sides.

C430A-Package of 10. Your Cost
84
15c

(A)

(D)

(E)

## JENSEN Royal Jewel Needle

(A) Genuine sapphire jewel point set in specially designed offset shank which reduces surface noise and distortion to a minimum. The hard, smooth, perfectly shaped sapphire point protects your records and provides exceptionally long life for the needle. Plays up to 10,000 sides! $\$ 1$ C111-Your Cost

## RUBY-TONE Needle

(B)A precision ground jewel tip that is carefully fused into a specially designed straight shank adapter. This special process practically eliminate surface noise, increases frequency response, and
gives perfect reproduction. 3000 plays. $\$ 1$ gives perfect reprod
C192-Your Cost

## JEWEI TIPPED Offset-Type Needle

(C) This extraordinary jewel tipped ncedle wil provide a guaranteed 5000 perfect plays. Sur face noise and distortion are greatly reduced by an ingenious cushion action design that minimizes record wear and eliminates needle talk. \$1, 17

## Precious Metal Tipped Needle1000 Plays

Similar in design to above but with a special alloy tip for long life and full clarity C116-Each Only.

544

## KACTI Needles

(D) Long playing cactus needles that produce clear. soft.natural tones. Mechanical surtace scratch is practically eliminated. Easy to resharpen. Will not scratch or damage records.
C359-Package of 12 .
284 10 Packages for

## PETER GREY Needle Pointer

(E) Famous "Kacti" needle pointer for sharpening ca
brush.
C293-Shipping weight 2 lbs
C271-Extra Discs. Each
$81=50$
$\$ 1.35$


Standard Playback Needles
(1) RCA steel phonograph needles
C153-Full Tone (Pack of 100) C160-Extra Loud (Pack of 100)

10 Packages assorted. . 75c. Your Cost per Package
(J) 12CA Chromium needles. Green shank

57-Package of 6. Your Cost per Package
$10^{4}$
254 10 packages
(J) RELIANCE Chrome plated individually shadowgraphed needles

Good for 15 plays each
C440--Package of 5 . Your Cost
15
(J) Green shank shadowgraphed needles.
(J) Good for 12 plays each

C432-1 lackage of 100. Your Cost.
(K) Hi-fi needles for automatic record changers. Good for 10 to 15 plays eacl
K RCA Red Seal needles, designed for Red Seal rec-
(1) ords. Cl 41 -Pkg. of 50
$25^{c}$
10 Packages for

## RECORDING NEEDLES

(E) Lapped edge sapphire culting needle for acetate discs. Precision
cutting life.
c191-Your Cost Each
\$3.23
(E) Like above, but with Long Shank to fit Presto Professional and (5) Brush cutting heads.
\$3.45
C198-Your Cost Each
iscs. About 10

C196-Your Cost Each
(F) Steel cutting needle for acetate; individually ground and lapped.
(F) Flattened shank.

C439-Package of 3. Your Cost
$39{ }^{6}$
(G) Stellite cutter for acetate discs. Extremely quiet. Cuts hundreds C) of sides; can be resharpened.
$\$ 1.1$
(H) Individually polished steel cutter for acetate discs. Will cut 15 to 25 10-in. discs
C348-Package of 4. Your Cost
(H) Alloy cutter for acetate; harder than steel. Polish while they cut. (1) Hand lapped.

C434A-Package of 5 . Your Cost $95^{\text {f }}$
C4348-Package of 10 . Your Cost

## Standard Albums

(A)

(A) A well-made album with a durable and attractive maroon cover. Opens flat due to a unique type of construction. An extrex inside front cover. Shipping weight 2 lbs. each.

| Cat No. | Size | Pockets | Each |
| :---: | :---: | :---: | :---: |
| C21890 | $10^{\circ}$ | 12 | $78 c$ |
| C21891 | $12^{\circ}$ | 12 | $94 c$ |

## Deluxe Record Albums

(B) Flat opening type with heavy kraft pockets. Byerall covering of padded brown swirl leatherette. Gold embossed Gothic design on back. Beautiful in appearance and unusually sturdy in construction. this is a truly superior album in every way. Shipping weight 3 lbs. each. Index inside front cover.
$\begin{array}{llcc}\text { Cat. No. } & \text { Size } & \text { Pockets } & \text { Each } \\ \text { C21888 } & 10^{\circ} & 12 & \$ 1.28 \\ \text { C21889 } & 12^{\circ} & 12 & 1.33\end{array}$

## LYRIC Record Holder

C Why risk broken and scratched records when you can safely file fifty $10^{\circ}$ or $12^{\prime}$ records in only 12 inches of table or shelf space? Soft red felt covers the unbreakable steel base and separators, keeping your records in perfect condition. Handy indexing system included helps you locate any record in a few seconds. Handles are copper plated. A perfect gift for music lovers.
C21894-Your Cost.
s2.33

## Lyric Record Carzying Case

D) Stores fifty $10^{\circ}$ records safely and con veniently. Aircraft aluminum construction Very light, exceptionally strong and durable Comfortable leather carrying handle. Ilandy indexing system. Protective rubber cushions the home. Shipping weight 7 llos. $\$ 5,30$ the home. Shipping we
C21896-Your Cost. C21896-Your Cost eight 7 libs.



CRYSTAL PICKUP REPLACEMENT CARTRIDGES
A comprehensive lincup of replacement cartridges for all standard makes of crystal pickups as recommended by the manufacturers. Each and every cartridge is precision made and individually tested for rated frequency response and output voltage.

## RCA Magic Tone Cell Kit



|  | c |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ock |  |  | Pres |  |
|  | Model |  |  |  |
| C233 | ¢M-4 | B |  | V. ${ }^{3} 3.26$ |
| Ca3407 | B | D | 23/4 oz. | 2.5 V. 3.26 |
| C13963 | * 1 | A |  | .85 V. 5.23 |
| C13964 | *LP-21 | A |  | V. 5.23 |
| C13965 |  | ${ }^{\text {B }}$ | 4 oz . | 2.62 |
| C13967 | * | J |  | . V. 5.23 |
| ${ }_{C} 13969$ |  | B | 11/ oz. | . V. 3.26 |
| C13972 |  |  |  | 3.91 2.62 |
| C13981 | L-72 | B | ${ }^{2} 11 / 8 \mathrm{oz}$ oz. | 1.4.5 V. $\mathbf{3 . 9 1}$ |
| C13982 | L-75 | B | 11, oz. | . 75 V. 3.2 |

SHURE

|  | SHURE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Sock } \\ & \text { No. } \end{aligned}$ | l |  | Pres- |  |  |
| C13968 | W42A |  |  | ${ }^{\text {Put }} \mathrm{V}$. | \$2.35 |
| C13985 | +W57A | ${ }^{\text {B }}$ |  |  | 2.62 |
| C13986 | *W57AN | ${ }^{\text {B }}$ | 3/4 oz. | 1.6 V . | 4.09 |
| ${ }_{C 13987}$ | W58A | ${ }_{8}^{8}$ |  |  |  |
|  |  | B |  |  | 62 |
| clud | es needle. |  |  | 90A | ickup. |

## SHURE Replacement Pack

Five standardized lever type crystal cartridges will replace 58 different crystal cartridges. No longer necessary to carry a large stock in order to have the correct replacement. Shure cartridge replacement chart printed on bottom of each pack C13990
Your Cost
s14.88

| $\begin{gathered} \text { Stock } \\ \text { No. } \end{gathered}$ | Model | Type | Pressure | Out put |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C13966 | N3 | B | 11/4 oz |  | \$2.62 |
| C13970 | D4 | D | 11/4 oz. | . 7 V | 3.18 |
| C13971 | D5 | D | 11/4 oz. | . 7 V . | 3.91 |
| C13976 | C2 | C | 21/2 oz. | 2.0 V | 2.35 |
| C13977 | C3 | B | $21 / 2 \mathrm{oz}$. | 2.0 V . | 2.35 |
| C13978 | E4 | B | 21/2 oz. | 1.5 V . | 2.62 |
| RCA |  |  |  |  |  |
| Stock |  | Type | Pressure | Out- |  |
| c215 | 31050 |  | 2.7 oz . | 1.5 | Each |
| C249 | 37158 |  | 3 oz .1 .5 V . |  | \$2.52 |
| C277 | 33217 |  | 2.7 oz .1 .5 V . |  | 2.82 2.52 |
| 280 | 33122 |  | 2.7 oz . | 1.5 V . |  |
| C13424 | 31156 |  | 3 oz. | 1.5 V | 2.85 |
| C13979 | 38610 |  | oz. | 1.5 V |  |
| ASTATIC "Nylon-1-J" Cartridge |  |  |  |  |  |
| 1 ncorporates molded Nylon chuck and kneeaction, sapphire tipped needle. Control of coupling between needle point and crystal element is nearly perfect. Needle is matched to cartridge, and while it may be replaced, no other needle may be used, thus the quality of |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { гергоduc } \\ & \text { C13988- } \end{aligned}$ | ction mus | t remai | in cons | $\$ 4.56$ |  |
|  | -Weplace | ylont | Nedle. |  |  | Record Blanks for Home and Professional Use

PRESTO "ORANGESEAL" Discs Aluminum Base
Famous Presto aluminum base recording discs. Coated with Presto's special compound they have low surface noise and long-playing life. Non-warping and lighter in weight than Green Seal discs listed below. Standard package quantity 50 . Lots of 50 ea.
 C11962-10
"GREEN SEAZ" Discs
Finest grade of recording blank made by Presto. Aluminum Base and coated by a special compound used exclusively by Presto. Used by research laboratories to demonstrate the capabilities of recording equipment. Standard recording blank for a majority of the larger broadcasting stations and recording package quantity 30 . C11992-12' Each ..... $\$ 1.80^{\circ} \quad \$ 1.08$
$\begin{array}{lll}\text { C11957-131.4. Each..... } 2.25 & 1.35 \\ \text { C11993-16 } 6^{\circ} \text {. Each..... } 3.25 & 1.95\end{array}$

## AUDIODISCS

"RED LABEL" Aluminum Base For professional use. "Acetate" coated on smooth aluminum base. Double-sided with 3 drive pin holes. $054^{\circ}$ overall thickness. Write for special prices in standard pachage of 25.

```
C11994-10. Each
C11995-12. Each
```


## "YELLOW LABEL'

Acetate coated on Aluminum Base. For amateur, school or home use. Double sided and labeled. Std. Pkg. Quan. 25.
C11990-8". Each
C11998-10. Each. . . . . . . . . . . . . . . . . . . . 50.90
C11999-16*. Each......................... . . 2.70

## RECORDISCS

## Home Recording Blanks

The Orange and Red Label Discs listed below are all Cellulose nitrate coated, thus providing high fidelity reproduction, and the ability to withstand age and playback with out cracking or peeling

## Orange Label

Firm, non-warping bond base, professional nitrate coated. Admirably suited for the average type of amateur transcription. C11969-SIX 6! " Discs.
. $\$ 0.60$ C11970-SIX C10 $^{8 \prime}$ Discs................ 1.00

## Red Label

lleavy, $021^{\prime \prime}$ thick aluminum base dises with a mirror-like finish for high-Indelity reproduction over a wide frequency range. Comparable to those used by broadcasting stations and professional recording studios.


## Aluminum Base Discs

1 ligh quality recording discs with a coating of professional nitrate compound on an aluminum hase. Low noise level, warp-proof and unbreakable. Light weight

| StockNo. | Size | Price Ea. Per 10 Ea. |  |
| :--- | :---: | :---: | :---: |
| C11955 | $61 .{ }^{\circ}$ | 20 c | 18 c |
| C11956 | $8^{\circ}$ | 27 c | 24 c |
| C11957 | $10^{\circ}$ | 40 c | 36c |
| C11958 | $12^{\circ}$ | 53c | 47 c |

## WILCOX-GAY RECORDIO Discs

Lightweight, flexible discs for use with home ecorders. Non-inflammable. Excellent reording quality. Coated and label both sides. C11979-SIX $61^{6}$ Discs. ............. 50.60

GOULD-MOODX Professional Record Blanks
Professional quality blanks having a perfectly uniform coating of highest grade cellulose nitrate on snooth aluminum base. Mirror-like surface will permit recording with utmost fidelity and lowest noise level to produce professional results. Overall thickness $.063^{\prime}$. 2-hole type.

| Stock No. | Size | Price Each | Per 25 Ea. |
| :--- | :---: | :---: | :---: |
| C11986 | $10^{\circ}$ | $\$ 0.84$ | $\$ 0.68$ |
| C11987 | $12^{\prime \prime}$ | 1.36 | 1.09 |
| C11988 | $16^{\circ}$ | 2.50 | 2.00 |

## MASTER Discs

Cellulose coated aluminum baserl discs used extensively by phonograph record and electrical transcription manufacturers for making original master recordings. Not affected by humidity or changes in temperature.

| Stock No. | Size | Price Each Per 12 Ea_ |  |
| :--- | :---: | :---: | :---: |
| C11950 | $131 /$, | $\mathbf{\$ 2 . 2 4}$ | $\$ 1.79$ |
| C11951 | $17: 4$ | 3.75 | 3.00 |

## Record Renewer

For acetate records. Cleans, lubricates and protects. Thin film of lubricant reduces fric15300
Renewer: Same as abovel but for commer cial records such as RCA, Victor, Columbia Decca, etc. 2 -ounce bottle. C15301-Your Cost
Recording Fluid. Applied blank before cutting Appled to recording blank before cutting, increases stylus life reduces surface noise. For use on non-in flammable discs only. 2 -ounce bottle

## C15302-Your Cost

38c

## Gummed Record Labels

Neatly printed spaces for title, date and name of recorder. Fits all discs.
C431-Package of 50 .

#  <br>  

PRESTO Model Y Recorder
(A) Highest quality $16^{\prime \prime}$ dual speed portable recorder and playback. Handles up to and including 171/ transcription masters. Ser ves 500 people as a public address system. Uses the famous Presto 1-C cutter, magnetic, normally flat $50-8000 \mathrm{cps}$; equalized, $50-10,000 \mathrm{cps}$. Negligible harmonic distortion. Wide dynamic range. Turntable is directly driven by pulley on motor shaft to eliminate vibration and hold speed absolutely constant. Speed changed instantly, outside-in or inside-out cutting changed instantly, and cutter gently lowered to surface, all by levers. Vibration damper on cutter eliminates vertical modulation. Highest quality $16^{\circ}$ magnelic pickup. Quick disengage for cutting spiral runouts. picknp. Quick disengage for cutting spiral runouts. in every way to overhead lathe. 2 -mike mizer, high in every way to overhead lathe. 2-mike mixer, high continuous cutting. Model Y-2 consists of the Model 75-A recorder and playback in its own case and the Model 87-A amplitier and speaker in its own case. The only accessories needed are a high-impedance mike. discs, stylus, and needle.

## (e)



Professional quality portable playback. Attractive, workmanlike appearance, small size, light weight. Remarkably clear wide-range reproduction. Consists of: $12^{\circ}$ dual-speed, rim-driven recording turntable, high-quality $16^{\prime \prime}$ magnetic pickup. 4 -stage amplifier, $8^{\prime \prime}$ speaker mounted in baffled case cover with $20-\mathrm{ft}$. extension cable, and Presto Transcriptone needle. Has tone control to adjust response for all makes of lateral recordings.

Amplifier uses two 6SJ7's, a 6N7, two 6C8G's, two 2A3's push-pull, and a 573 . Gain 115 db . Output 10 watts. Freq. response flat $30-10,000 \mathrm{cps}$. Treble control raises 6500 cps as much as 17 db or drops 5 kc as much as 20 db . Bass control raises 100 cycles as much as 20 db . Distortion less than $1 \%$ at maximum cutting level. Panel includes a volume indicator meter, telephone line input jack, monitor jack, and dual receptacles for turntables and mikes Mike input 100,000 ohms, line input 500 ohms, output 8 ohms. Speaker is $10^{*} \mathrm{PM}$ dynamic, mounted n the baflled case cover
Model 75-A recorder and playback is $201 / 2 \pi 11 \times 19^{\circ}$ Weight 49 lbs. Shpg. wt. 68 lbs. Model $87-\mathrm{A}$ ampli fier and speaker is $2315 \times 12 \times 20^{\circ}$. Weight 57 lbs. Shpg. wt. 85 lbs . Total Model Y-2 Shpg. Wt. 153 lbs. For 115 volt, 60 cy AC . Complete with tubes and instruction book.
\$741.00
C22586-Your Cost. C22587-Model 75-A Only, Your Cost. . . 5451.00
C22588-Model 87-A Only, Your Cost. . 290.00


Accurate, for professional or amateur. Fits all standand turntables. Positive screw engage ment, chip guard, many other efinements. 110 limes/inch, out side-in. Choice of Astatic X-20 Crystal or M-41 8-ohm Magnetic cutters. $12^{\prime \prime}$ Model, Crystal. C22565-
Your Cost
$\$ 60.00$
C22566-12 Magnetic $\$ 60.00$ C22567-16 Crystal ... 70.00 C22568-16 ${ }^{\prime \prime}$ Magnetic. . . 70.00
quickly replaceable worm for either outside-in or inside-out cutting. 110 db amplifier gain, flat 50 8000 cps . High-freq. equalizer for $331 / 3 \mathrm{rpm}$ recording, maximum 20 db up at 6 kc . Playback scratch filter, maximum 25 db down at 5 kc . Volume-indicating meter. Monitoring jack. $8^{\prime \prime}$ PM speaker in cating meter. Monitoring jack. 8 case cover with extension cable
Tubes: three 6SQ7 stages, 6 N 7 , push-pull 45's, and 1ubes: three 6SQ stages, 6N1, push-pull 45 's, and 80. Complete with tubes and instruction book, with
outside-in cutting worm. (Extra worm for insideoutside in cutting worm. (Extra worm for insideaccessories needed are a high-impedance microphone, discs, stylus, and needle. Dimensions: 191/2x $151 / 2^{\prime} \times 14^{\prime}$. Weight 46 lbs . Shpg. wt. 69 lbs. For 115 volts, 60 cycle AC
C22585-Your Cost
$\$ 348.00$


Overall frequency response $80-7500 \mathrm{cps}$ Lateraltype pickup. needle pressure $13 / 4 \mathrm{oz}$. Speed accuracy less than $0.5 \%$. A mplifier gain 70 db , output 4.5
watts undistorted. Tubes are 6SF5, 6N7, push-pull 45's, and 80 . Dimensions: $1916 \times 151 / 2 \times 14$. Weight 46 lis. Shpg. wt. 69 lbs. Model L-2, complete with tubes. for 115 volts, $60 \mathrm{cy} \mathrm{AC} . \$ 290100$ Available for other line frequencies on special order.


## PARA-FLUX Playback Equipment <br> Reproducers <br> 16" Turntable

(G) Rugged $16^{\circ}$ magnetic, with equalizer and 5 -pos. de-emphasis switch. Out puts from 30 to 600 ohms at - 43 to -53 db below 1 mw. Heads quickly interchangeable. Adjustable height. Fhangeable. Adjustable height. Flat 40-11,000 cps. Permanent diamond stylus, pressure 35 grams. Complete assembly is Head. Diamond, Arm, Equalizer and Switch. Shpg wt. 9 lbs Model UL-iDA with Universal Head.

## C13454

Model VL 106mo Head.
C13455 Your Cost $\$ 150.00$ Ci3456 Model LL-1DA with Lateral Head. - Your Cost $\mathbf{5 1 2 0 . 0 0}$ NOTE: Replacement heads available at $\$ 35.00$ on exchange hasis.
(H) Model TP-16, companion to the Para-Flux Reproducer Smooth, silent, trouble-free. Meets all requirements of Broadicasting studios 78 or 33 s spm Heavy-duty constant-speed motor with oversize bronze bearings and dual speed control, in full loating mount on steel base plate. Speed control completely disengages driver and idler in "off" position, thus preventing "flats" on the drive-mechanism surfaces Specially formed spindle gives "wowless" performance. Shipped in wood utility mounting suitable for permanent installation. 215 与ex 16x5!2".
C22509 Cost $\ldots \$ 9$.
Your

# Pilat tmposSOCKETS 

Genuine EVEREADY-MAZDA Pilot Light Bulbs


Both pilot and flashlight type bulbs are listed below.
6.8 volt bulbs are for 6.3 volt. receivers. Bead colors aid in identifying bulb types. Ever. eady-Mlazda bulbs are stand ard in most makes of radios
Prices Below Include Federal Excise Tax.
Tubular Bulb, Miniature Screw Base (A)

| Stock No. Type | Bead Color | Volts | Amps. | Ea. | 10 Far | 100 For |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C12274 48 | Pink | 2.0 | . 03 | 15 c | 99C | \$8.91 |
| C12250 41 | White | 25 | . 50 | 9 c | 60 c | 5.40 |
| C12254 10 | Brown | 6-8 | . 15 | 9 c | 60 c | 5.40 |
| C12252 46 | Blue | 6-8 | . 25 | 9 c | 60c | 5.40 |
| Tubular Bulb, Miniature Bayonet Base (B) |  |  |  |  |  |  |
| C12260 43 | White | 2.5 | . 50 | 9 c | 60c | 5.40 |
| C12259 49 | 1 ink | 2.0 | . 06 | 15 c | 99 c | 8.91 |
| C12249 44 | Rlue | 6-8 | 25 | 9 c | 60 c | 5.40 |
| C12284 47 | Brown | 6-8 | . 15 | 9 c | 60c | 5.40 |
| Round Bulb, Miniature Screw Base (C) |  |  |  |  |  |  |
| C12273 50 | White | 6-8 | . 20 | 10c | 66 c | 5.94 |
| Round Bulb, Mintature Bayonet Base (D) |  |  |  |  |  |  |
| C12261 51 | White | 6-8 | . 20 | 8 c | 49c | 4.41 |
| C12285 55 | $W$ hite | 6-8 | 40 | 8 c | 49 c | 4.41 |
| FLASHEIGHT BULBS |  |  |  |  |  |  |

G-31/3 (C) is small round. $\mathrm{G}-4!2$ is large round. TL-3 (E) is iens bulb. P-3!2 (not illustrated) is pre-focused miniature flange type bulb Stock No. Type Color
Stock No. Type Color Volts Amps. Ea. 10 For 100 For

| C12200 | 13(6-31: | Green | 3.8 | . 30 | 9 c | 60 c | \$5.40 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C12201 | 14(C)-31-3) | Blue | 2.5 | . 30 | 9 c | 60c | 5.40 |
| C12202 | 605(G-4 ${ }^{1}$ ) | Brown | 6.0 | . 50 | 10c | 66c | 5.94 |
| C12203 | 222(TL-3) | White | 2.2 | . 25 | 9 c | 60 c | 5.40 |
| C12204 | 1121TL-3 | Pink | 1.1 | . 22 | 9c | 60 c | 5.40 |
| C12205 | 233, $(-31$. | Purple | 2.3 | . 27 | 9 c | 60c | 5.40 |
| C12206 | PR2, P-3 ${ }^{1}$ ) | Blue | 2.4 | . 50 | 13c | 86 | 7.74 |
| C12207 | PR3(P-31) | Gireen | 3.6 | . 50 | 13c | 86 c | 7.74 |
| C12208 | 263)(G-31\% |  | 2.6 |  |  |  |  |



## Candelabra Base

110-120 V. Pilot Lights Genuine GE Nazdalamps. Type S-6. C12257-6 watts Each.
Type c-7. As alove, but cone - watts. Available in White Frosterl - C12280; Clear-C12275.

Either Type, Each Tubular Candelabra Base 110-120 Volt Pilot Lamp
A brand new 4 -watt lamp that is ideal for use behind small panel openings, dials, etc. looks just like a radio pilot


## VICTOR Pilot Buib

Intermediate base, frosted bulb. 110 ' 120 volts. For Colonial, Victor and other receivers. C12253Carton of 10, \$1.71. Each ..............


## Dial Light Coloring

Kit of colors, Red, Gireen, Blue and Amber, and a bottle of solvent. Each in screw top, wide mouth bot${ }^{\text {tle }}$. 15 ries in 1 minute. Color is permanent. C15185-
$41^{4}$

## $1^{\prime \prime}$ Enclosed Pilot Light

Underwriters' Approved single unit socket assembly unalfected by heat. All porcelain and brass con-
siruction. 0 standard So
lamp, removable from front of panel. Single $1^{\circ}$ hole mounting. Faceted red or green jewel. C14140-Red Jewel Cither Type, Your Cos
名

Front Removable Jewel Brackets

screw base. I'it tubular bulbs only. $\begin{array}{ll}\text { C6416-Red } & \text { C6417-Green } \\ \text { C6418-Anber } & \text { C6425-Opal }\end{array}$ Any Type, Each

Same, but Miniature Bayonet Base $\begin{array}{ll}\text { C6408-Red } & \text { C6409-Green } \\ \text { C6410-Amber } & \text { C6411-Opal }\end{array}$ Any Type, Any
Each.

Giant 1"Jewel Brackets 1 diameter faccted jewels.
3 or 6 -watt 110 V . bulb.

|  | Candeliabra | Mininture | Bayonet |
| :---: | :---: | :---: | :---: |
| Color | Base | Iase | Base |
| Red | C6403 | C6404 | C6405 |
| Opal | C6321 | C6324 | C6327 |
| Green | C6322 | C6325 | C6328 |
| Amber | C6323 | C6326 | C6329 |
| Any Type | Above, |  |  |



## GF NEDN GION LAMPN

Used extensively in test instruments. On DC, only the negative electrode glows. All except 1 -watt types operate on $105-125$ volts AC or $D C$ and require minimum starting voltages (approx.) 65 on $\mathrm{AC}, 90$ on DC. 12 -watt minimum starting voltage 105 -recommended only for AC not DC. All have clear glass except C12263 which is finished orange. Prices include
Fed. Tax. Fed. Tax.


| Stock No. | Watts | NE No. | Bulb | Base | Start AC | Volts DC | Your Each | Cost <br> 10 For |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C12266 | 1 | NE30 | G10 | A | 60 | 85 | 40 c | \$3.60 |
| C12267 | 2 | NE34 | S14 | A | 60 | 85 | 50c | 4.50 |
| C12263 | 2 | NE34 | SI4 | A | 60 | 85 | 50 c | 4.50 |
| C12276 | 3 | NE40 | Sl4 | A | 60 | 85 | 60 c | 5.40 |
| C12264 | $1 / 4$ | NE45 | T 112 | 1 | 65 | 90 | 40 c | 3.60 |
| C12215* | 1/25 | NE51 | ' 31/4 | C | 65 | 90 | 10c | . 90 |
| C12216* | 1/25 | NE2 | T2 | D | 65 | 90 | 8 c | . 72 |
| C12268* | 1/4 | NE18 | [41/2 | E | 65 | 90 | 35c | 3.15 |
| C12269* | 4 | NE29 | G10 | E | 105 |  | 45c | 4.05 |
| C12270 ${ }^{\text {* }}$ | 1 | NE32 | G10 | E | 60 | 85 | 45 c | 4.05 |
| C12271 | 2 | NE.36 | S14 | F | 60 | 85 | 55c | 4.95 |
| C12209* | ${ }^{1 / 4}$ | NE7 | 「412 | D |  | 70 | 31c | 2.79 |

Resistorless type.
d Edison. B: Candelabra screw
C: S. k. D.C.

Porcelain Receptacles For neon glow lamps, etc. Mtg. hole spacing all types 1 .' excent c13327 which is $2^{\circ}$.
 A $n$ in addition C13331-Candelabra (B) © C13327-Edison (B) $\qquad$ C13330-Miniature (B) Ea. $\boldsymbol{\text { C1 }}$ C13387-Candelabra (A).....33c 2-Contact Cand. Bay. Metal Shell Sockets $\qquad$ 3akelite base quires ${ }^{14} 16^{\circ}$ hole plus
c13332.. $48 \mathrm{C} \quad$ apart. 29 c

## Full-View Neon Pilot Light

Full view plastic head pilot light with built-in resistor for operation on 110 volts. Uses C12215 bulb from front panel. $1^{1}{ }^{40}{ }^{\circ}$ long exiends ${ }^{\circ} 16^{\circ}$ in front of panel. With mtg. nut and washer, thread-
C14181-Red Head C14182-A mber 1 lead.
C14183-Opal Head ost

## Miniature Panel Light

For panel mta. S.C. Min. Bay. Base. Mits. in C6436- With 12 lead, nut and washer
(1nt) Reliance Buil's
lakes candelabra base bulbs type S-6. For panels up to $12^{\circ}$ thick $1^{\text {. diam- }}$ eter glass jewel with set Polished chrome. Jewel bezel $T \mathbf{L}$ Polished chrome. Jewel bezel. C14174-Your Cost $\qquad$ $76^{9}$
C14175-Similar to above, but with red or C14176-Same but withminiature base. 7 S Either Type, Your Cost Each.... $\mathbf{S f}^{9}$


## Jewelled Pilot-

## Brackets

Fine quality jewelled pilot brackets, for amplifiers, transmitters, etc. All have faceted jewers, highly polished nickeljelated steel brachets. Standplated steel brachets. Stand-
ard jewelled brackets have $1 / 2^{\circ}$ ard jewelled brackets have $1 / 2^{\circ}$
jewel requiring a hole. Jumbo brackets have a $3,{ }^{4}$ jewel, requir${ }^{11} 0 \mathrm{~V}$ a " hiniature Bayone with Candelabra 110 V., Miniature Bayonet and Miniature Screw base suckets.


## Portable Electric Record Player and Changer



An amazingly versatile, fine quality unit at an exceptionally low price. Comprises an improved automatic record changer power amplifier and speaker Changer will speaker. Changer will play continuousy loading with cabsingle loading with cabinet cover closed, ten 12
or twelve $10^{\circ}$ records. or twelve 10 records. jected when desired with the press-to-reject button which also serves as automatic manual, and on-off switch. All-in-one control conveniently located. Easy loading and gentle with your records. Will not jam even if you are careless. New silent type, constant, self starting, rim drive motor with $9^{\prime \prime}$ turntable. Fine Astatic crystal pickup with extremely low needle pressure gives wide frequency range and minimum surface noise. Ideal for multitude of uses. Can be carried without fear of moving parts New locking device protects pickup arm without fear of moving parts New locking device protects pickup arm and turntable to insure complete portability. Separate tone and volume control permits adjustment to desired response. Tube comple-
ment: $1-125 \mathrm{~J}, 1-50 \mathrm{~L} 6 \mathrm{GT}, 1-35 Z 5 \mathrm{G}$. High fidelity reproduction by $6^{\prime \prime}$ PM dynamic speaker. Portable carrying case finished in attractive simulated alligator skin with leather handle and snap locks. Overall dimensions $181 / 4^{7} \times 151 / 3^{\prime \prime} \times 9{ }^{1 / 4}$ ". Complete with tubes and speakerready to use. Shpg. wt. 33 lbs.
C22521-
Your Cost
$\$ 44.75$

## RECORD CABINETS



We are proud to present four new record cabinets, to fit the needs of those record enthusiasts who not only want convenient storage space for their record collections, but also appreciate and love good furniture.
Model A and Model $\mathbf{B}$ are identical in size, styling, capacity, and finish, except Model A is supplied less doors. Modern streamline round corner design harmonizes with practically all furniture settings. Large size top is adequate for most present day table model phono combinations. Semi-concealed album partitions and clear shelf space make the cabinet adaptal)le for use for books, knicknacks, etc., for users that do not have sulficient albums to fill entire case. A stop cleat is provided so that $12^{\prime \prime}$ records are self aligning merely by shoving record album against the cleat. Cabinet is built to finest furniture standards with select hardwoods and veneers and is beautifully finished to fit into fine home surroundings. Size: 193/4" wide, 1734 "deep, 28, $2^{*}$ high. Hlolds 9 $12^{\prime \prime}$ albums, 108 records.
Model C is a double tier cabinet without doors for larger collections of albums. Holds 18 albums, 216 records. Size: $193 / 4{ }^{\circ}$ wide, $173 / 4^{\prime \prime}$ deep, $33^{\circ}$ high.
Model D is a large modern cabinet with double doors designed for the storage of large record collections. Flush-to-floor design with record storage space divided into two tiers. Dividers for holding albums upright. Constructed of ${ }^{13}$ " 5 -ply mahogany veneer, with a beautiful lustrous piano finish on all surfaces. A really magnificent piece of furniture. Hoids twenty albums, 240 records. Size: $24^{\prime \prime}$ wide, $16^{\prime \prime}$ deep, $31^{*}$ high. Will really accommodate a record player or radio on top. Highest grade distinctive cabinet hardware.

| Model | Stock No. Mahogany | - Stock No. Walnut | Shpg. <br> Wt. | Your Cost |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathbf{A} \\ & \mathbf{B} \\ & \mathbf{C} \\ & \mathbf{D} \end{aligned}$ | $\mathbf{C 2 5 7 6 3}$ $\mathbf{C 2 5 7 6 5}$ $\mathbf{C 2 5 7 6 7}$ $\mathbf{C 2 5 7 5 9}$ | $\begin{aligned} & \mathbf{C} 25762 \\ & \mathbf{C 2 5 7 6 4} \\ & \mathbf{C} 25766 \\ & \mathbf{C 2 5 7 6 0} \end{aligned}$ | 26 Ibs. 31 lbs. 35 lbs . 50 lbs. | $\begin{array}{r} \$ 15.90 \\ 19.35 \\ 21.85 \\ 42.95 \end{array}$ |

CLASSOPHONE Record Storage Facilities


The modern way to store, protect and classify phonograph records for instant use. Classophone Pockets are hinged at the base, firmly anchored in the cabinet into which it is built. Each Classophone Pocket is clearly numbered; each number corresponds with gummed label supplied for affixing to record number is then placed ng to fex or index book Comes in on index file or index book. Comes in portable carrying cases or in kits for building into your own cabinet or bookshelf. Each pocket holds either a $10^{\prime \prime}$ or $12^{\prime \prime}$ record.
Portable No. 3: In convenient, sturdy portable carrying case, finished in beautiful simulated alligator leather with smart matching trimmings. Ideal for motor trips, musicians, sound system operators. Includes 25 Classophone Record Holders complete with numbered stickers; index; lock and key for case.
C21876- Your Cost.
$\$ 11.61$
ve except has 50 pockets.
C21877-Your Cost
$\$ 16.17$
Kit No. 1: 25 Classophone Pockets for installation in your own cabinet or bookshelf. Includes numbered stickers, index reference leaflet. construction diagram.
C21878-Your Cost.
s. 14

Kit No. 2: Same as Kit No. 1 described above except h
510 C21879-
\$10.28
For Commercial Use: Classophone Kits are available in large lots for radio stations, schools, manufacturers with wired music systems, etc. Write for quantity prices.

## Two Station Intercom

## $\star$ Operates on AC or DC <br> $\star$ Noise Silenc-

 ing Switch$\star$ Remote Station up to 1000 Feet Distant


Complete two way intercommunication system for use in garages, restaurants, stores, factories, business offices or the home.
No special knowledge or tools required. Any 2 conductor wire used for remote station connection up to 1000 feet distant. $105-120$ volts AC DC. Either station may be hung on wall by means of screw slots in the back. Cases moulded of durable hard plastic. Attractive polished mahogany finish. Master unit has noise silencing switch. Each unit measures $8 y^{\prime \prime}$ high, $6^{\prime \prime}$ wide, $4^{\prime \prime}$ deep.
Complete with all tubes in place, 6 ft . rubber cord, 50 ft . connecting wire one master and one sub-station, ready to operate
wire, one master and one Your Cost

## Multiple Station Intercom

Master Station Only, same as used in the 2 -station set above. Output 2 watts; speaker 4 -inch Alnico V PM; tubes 12SJ7GT, 50L6GT, 35Z5GT. Shipg. wt. 7 lbs.
C22365-Your Cost.
$\$ 16.17$
Remote Station Oniy, same as used in the 2 -station set above ex cept has addition of push-button switch to originate call to master station. Up to 5 remote stations may be used with the master C22366-
$\$ 477$
Selector Switch Only, for use by the master station to select any one of the remote stations. Simple detailed installation instructions packed with each unit. No matter which button is pressed, any of the remote stations can "come in" to originate call. No solder connections necessary. 6 push buttons, 5 for station selection by master, the sixth o return system to neutral. Mounts anywhere. Shpg. wt. 2 lbs. C22367-
Your Cost
$\$ 5.51$
Twisted Pair Intercom Wire, to connect Selector Switch to any remote station up to 1,000 feet away. C16013-Your Cost Per Foot.
$1 / 2^{4}$

## Ferret Signal Generator



Model 701 FM-AM signal generator. Large $9^{\circ}$ three color scale, glass covered. Frequency range 170 kc to 220 mc , funFrequency range $170 \mathrm{kc} t \mathrm{~m} 20 \mathrm{mc}$, funpletely shielded for minimum radiationCrystal calibrated, low loss, permeability tuned RF coils. 0 to $100 \%$ internal 400 cycle sine wave modulation. Electron coupled combination Hartley and Colpitts oscillator for high LC ratio, low fluctuations. Low loss, low impedance, coaxial cable output. Ladder attenuator. Vernier drive with 3 to 1 ratio. Housed in an attractive, blue-gray Hammertone finished aluminum case. $10 \frac{1}{4} 4^{\prime \prime} \times 10^{1 / 4} x^{\prime x}$


(14)

(N)

(D)


## Any Item On This Page

Radio Knob Spring (P) Finest grade selected steel springs in all regular sizes and shapes. Pkg. of ap prox. 20 assorted. C15437-

## Machine Screw

## Assortment

(A) All standard sizes used in electronic and similar work in handy inexpensive assortment. Contains approximately 50 Nos. 6, 8, 10 screws $14^{*}$ to $1^{\prime \prime}$ long. C15456-Assortment
C15457- $6-32 \times 3 / 8$, pkg. of 60 . C15458-6-32×1/2, pkg. of 50 . C15459-8-32x 12 , pkg. of 40 .

## Small Machine Screw and Nut Assortment

(A) Special assortment of extra and small screws and nuts Nos. 2 perimental work. for fastex small parts, wark for fastening smail parts, and for replacing rivets. Approximately 40 assorted screws and 40 assorted nuts.

## Self Tapping Screws



Cut their own thread in either metal or plastic. Ideal for mounting parts on chassis, replacing rivets and eyelets. Package of approx. 30 assorted sizes.
C15450-Assortment
C15451-pkg. approx. 40 . size $6 \times 3 / 8$. 3.2 pkg. approx. 35 , size $8 x^{3 / 8}$.

## Phonograph Pick-up <br> \section*{Set Screws}

Knurled head steel screws, antique bronze. For popular pick-ups and recording heads. Approx. 10 asst.Wood Screw Assortment
(D) Handy assortment for workDhop or home. Contains approx. 30 round and flat-head screws C15453- sizes in brass and steel.

## Ornamental Screws

Antique bronze finished rosette head screws for mounting speakers. Package of 15 assorted sizes.
## C15449-

## Spade Bolts

Indispensable for attaching condenser coils, $1 F$ cans, for Experimenters, Servicemen and manufacturers. Stud size 6-32. Hole size No. 6. Package of approx. 25 assorted lengths. C15443-
## Small Screw Assortment

(G) Assortment contains approx

60 small wood, brass and stee screws sizes 1 to 3 up to $3 / 8^{\circ}$ for name plates and escutcheons. C15454

## Rubber Feet



Made of oil resistant synthetic rubber for radio phonograph and amplifier bases. Available in screw or tack type. Package of 12 assorted screw type. C15407 -
Package of assorted tack type. C15408

## Snap-in Trimounts

(J) r

Eliminates use of screws on radio back covers, dial scales, chassis built in antennae. Speeds up assembly and repair.
Stk. No. Leth. For Hole No. Pcs. C15438
$C 15439$
$C 15440$ C15440
C15441 C15441


## Expansion Springs

(A)

Handy for radio, electrical (A) shops, laboratories. Assortments contain various sizes for record changers and dial drives. C15434-10 Asst. large springs.
C15435- 10 Asst. small springs.

## Fuse Insulators

$\qquad$ Highest quality insulators for use on automobile radios. Two lengths included fit all standard $1 /{ }^{\text {: }}$ diameter fuses. Pkg. approx. 16 asst. C15405-

## Fuse Clips

C) Made of nickel plated spring Pkg. 12 assorted. Pkg.

## Speed Nuts

(D) Self locking and casy to install. changers, tuning units. Package of approx. 30 assorted sizes. (囚) $\mathbf{C 1 5 4 0 1}$ -

## Retaining Rings and "C" Washers

(E) Standard types and sizes required for radio, electrical and electronic repair work. For servicing of volume controls and record changers. Assortment contains sizes for shafts $1 / 8^{\circ}$ to ${ }^{3} /$ /f $^{*}$ diameter. Stock Description Approx. C15427 Rings and Washers ${ }^{C 15428}$ Ring ${ }^{\text {P/ }}$ " shaft


## Chassis Mounts

(F) Long lasting resilient synloating effect. Pkg of give chassis C15432-

## Phono Motor Rubber Drives

(G) Exact replacements for standard motor drives. Precision made to assure constant speed. Made of abrasion resistant synthetic rubber for long wear
Stock I.D. O.D. Thick No. per



## Cord Strain Reliefs



Provides a grommet and strain ppliance, radio and amplifier pow er cords. Will prevent insulation of wire from being cut or damaged. Package of 4. c15431-

## Angle Brackets

(J) Handy brackets of various lengths and shapes. Precision made of steel, or brass and plated Pkg. of approx. 15 assorted.

## c15418

## Acorn Nuts



Improves appearance on panel assemblies and cabinets. Pal type stcel nuts, self locking. Cadmium plated. Pkg. of 12 assorted. C15444-

## Special Mounting Nuts

(K) Various kinds of nuts used on volume controls, switches, jacks and potentiometers. A must for every radio man and electrician. Cadmium or nickel plated. Package of approx. 15 assorted. C15445-

## Steel Set Screws

(L) Hardened steel set screws, all (L) popular sizes for radio knobs. record changers, automobile radios. Package of approx. 20 assorted sizes. C15400-

## Metal Washers

(M1) Cadmium plated. Steel washassorted small gize of approx. 100 assorted small sizes. C15433-

## Machine Screw Nuts

(N) Nuts are "Small Pattern" preferred in the electronic and electric trades. Cadmium plated.


|  | Asst. | 50 |
| :--- | :--- | :--- |
| C15444 | 6.32 | 50 |
| C15448 | 8.32 | 40 |

## Terminal Lugs

(O) Available in six popular sizes, Mor radio and electronic work. Made of tinned brass. Stock No. Fig. No. Approx. No.

| C15419 | Asst. | 40 |
| :--- | :---: | :---: |
| C15420 | 1 | 30 |
| C1521 | 2 | 30 |
| C1522 | 3 | 30 |
| C15223 | 4 | 30 |
| C1524 | 5 | 30 |
| C15425 | 6 | 40 |

## Spacers

(L) Assortment of metal and insuL) lating spacers. Accommodates No. 6 and No. 8 screws. C15402-Pkg. approx. 12 asst. in${ }^{\text {sulating. }}$ C1503. Pkg. approx. 12 asst. metal.

## Small Cotter \& Hairpins

(M) Package contains assortment (iv) of most popular sizes of cotter and hairpins. Valuable aid in radio and phonograph repair. Package of approx. 50 .

## Spring Washers

(N) For record changers and automatic tuning assemblies. As sortment of phosphor-bronze and steel friction washers. Approx. 25 C15404

## Key Wrenches

(O) Three assts of key wrenches to Three assts. of key wrenches to socket screws used in radio and electronic equipment.
Assortment of 5 small Hex wrenches Fits set screws No. 4 to $1 / 4^{\prime \prime}$ and cap screws No. 2 to 8.
C15410-
Assortment of 4 medium Hex wrenches. Fits set screws No. 8 to


## C15411 -

Assortment of 4 small Spline wrenches. Fits set screws up to $1 / 4^{\circ}$ and cap screws up to No. 8

## RADIO HARDWARE IN JARS

The most convenient, neatest
 way to keep your small hard-ware-in glass jars with screwon caps.
Your Cost,
C14675-jar only.
P-K Tap Screws (C)

| No. | Quantity | Size |
| :---: | :---: | :---: |
| C14665 | 50 | No. $4 \times 3$. |
| C14666 | 50 | No. $6 \times 1 / 2$ |
| C14667 | 45 | No. $6 \times 1 / 8$ |
| C14668 | 40 | No. $7 \times 1$ |
| C14669 | 35 | No. 10x ${ }^{3}$ |
| C14670 | 45 | No. 10x |


| Round Head Machine <br> No. Screws (A) Quantity Size |  |  | Hexagon Nuts (B) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Quantity |  |
| C14650 | 100 | 4-36x $1 / 1 /$ long | C14661 | 110 | 4-36x1/" |
| C14651 | 100 | 4-36x $1 / 2^{\prime \prime}$ long | C14662 | 110 | 6-3 |
| C14652 | 75 | 4-36x ${ }^{3 / 4}$ long | C14663 | 90 |  |
| C14653 | 90 | 6-32x $1 /{ }^{\prime \prime}$ long | C14664 | 90 | 8-32 |
| C14654 | 80 | 6-32x $1 / 2$ " long |  |  |  |
| C14655 | 70 | 6-32x ${ }^{8 / 4}$ \% long | Washers (D) |  |  |
| C14656 | 75 | 8-32x ${ }^{2 / 8}$ " long |  |  |  |
| C14657 | 70 | 8-32x ${ }^{\prime \prime}$ | C14671 | 150 No. |  |
| C14658 | 65 | 8-32x ${ }^{\text {c }}$ long | C14672 |  |  |
| C14659 | 60 | 10-32x ${ }^{1 / 2}$ ' long | C14673 | 100 No. 6 | ockwasher |
| C14660 | 50 | 10-32x $1 /{ }^{\prime \prime}$ long | C14674 | 100 No. 8 | ockwasher |



## Display and Utility Rack

Handy metal rack for your workbench, shelf, or wall. Consists of 4 shelves for storing 36 hardware jars, small parts, and miscellancous items. $12 \times 16 \times 8^{\prime}$. Shpg. wt. 4 lbs . C22354-Your Cost
$\$ 3.23$

## Hardware Assortment

Over 1000 pieces of hardware items. Contains Rivets, set screws, eyelets machine screws, lugs etc. $31 / 2 \times 3 \frac{3}{4} \times 2 \frac{5}{8} 8^{\prime \prime}$. Weighs over 2 lbs. A bargain assortment unequalled anywhere. Don't delay! Order Now! Shpg. wt. 3 lbs.
C14833-Your Cost Only


794


## DeLuxe Hardware Assortment

Our most popular hardware assortment conveniently hoxed. Contains over 1000 pieces of the most frequently used hardware, including assorted machine screws-woodscrews-nuts-bolts-rivets-eyelets-lugs-lock washers-fibre washers-rubber grommets, etc. Finest quality hardware. Shpg. wt. 4 lbs. C14831-Your Cost, per Box.
$97^{\text {f }}$

Rivet and Eyelet Asst.
 Special assortment of 55 popular size rivets and eyelets to fasten sockets, etc.
c14840-55 Asst.
Your Cost
24 ${ }^{\text {c }}$

## Escutcheon Pins

$\Longrightarrow$Antique finish-5/6"
long. For fastening all $\longrightarrow 1$ long. For fastening all C14811-Per 100 Your Cost
14.

## Escutcheon Screws

Round head, antique finish, $3 / 8^{\circ}$ long. Fits any type escutcheon. Clas Gross No. 2 size 394 Per Gross

## $1 / 4^{\prime \prime}$ Metal Spacers



For raising components above from panel. All pass, Nos. 4, 6 and 8 screws. Stock Ileight For Lots of No. Inches Ten 100

| N9868 | $1 / 8$ | 21 c | $\$ 1.89$ |
| :--- | :---: | ---: | ---: |
| C9869 | $1 / 3$ | 25 c | 2.25 |
| C9870 | $3 / 4$ | 29 c | 2.61 |
| C9871 | 1 | 32 c | 2.88 |

C9871 1

## Assorted Brackets

 Box of 28 of the most popular angles and brackets used in radio. Made of heavy metal.
C14838
Your Cost.

Insulating Washers
 parts.

Shoulder Type

|  | Shoulder Type |  |
| :---: | :---: | :---: |
| Stock | D Per | Pe |
| No. | O.D. I.D. 10 | 100 |
| C15021 | 1". $8^{\circ} 8^{\circ} 11 \mathrm{c}$ | 99 |
|  |  | 72 |
| C15022 | 12" 30, 7c | 63 |
| C15023 | 7 c | 63 |
| $\begin{aligned} & \mathbf{C 1 5 0 2 5} \\ & \mathbf{C 1 5 0 2 6} \end{aligned}$ | 7 c | 63 |
|  | .136" 6c |  |
|  | Flat Washers |  |
| C15030 | $3 / 4{ }^{\circ} 8^{\circ}$ \% 8c |  |
| C15031 | 1/4. Sc |  |
| C15032 | 6 c |  |
| C15036 | 18. $9 / 4^{\prime \prime}$ 6c |  |
| C15037 | 14* $136^{\prime \prime} 6 \mathbf{c}$ |  |

## Assorted Fibre Washers



Contains 100 plain and shoulder type to fit Nos. 6 8 and 10 screws, as well
as $1 / 3,8 / 8$ and 3/2" holes C14832-Shpg. wt. 8 oz . Your Cost $36^{4}$

## Snap-in Trimounts

Used to fasten dial scales, loop antennas scales, loop antennas cabinets, etc. 30 Asst. C14839 Your Cost

## phan mies Sing HARDWARE



No. Size Lgth. Doz. Gr.Lots C14680 6-32 $/$ 9c 95c C14681 6-32 1\% 10c $\$ 1.02$ | C14682 | $6-32$ | $11 / 2^{\prime \prime}$ | 11 c | 1.18 |
| :--- | :--- | :--- | :--- | :--- |

## Round Head Wood Screws

 $\begin{array}{cccc}\text { Stock } \text { No. } & \text { Size } & \text { Length } & \text { Gross } \\ \text { C14780 } & 4 & 28 & 39 \mathbf{c} \\ \text { C14781 } & 5 & 1 / 2 & 41 \mathbf{c} \\ \text { C14782 } & 5 & 8 \% & \mathbf{4 5 c} \\ \text { C14783 } & 5 & 1 & \mathbf{4 8 c}\end{array}$
## Hex Nuts, Knuxled Nuts, <br>  Washers, Sizes

C14804-6-32x $1 / 4^{\prime \prime}$ hex. nuts. Per uross c14805-8-32x nuts. Per oross C14806 $6-32 x$ hex nuts. Per gross C14807-8-32x 3 , 16 hex C14803-10-32x $3 / 8^{\prime}$ hex. C14803-10-32x C14808 $6-32 x 11,2, \$ 10$ knurled nuts. Per washe C14809-No. 6 washers.
C14810-No. 8 washers. Per 100

Locking Washers
C14758-6 Lockwashers C14759-18 Lockwashers Either type 100 For


## Knob Set Screws

 These headless set screws are case hardened. For radio knobs, couplings, etc.

C14787-
1/ $x \times 8-32$
C14789-

| $1 /{ }^{1} \times 6-32$ | $1 /{ }^{\prime} \times 8-32$ |
| :--- | :--- |
| C14788- | C14789-32 |
| $1 /{ }^{\prime} \times 6-32$ | $1 /{ }^{\prime} \times 8-32$ |

Any Size Above,
184 10 For 50 For.


## Soldering Lugs <br>  <br> ? 0

 C14812-No. 1. C14813-No. 2. C14814-No. 3, solderless type. C14816-No. 4, 8 long C14818-No. 5, $7 /{ }^{\prime \prime}$ long Your Cost per 100,Any Type Lug.......

## Tapered Lugs

 Fits over all screws up to No. 10; shank fits banana plugs. $114^{\prime \prime}$ long, $1 / 2$ C12954-
## Per Dozen



For battery terminals, etc., 1 long. No. 10 slot. 100 For 69c. c14912-Your Cost $\qquad$ 34

## Colored

## Grommets

Hard insulating com-
position; with knurled
nut; in red or black.
Red Black Hole Diam. L C14688 C14689 $1 / 8^{\prime \prime}$
Your Cost Per Doz.
Either Color. $\ldots . .$. C14690 C14691
YourcostPerDoz. $\$ 1$ Either color
C14692 C14693
Your Cost Per Doz. 8 ? Either Size

## Rubber Grommets

Insulate holes in $16^{6}$ metal panels, appliances, etc.

| Stock | Fits Inside Per | Per |  |  |
| ---: | :---: | :---: | :---: | :---: |
| No. | Hole Diam. Doz. | 100 |  |  |
| C14765 | $1 /$ | $1 / 8$ | 9 c | 60 c |
| C14766 | $5 / 16$ | 16 | 16 c | 65 c |
| C14768 | 716 | 6 | 20 c | 70 c |
| C14769 | $1 / 2$ | $1 / 8$ | 22 c | 75 c |

## Rubber Grommet Kits



Available in two assortments - $A$ " kit 12 assorted srommets in sizes-3/16" to $3 / 2$ " Kit "B" contains 30 assortd grommets in 4 standard sizes ${ }^{3}{ }^{\prime}$ to ${ }^{16}$


C14794-As
Your Cost...... "B;":
C14795-Assort.
Your Cost........


## 



## GE PYRANOL Condensers

(A) Famous make of oil filled and impregnated, hermetically sealed Compapacitors with stud type terminals on glazed ceramic insulators. Complete with terminals and mounting hardware. Ideal for commercial, amateur, manufacturing and experimental uses.

| Stock |  | Cap. | W.V. | Dimensions, |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { No } \\ & \text { 5B3299 } \end{aligned}$ | $\underset{\text { Fig. }}{\text { Fig }}$ | $\mathrm{Ml}_{4}$ | $\begin{aligned} & \text { D. } \mathrm{C} \\ & 1500 \end{aligned}$ | $38.101 / \times 4{ }^{3 / 6}$ | Cost |
| 5B3228 | A | ${ }_{2}^{4}$ | 1500 |  | 51.95 |
| 583236 | A | 1 | 1000 | $1^{3} \times 1 \times 1 \times 1 / 4$ | . 59 |

## 4 Mid. 600 Volt Oil Type Capacitor

(B) Oil filled and impregnated! Mounting is through a single hole to The two key-ways in the the 16 theads per inch threaded bakelite neck. notches. The extruded metal container are locked in corresponding rubber sealing extruded metal container is spun down on a synthetic mechanical bond between container and cover. Size $412 \pi 11 / 2^{\circ}$ stron 600 working volts, DC.

## TOBE Plng-In Capacitor

## Type PT-SC-11

(C) Filtermite. Passes all re(C) quired Army and Navy immersion tests. Low power factor. Capacity: 8-8 mids. Resistance: 2000 megohms per mfd. Voltage: 600 volts DC working. Tested at 1800 volts
 C2230-4 prong. \$1.95

## 600 Volt Oil Filled Condenser

Cornell-Dubilier type TII $6020,2 \mathrm{mfd}$ at 600 volts DC wkg. Size, $1 \times 1 \frac{13}{4} \times 277^{\prime}$. Less mtg. bracket.

## 5B3014-Each.

Similar to above but 6 mfd . Size: $51 / 2 \times 21 / 2 \times 11 / 4.1$
5B3209-Your Cost 694

.25 Mfd. 1000 Volt
Condenser
(C) A light-weight dependable (C) unit furnished with mounting bracket. Oil-filled and impregnated. Porcelain stand-off insulators fitted with locknuts and soldering lugs. Overall size: soldering
$3 \times 184 \times 11^{2}$
02316 C2316-E்ach

## Plastic Cased

## Dry Electrolytics

Highly efficient electrolytic condensers encased in gleammounting All are $100 \%$ moisture proof and will withstand exremes of heat. Insulated wire leads for direct connection all eads for direct connection. Al 600 volts peak. $13 / 8^{*}$ d. $\times 31 / 2^{*} h$. with palnut.| Stock | Cap. | Your Cost |
| :---: | :---: | :---: |
| No. | Mfd. | Yowr Each |
| C2384 | 10. | \$0.69 |
| C2385 | 12 | . 76 |
| C2386 | 16 | . 85 |
| C2389 | 20. | . 92 |
| C2390 | 24. | . 95 |
| C2393 | 35. | 1.09 |

(G)

Oil Filled Paper Condensers

Stock Cap. D.C. Dia. Your
No. Type Mid. W.V. $\times$ L. Cost
Cap. D.C. Dia. Your
 $583214 \mathrm{D}^{*} .0560018 / 3 \times 13 / 7 \mathrm{c}$ *Same as 5B3213 less mounting bracket.
(1) Metal encased. Stand-off insulator terminals with 8-32 screw terminals with lugs. Complete with mounting hardware. Overall size: $31 / 4 \times 1 \frac{1}{4} \times 1^{\circ}$ 582968 Your Cost.

494

## Midget Paper Condensers



For Hearing Aids and Personal Radios. Miniature type paper capacitors with ends sealed in bakelite resinoid. Will not melt at 100 degrees centigrade. For use up to 95 per cent humidity. Good leakage resistance, and leads will not pull out at high temperatures. Noninductive, pre-tinned copper wire leads. These units are conservatively rated at 150 volts. All sizes are plus or minus 1 , $5^{\circ}$.

| Stock No. | Cap. <br> Mfd. | $\begin{aligned} & \text { Size } \\ & \text { L. } \times \mathrm{D} . \end{aligned}$ | Your Cost |
| :---: | :---: | :---: | :---: |
| C3192 | . 001 | $5 / 8 x^{3} / 66^{\prime \prime}$ |  |
| C3159 | . 002 | $3 / 4 \times 3 / 16^{\prime \prime}$ |  |
| C3160 | . 005 | $8 / 4 x^{3} / 6^{\prime \prime}$ |  |
| C3161 | . 006 | $3 / 4 \times 1 / 8{ }^{\prime \prime}$ |  |
| C3193 | . 01 | $8 / 4 \times 1 / 4{ }^{\prime \prime}$ |  |
| C3194 | . 02 | $3 / 4 \times^{5} / 16^{6}$ |  |
| C3162 | . 05 | $8 / 4 \times 3 / 8{ }^{\prime \prime}$ | 11 c |
| C3163 | . 1 | $3 / 4 \times 1 / 2$ | 12 |

## Standard Brand Condensers-Priced Low



Servicemen! Extra special values in conden ers. These prices give you over $60 \%$ discount from list. Concord offers the opportunity to stock all popular sizes of condensers at tremendous savings. A condenser for every service need. Stock up now on all sizes. All brand new guaranteed nationally known makes of condensers. Order today.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \\ & \hline \end{aligned}$ | Cap. | W. V. D.C. | Price Each | Price-Lots of 10 Each |
| :---: | :---: | :---: | :---: | :---: |
| X-100 | 10 | 25 | \$0.30 | \$0.27 |
| $\times-101$ | 25 | 25 | . 34 | . 31 |
| $\times-102$ | 50 | 25 | . 40 | . 36 |
| X-103 | 10 | 50 | . 32 | . 29 |
| $\underline{X-104}$ | 20 | 50 | . 34 | . 31 |
| $\times-105$ | 25 | 50 | . 36 | . 33 |
| $\times-106$ | 50 | 50 | . 42 | . 38 |
| X-107 | 8 | 150 | . 32 | . 29 |
| X-108 | 12 | 150 | . 34 | . 31 |
| X-109 | 16 | 150 | . 36 | . 33 |
| X-110 | 20 | 150 | -38 | . 34 |
| X-111 | 30 | 150 | . 40 | . 36 |
| X-112 | 40 | 150 | . 44 | . 40 |
| X-113 | 12 | 250 | . 32 | . 29 |
| X-114 | 12 | 250 | . 40 | . 36 |
| X-115 | 16 | 250 | . 44 | . 40 |
| X-116 | 20 | 250 | . 48 | . 44 |
| X-117 | 8 | 350 | . 36 | . 33 |
| X-118 | 12 | 350 | . 44 | . 40 |
| X-119 | 16 | 350 | . 50 | . 45 |
| X-120 | 24 | 350 | . 54 | . 49 |
| X-121 | 4 | 450 | . 36 | . 33 |
| X-122 | 8 | 450 | . 38 | . 34 |
| X-123 | 10 | 450 | . 42 | . 38 |
| X-124 | 12 | 450 | . 46 | . 42 |
| X-125 | 16 | 450 | . 54 | . 49 |
| X-126 | 20 | 450 | . 60 | . 54 |
| X-127 | 16 | 500 | . 80 | . 72 |
| X-128 | 5-5 | 50 | . 44 | . 40 |
| X-129 | 10-10 | 50 | . 46 | . 42 |
| $\times-130$ | 8 -8 | 150 | . 46 | . 42 |
| X-131 | 8-16 | 150 | -48 | . 44 |
| X-132 | 20-20 | 150 | . 52 | . 47 |
| X-133 | 8-8 | 200 | . 50 | . 45 |
| X-134. | 8-16 | 200 | . 52 | . 47 |
| $\mathrm{X}-135$ $\mathrm{X}-136$ | 12-12 | 200 | . 52 |  |
| X-136 | 16-16 | 200 | . 60 | . 54 |
| X-137 | 16-16 | 250 | . 68 | . 61 |
| X-138 | $8-8$ | 450 | . 68 | . 61 |
| X-139 | 8-16 | 450 | . 80 | . 72 |


(1)

(L)

(1)
(0)

## SPECIAL VALUE Condensers

A variety of capacitors for every purpose, at give away prices. Exceptional opportunity for radio servicemen, experimenters and amateurs to have available a stock of popular condensers at money saving values. Midget dry electrolytic types will handle any job requiring an electrolytic capacitor. Polarity clearly indicated. Bare wire leads. Easily replace larger capacitors. Can types hermetically sealed in spun metal cans with spade terminals and mounting lugs.

| No. | Type | Mfd. | WV | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 583220 | K | 8 | 450 | 11/16x21/2 | 27c |
| 583221 | K | 8-8 | 450 | $1{ }^{1} 23 / 8$ | 45c |
| C3156 | K | 10 | 450 | 13 ¢x23 8 | 23 c |
| C3157 | K | 10-10 | 450 | $1.131 / 8$ | 35 c |
| 583222 | K | 16 | 450 | 7/8×3 | 35 c |
| 583223 | K | 20 | 150 | $11 / 1{ }^{1 / 2}$ | 25 c |
| C3155 | K | 20 | 250 | 4, $211 / 2$ | 35 c |
| 583224 | M | 20-20 | 150 | 3/8x21/2 | 37 c |
| 5B3225 | K | 40 | 150 | $3 / 4 \times 2$ \% | 29c |
| C3158 | K | 40 | 450 | 13 30x $31 / 2$ | 49 c |
| 583226 | M | 50-30 | 150 | $11.10 \pi 3$ | 39e |
| 583219 | L |  | 500 | 11/8×2 | 49 c |
| 583216 | L | ${ }_{100-100-50-20}^{100}$ | 50 | $1 . \times 21 / 2$ | 14 c |
| 583053 | L. | 100-100-50-20 | 50 | $11 / 4 \times 3$ | 17 c |

## Oil Filled Capacitor

(N) Connectors mounted on por1 mfd at stand-off insulators. 1 mfd at 1000 W.V. DC. Steel case $1 \frac{1}{4} \times 1 \times 21 /{ }^{\prime \prime}$. Bracket with $21 /{ }^{\prime \prime}$ mounting centers. 594

## Oil Impregnated <br> Paper Condenser

(O) Cylindrical type can, solder 600 W. connector. 2 mfd at 600 W. 5 532

# PM, mumpanamic 


(B)


## $5^{\prime \prime}$ ALNICO V P.M. Speaker

(A) Uses the new Alnico $V$ magnet that provides maximum performance with minimum weight. Widely used in AC-DC radios, record players, inter-office and auto radios. High conversion factor. Voice coil terminals conveniently placed on transformer mounting bracket. Transformer not furnished Normal wattage 3, peak wattage $4 \frac{1}{2}$.


## 31/2" ALNICO 3 Speaker

(B) $3^{12^{\prime \prime}}$ square mounting PM speaker with heavy Alnico magnet. Dmall dust-proof spider and voice coil. Excellent for intercom systems, Will handle portable record plagers Voice coil impedance onms. Panel. Shgy. wt., 1 lb .
$\$ 1.49$

## ALNICO V Oval Speaker

C) $4 \times 6^{\circ}$ rectangular mount with $3 \frac{5}{8} \times 4 \frac{6}{8}$ mounting centers. Utilizes Alnico $V$ magnet of 1.47 oz . wt Spider and voice coil dust proofed. $21 / 2^{\prime \prime}$ deep. Voice coil terminals on transformer mounting. Less transformer. Weighs only 9 oz . Ideal for portable equipment or requirements where quality reproduction and light weight are desired. Voice coil 3-4 ohms impedance. Rated 3 watts normal, $4 \frac{1}{2}$ watts peak. 5B7012
${ }^{\text {s }} 1.65$


## Alnico " $V^{\prime \prime}$ 12" PM Dynamic Speaker

Excellently constructed 12" PM dynamic speaker with Alnico $V$ permanent magnet. Magnet weight of 6.8 oz . is equal to 20 oz . of conventional magnets 1 voice coil with $6-8$ ohms impedance. Capacity is 14 to 18 watts. Dustproof spider and voice coil construction For all general applications such as FM and AM receivers, fine phonographs broadcast and recording monitoring, public address Also excellent for replacement purposes 587010
Your Cost

## $\$ 5.95$

## MIDGET PM SPEAKERS



Compact, lightweight speakers that employ efficient permanent magnets. Ideal for call and paging systems, hearing aids, intercommunicators, $31 / 2$ model has 3 ohm voice coil. $5^{\prime \prime}$ model has round frame, others square. Less transformer. Shpg. wt. each, $11 / 2 \mathrm{lbs}$.

 | C19123 | 3 | 2 | $\$ 1.30$ | C19113 | $5^{\circ}$ | 2 | $\$ 1.45$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| C19132 | $3 / /^{\prime \prime}$ | 3 | 1.40 | C19114 | $5^{*}$ | 3 | 1.49 |

C19112

## 8/f PM Speaker

 High quality perma-nent magnet all purnent magnet all pur pose Matches in sensitıvity a comparable field coil type. Has high permeability magnet. One-piece seamless cone, plated metal frame. Voice coil impedance 3.2 ohms. $6^{\circ}$ diameter, V.C. Dia. 8 " , normal wattage 4, peak 6 . Depth, $2^{15}$, 16 ". Less output transformer. Shpg. wt., 3 lbs. $\times 144$ Your Cost
$\$ 1.89$

## 31/?' Field Coil Spealser



A quality speaker for general replacement purposes on call systems, hear ing aids and midget radios Has 450 ohm field coil. Flat response, when properly baftled from 100 to 450 c c.p. Former 1 picce cone Less transformer. Shpe. wt., 3 tbs. Less transformer. Shpg. wi., 3 ibs.
$\times 146$

High quality PM speaker with high permeability mag. net, and one piece seamless cone. Voice coil imped ance 6-8 ohms. dia. $3 / 4^{\prime \prime}$. Normal 5 watts, peak 8 watts. Depth $3132^{\circ}$. Shpg. wt. 4 ths. Less output transformer Ideal for radio set replacement and light P.A. work.
$\times 145-$
Your Cost
$\$ 2.90$

## 4' Field Coil Speaker



Has a practically flat response, when properly baffled. covering from 100 to 14500 c.p.s. Formed one piecc cones. For general replacement purposes on call systems, hearing
aids, midget radios. Also good for light public address work. 450 ohms field. Shpg. wt., 3 lbs Less transforme X147-
Your Cost
$\$ 1.49$
 work.

5' Dynamic Speaker
 $5^{\prime}$ dynamic speaker for general replacement in radio receivers, call and inter-
communicationsystemis. Also used for light public address work. When properly baffled has a practically flat response covering from 100 to 4500 c.p.s. Formed one piece Shpg. wt., 3 lbs. X148-Your Cost

225 Ohm 5' ${ }^{\prime \prime}$ Dynamic Speaker


For replacement in radio re ceivers, inter communication and paring sys. tems. 225 ohm ${ }_{5}$ : dy y a mic speaker withex speaker withex tra heavy pot hum bucking coll and double shielded Output transformer to match output im pedance of 50L6. Excellent for voice and music
YB7013- Cost
$\$ 1.65$

## Handy Terminal Strip Kit



Vitreous and Cement Coated Resistor Kit


Assortment of 20 vitreous enamel and cement coated wire wound esistors with wattage ratings from 5 watt to 25 watts. Wide 58245 Your Cos $\qquad$ \$1.79

## Kit of 100 Micamold

 Mic $\perp$ Condensers

Kit of 10 assorted. Handy assort ment with from 2 to 28 terminals. High quality phenolic insulation with either screw or solder lug terminals. Mounting holes or brackets provided on each strip. 5B6975-
Your Cost

## Voltage Divider Kit



Rated at 2.5 watts in free air10 watts when mounted on chas sis. Metal mounting strap con ducts heat from unit without shorting or grounding Contains 10 wire or grounding Contain moulded bakelite cases and metal moulded bakelite cases and metal mounting straps. Resistance values. $5.45,6,100 / 2 \mathrm{M}, 250,2500$ 5B244- Cost . . . . . . . . . \& \&

## Kit of 10 Moulded

 Paper Condensers
## 

Popular sizes of moulded bakelite cased wax impregnated paper condensers, with axial wire leads. All have RMA color code, and all guaranteed perfect. Highest quality units made by leading manufacturers. Capacitance from .006 mfd . to $.2 \mathrm{mfd} ., 200$ to 600 volts. volts.
58697

## IF Transformer

 High gain permeability tuned $1 F$ transformer. 375 KC normal peak, but gives verysat isfactoryoperation at 455 KC peak Has screwdriver slot adjustments one on $10 p$ and one on bottom. 5 solder lug termi-solder lug termi
Ideal for replacement use and ex ideal for replacementers. Small size, only $11 / 2 \pi$ $114 \times 21 / 4$ high. 2 spade mounting $11 / 2 \times 2 / 4$ high. 2 spade mounting
studs No. $6-32 \times 3 / 8$ long on $13 / 8$ studs No. $6-32 \times 3 / 8$ long mtg. ctrs
585129
Your Cost, Ea. 10 for.

#  <br>  <br> "L" Pad <br> (A) Nationally known wire wound "L" Pad Standar replacement or general purpose use ${ }_{1}^{4}$, dia. shafts. $8-8$ ohms. 4 watts, 1 3. dia. shafts. $8-8$ ohms. ${ }^{4}$ C6337-Your Cost, Each Lots of 10 each <br> Wire Wound Volume Control <br> (B) <br> Exceptional value in nationally known standard make of smooth acting wire wound 1000 ohm, 4 watt control. Standard $3^{2 / 8} 8^{\circ}-3$ threaded mounting bushings and $3 / 4^{\circ}$ purpose use lenth ${ }^{3 / 8}{ }^{\circ} \mathrm{SB} 209{ }^{\circ}$ <br> Your Cost, Each <br>  <br> 244 Lots of 10 . <br> $.19 c$ <br> <br> Potentiometer <br> <br> Potentiometer <br> Nationally known, fully enclosed smooth action carbon type control for replacement or general purpose use. Standard $/ /^{\circ}{ }^{\circ}-32$ threaded mounting bushing and solder lug Sterminal. 13,000 ohms $14 / 8$ C8158-Your Cost, Each Lots of 10 each <br> 104 



## 6 Pole 3 Position Ceramic Gang Switch

## (K) Non-shorting type, with all contacts, lugs and wipers

 plated. Steatite insulation used other metal parts cadmium and RF Steatite insulation used throughout, for high voltage 10 switching. Has standard $3 / \mathbf{g}^{\circ}$ threaded bushi Y ${ }^{1}$ shaft extending $15 / 6^{\circ}$
## Ceramic Insulated Selector Switches

(M) Five position two gang selector switch with total of 32 cuits are supplied by a common source or as a mand switch to cuits are supplicd by a common source or a a a band switch to
short out unused coils. Standard $8 / 8^{\circ}$ bushing with lock washer short out unused coils, Standard $3 / /^{*}$ bushing with lock washer
and nut. $1 /$ " shaft, $_{3} 8,8$ long. A good item for any maintenance or serviceman.
$584035-Y$ -

294

## $1 / 2$ \& 1 Watt R.M.A. Carbon Resistors

(R) Here's another CONCORD EXCLUSIVE serviceman's offer that helps you to build profits! Our tremendous buying power makes this offer possible-stock up now and save! All are R.M.A. coded and held to acceptable tolerances. Specify stock number of type and resistance.

| Ohms | Ohms | Chms | Ohms | Ohrn | Ch | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 100 |  | G6as) | 17560 | 7000 |  |  |
| 150 | 1000 |  | 20 HO |  | 250000 |  |
| 200 | 150 | 10 |  | 80 | 0 | , |
| 550 | 20 |  |  | ямхю | 460000 |  |
| 500 | 2500 | 12510 | 35000 | 100000 | 500000 |  |
|  |  | 13000 | 50000 | $125(010)$ | 750010 |  |
| C5239-500 1500 600001500 |  |  |  |  |  |  |
| $\begin{aligned} & \text { C5239 } \\ & \text { C5240 } \end{aligned}$ | - Wat | $\mathrm{Sizize}^{\mathrm{Size}}$ |  |  |  |  | Kit of 100 Resistors-An assortment of 100 por pular resistors. Contains approximately 501 -watt, 25 poputat carbon $1 / 1-$ watt resistors. All standard RMA color coded. Shpg. wt. C3816-Kit of 100. Specially Priced.

## 2-Watt Carbon Resistors

Heavy-duty carbon resistors, absolutely moisture proof. RMA color codecl for easy identification; made of the finest material and workmanship. Guaranteed accuracy, $\mathbf{1 0 \%}$ plus or minus. The average are within $5 \%$. Resistance values will not vary at normal voltage. Ideal for replacement across small voltage divider sections, bleeders, etc. $2^{\prime} \mathrm{L} . \mathrm{x} \mathrm{I}^{\prime} \mathrm{O}$. D .



## Radio Phono Selector Switch

(F) Nationally known switch for replacement or general purpose use 3 position 10 point stator. AC switch closed in 3rd position extreme clockwise, Standard $3 / 8^{\circ}-32$ threaded be4172-Yourcost.... length. $\mathbf{2 9}$

### 1.5 Meg. Volume Controls

A compact efficient and long life volume control. Consistent quiet service is as. sured in all climates by means of an exclusive stabilized element. Dia. $11 / /^{\prime \prime}$. $3^{\prime \prime} 4^{\prime \prime}$ slaftt $2^{\prime \prime}$ long, $3 / 8^{\prime}$ bushing with nut. 1.5 megohm control Audio shunt, AVC taper 5B2105-Your Cost.294

## SPST Volume Control Switch

## (G) SPST cover plate switch for

 ahove volume control 5B2106-Your Cost
## Midget Knife Switches

(L) Panel mounting. Has black Bakelite


## Push Button Switch

(P) Six button switch, one bution three pole double throw, rest are double pole, single throw, non-shorting. Less C9582

29

## SPST Locking Type Switch

(N) For use on automatic record changers actuates switch, which then locks in actuates switch, which then locks in closed position, and circuit can be opened by light pressure on retaining dog Handies approximately 3 amps. at 125 volts. C12597-Your

Special Value Resistor Kit Kit of 100 assorted resistors, $\frac{1 / 3}{}$ to 2 watt All R.M. a color coded. 5B155 Your Cost...

## 75 Watt 20,000 Ohm

 Adjustable Resistor(T) Wire wound unit with adjustable slide. Nicrome resistance wire wound on ceramic tube with glazed vitreous enamel coating, and lug terminals. $615^{\circ}$


59

## 75 Watt $30,000 \mathrm{Ohm}$

Variable Resistor
(W) Vitreous enamel coated. Adjustable several may be used contact buttons so several may be used without shorting out much resistance. Brackets and one slider furnished. 5B132 Your Cost

## "Koolohm" Fixed Resistors

(Y) Insulation has high di-electric strength, withstands red heat and is impervious to moisture.

$\begin{array}{ll}5 B 138 & 25,000\end{array}$

$\star$ Five-Tube High Fidelity Broadcast Receiver $\star$ Telechron Time Switch Clock

## *Worm Drive Synchronous Motor

$\star$ Three-Tube Facsimile Printer and Amplifier
Complete Set Consists of Two Principal Units
Recording Unit driven by a worm gear and synchronous motor and operated thru impulses from a special three tube recording head amplifier. Utilizes carbon paper in contact with white paper as a recording medium.
Receiver is a conventional 5-tube high-fidelity superheterodyne with the audio output feeding the recording amplifier. Easily modified to power a large PM speaker with plenty of reserve. Receiver as it stands, covers the entire broadcast band in two ranges of $540-1160 \mathrm{KC}$ and $770-1550 \mathrm{KC}$.
Telechron Time Switch Clock turns set on at any predetermined hour, permits it to operate for any desired length of time, up to six hours, then turns it off, all automatically. Can be used for numerous other timing applications as well. Entire complement is housed in a other timing applications as well. Entire complement is housty mahogany cabinet with closing lid in the style of the latest radios. Size of cabinet ( $13^{\circ}$ deep, $19^{\prime}$ wide, $21^{\circ}$ hgh ) adapts it to construction of modern record player or record changer with built-in radio. For $105-125$ Volts, 60 cycle operation Shpg. wt. 100 lbs. The many fine, precision units included in this equipment at the price shown, easily make it the outstanding buy of the year! The value of the parts
aione is many times this low cost! alone is many times this low costl
C25749-Your Cost.
$\$ 49.50$


## Eleven-Tube Radar Unit

(A)GREAT PARTS VALUE! Brand new APA-1 radar indicating gear designed to operate with any other aircraft radar or IFF equipment. Amplifier contains 11 tubes. $2 \times 2 / 879,6 \mathrm{H} 6,6 \mathrm{G} 6 \mathrm{G}, 6 \times 5 \mathrm{GT}$, measures $7 \frac{1}{8} \times 121\left\langle 2 \times 93^{2} /{ }^{\prime \prime}\right.$; has shock mounting. Control unit in separate cabinet has switches, potentiometers, connectors, etc. Scope indicator with $3 \mathrm{BP1}$ cathode ray tube enclosed in metal shield; has rubbertipped metal visor and 6 feet of 11 -conductor shielded cable. Units are in original packing cases, complete with operating handbook. Your Cost
\$19.95

## Xtal Frequency Standard

(B) The famous MCW-CFI unit of the AN/ART-13A Transmitter. This unique sub assembly utilizes one 12SL7GT twin triode as a combination 200 KC calibration osculator and frequency tripler, one and MCW as a converter and one 12SL7GI tube as a signaldetector CFI unit employs a regenerative frequency divider and multiplier circuit to obtain a 50 KC fundamental and harmonics, incorporating a 200 KC crystal (not supplied) as the controlling standard and will a 200 KC crystal (rom 50 KC to 18 megacycles. This unit can be adapted into an yield rom Frequency Meter, range 50 KC to 18 megacyeles by adding an external power supply and VFO. Chassis measures overall, including tubes, $5^{\prime \prime}$ high, $57 / 8^{\prime \prime}$ long, $3 \frac{2 / 8}{}{ }^{\prime \prime}$ wide. Shipped with tubes and schematic.
589548 . 589548
Your Cost
$\$ 2.95$

(A)
(B)


## Marker Beacon Receiver

(A) BC-1023-A is a regulation marker beacon receiver designed for reception of modulated signals on the 75-MC band authorized by the FCC; variable tuning permits coverage of $62-80 \mathrm{MC}$ without circuit changes. Output of the receiver usually is used to flash an indicator lamp on the pilot's instrument panel and no adjustments are necessary during operation; simply turn the set on. Relay circuit in the set can be adapted to control external circuits, open doors, etc. Weight is only be adapted to control external circuits, open doors, etc. Weight is onl
34 pounds; dimensions are $53 / 8 \times 5 \frac{3}{2} \times 3 \times 16^{\circ}$. $\mathrm{BC}-1023-\mathrm{A}$ is housed in a 34 pounds; dimensions are $53,6 \times 5 \frac{8}{8} \times 37 /$ she $^{\circ}$. BC -1023-A is housed in a in original cartons, and complete with tubes (1-6SQ7, $1-6 \mathrm{G6GT}$, $1-6 S \mathrm{C} 7$, and $1-12 S H 7$ ). Operates directly from any 12-14 VDC power source. Priced for quick sale to flyers, amateurs, and experimenters.
589547 -
Your Cost
\$3.95

## Wire Chief's Portable Test Set

(B)
A "must" for P. A. men. Use as a telephone set in connection with a handset. Use as DC voltmeter, O-50V, 1000 ohms/V, $1 \%$ accurate. Use as ohmmeter. Use to check insulation resistance. Use to predict location of a break in a line by determining capacity between two wires or one wire and ground. Parts alone worth lar more than price of entire set. Contains the voltmeter; six very good key switches (single-throw, two throw, spring-loaded, snap action; multiple contacts, perfect for amplifier panels, sound distribution panels, etc.); handcrank generator which puts out 90 volts at 16 to 20 cps; AC buzzer which requires only 5 ma; coils, terminals, etc. All contained in sturdy metal-bound wooden box with hinged lid, snap lock, and strap carrier, $11 \times 9 \times 71 / 2^{*}$. New with complete instruction manual. Weight 7 lbs . 589565-
Your Cost
$\$ 39.50$


## Transmitter Tuning Unit TU-10-B

(A) Plug-in type variable frequency master oscillator and buffer tuning unit, frequency range 10,000 to $12,500 \mathrm{KC}$, housed in aluminum case with removable top and bottom covers. Contains 3 variable condensers. One 27 -plate double spaced 100 mmf . Hammarvariable condensers. One 27 -plate double spaced 16 -plate double spaced 35 mmf . Hammarlund condenser $31 / 4^{\circ} \mathrm{lg} \times 23 / 4^{\prime \prime}$ wd $\times 23 / 8^{\circ} \mathrm{h}$, and one 35 mmf . Hammarlund condenser Hate double spaced 20 mmf . Hammarlund condenser $134^{\prime \prime} \lg \mathrm{x} 3^{\prime \prime}$ 7 -plate double spaced 20 mmf . Hammarlund condenser $13 / 4$ lg X 3
$\mathrm{wd} \times 18 / \mathrm{h}$; two 400 mmf . 2500 VDC low loss mica condensers Cor-nell-Dubilier 9 H , one 400 mmf . 2500 VDC low loss silver mica temperature coefficient condenser Cornell-Dubilier 9LS; one tuning coil 9 turns $0.102^{\prime \prime}$ dia. tinned copper wire spaced 2 turns $/ \mathrm{in}$. on ceramic coil form $2^{\circ}$ dia. x $5^{\prime \prime} \mathrm{lg}$, one tuning coil 6 turns $0.102^{\prime \prime}$ dia. tinned copper wire space 2 turns $/ \mathrm{in}$. on ceramic coil form $2^{\prime \prime}$ dia. $\times 5^{\prime \prime} \mathrm{gg}$, and tapped each turn; one Mycalex terminal strip $1 / 4^{\circ}$ thk. $\pi 3 / 4^{\circ}$ wd $\times 123^{\circ} 16^{\circ}$ Ig with 10 banana jacks. Front panel has one right angle 50 to 1 vernier 180 deg. rotation dial with lock, one straight 5 to 1 vernier 180 deg. rotation dial with lock, one heavy duty RF ceramic insulated SP6 rotary switch, and calibration chart. All variable condensers and coil forms mounted on ceramic stand-off insulators. Ideal as basic unit for high power transmitter exciter unit without alteration, or component parts may be dismantled for other uses. Black finish front panel, rear case natural aluminum finish. Size: $75 / 8^{\prime} \times 163^{3} \times 83 / /^{\prime \prime}$
589542 -
Your Cost
s1.95

## Interphone Pre-Amplifier

(B)
Compact resistance coupled pre-amp which operates from an external power supply. Incorporates a 6SL7GT twin triode, 28D7 dual beam power amplifier, microphone matching transformer, filters plugs, sockets, and relay, all wired ready to operate, from a 28 VDC source. Supplied with press-to-talk switch on a four foot rubber covered cable, shielded leads, PL-68 three circuit plug and PL-55 two circuit plug. Housed in an aluminum case $5^{\prime \prime}$ long, $312^{\prime \prime}$ high, $33 / 4^{\circ}$ wide. Schematic inside cover. Shipped complete with tubes. 589566-
Your Cost

## PLATE - FILAMENT - POWER TRANSFORMERS

©


# (E) 




#### Abstract

\section*{PLATE TRANSFORMER} (D) $117 / 120$ V. 60 cycle primary; secondary D 850 V . CT at 200 ma . Fully shielded. horizontal mounting. Color coded leads; primary: red common, black 117 V ., and brownblack 120 V . Secondary: brown High Voltage, and brown-yellow High Voltage CT. Size: $41 / 2^{\prime} \times 3^{3} 4^{\prime} \times 3 \frac{1}{/^{\prime \prime}}$ high. 4 mounting Studs on $585065-Y$ mour cost.......... $\$ 2$


## Mi-Voltage Plate Transformer

(C) Primary 115 and $230 \mathrm{~V}, 50 / 60 \mathrm{cy}$. Sec. grey steel case with 6 stud terminals enclosed off insulators through bottom. Size $73 / 1_{6}{ }^{\circ} x 5^{\prime} x$ $57 / 8^{\circ} .6$ mounting holes on $6^{\prime \prime} \times 218^{\circ}$ mounting centers.
$\$ 3=95$

## Hi-Voltage Plate Transformer

(A) Primary 117 voits 60 cycles. Secondary black finish Cl at 250 ma . Fully enclosed color coded leads. Size: $3^{7 / 12^{\circ} \times 41^{\prime} \times 4^{3}}$ RMA slot ted mounting holes on $3^{\prime \prime} \times 3^{3 / 8}=$ centers. 5 B6563-
\$4.95

## Power Transformer

(D) Special value transformers. Conform to RyMA specifications. Primary 117 v .60 cycles Secondary outputs 700 v c.t. at 90 MA , 5 v at 3 amp . and 6.3 v at 3.5 amps . For 8 or 9 tube receivers and amplifiers. Two hole mounting with $23 /{ }^{\prime \prime}$ centers. Size $310^{\circ} \times 33^{\circ} 4^{\circ} x-$ $3{ }^{3} 4$. Shpg. wt. 5 los.
SB6569-Your Cost
s. 65

## Power Transformer, 2.5 V.

(B) High grade low-power unit made to RMA specs. Primary $105-120$ V, 60 cy Secondaries 650 V CT at 40 mils, $5 \mathrm{~V}, 2$ amps., and 2.5 V CT at 4 amps. Mounting area $3^{\circ} \times 2 y_{2}^{\circ}$ M1521 Your Cost. Shpg. wt. 2 Ibs. 98 . ${ }^{\circ}$

## Extra Value

Power Transformer
(B) Heavy-duty through-chassis mount, halfshell type power transformer for replacement or or iginal installation. ${ }^{\text {Pri. }} 117 \mathrm{v}, 60 \mathrm{cy}$. Sec's 700 v CT at $120 \mathrm{ma}, 5.0 \mathrm{v}$ at 3 amp ., 6.3 y CT at 3 amp . Mtg. area $27 / 8^{\circ} \times 33 / 8^{\prime \prime}$ Ileight above chassis $25 / 8^{\circ}$. Overall hgt. $3384^{\circ}$ Shpg. wt. 4.2 lbs.
s2.95

## Heavy Dufy Power Transformer

(D) A first quality component. Mects all specilications of American Standards Approved Transformers. Primary $117 \mathrm{~V}, 50 / 60$ cy, electrostatically shielded. Secondaries 700 CT at 6 amps . $4.6^{\circ} \mathrm{H}, \mathrm{a}^{\circ} \mathrm{Wms}$. and 6.3 V centers $384^{\prime \prime} \times 3^{\prime}$. Wt. 7.1 lbs.
s. 46

## Heavy Duty Power Transformer

(A) Fully cased and electrostatically shielded. XFMP des mount. A super deluxe powe XFMR designed to live up to specifications under the most strenuous operating conditions. Ideal for general replacement purposes. 115 volt 60 cycle AC. $4 \frac{3}{3}$." high. Secondaries 800 V CT at $200 \mathrm{ma}, 5 \mathrm{~V}$ at 4 amps., 6.3 V CT at 5.5 amps . Mounting area $37 / 8^{\circ} \times 3.8 / 4$ Mtg. cirs. $33 / 6^{3} \times 2 \%^{\circ}$. Shpg. wt. SBS041-
Your Cost
s5.26

## Power Transformer

(C) Hermetically sealed well constructed power transformer, 115 VAC- 60 cycle primary with 700 volt center tapped secondary at 1.50 ma dc and 5 volt at 2 amp and Porcelain C.T. at 2.5 amp secondary windings Porcelain insulated lugs- 5000 volt insulation $31 / 2^{\circ}$ deep 1 dimensions $5 \% 8^{\circ}$ high, $4 \frac{3}{8} 8^{\prime \prime}$ wide, former for radios and amplifiers. $\$ 3.95$
586566 Your Cost...........

## Power Transformer

(A) Primary 117 volts 60 cycles. Secondary: No. $1-860$ volts CT at 50 ma ., No 2 5 volts CT at 3 amps., No. $3-5$ volts at 2 amps., No. $4-6.3$ volts at 2 amps ., No. $5-$ 6.3 volts CT at 2 amps. Fully enclosed black finish metal case, with $12^{\prime}$ long RMA color coded leads. Size $31 / 4 \times 3 \frac{3}{4} \times 37 / 8$. 4 slotter coded leads. Size $31 / 4 \times 33^{3} \times 37 / 8^{\prime \prime}$. \& slotted
mounting holes on $21 / 2 \times 23^{\prime}$ centers. Excelmounting holes on $2,2 \times 24^{\circ}$ centers. Excelplacement purposes. 5B6562-Your Cost
${ }^{\mathbf{s}} 1.95$

## Filament Transformer

(C) Primary 115 and 230 V, 50/60 cycles closed greydary $5 \vee \mathrm{CT}$ at 6 amps. Fully en closed grey linish steel case, with 6 stud ter minals on stand-off insulators through bot tom. Terminals $1-2-3$ primnary, 4-5-6 second $37 / 8 \times 138^{\circ}$ centers
586554 Your Cost
\$1.95

## Filament Transformer

Primary 115 V. 25 amps. at 60 cycles. Secondary $6.3 \mathrm{~V} ., 3 \mathrm{amps}$. In hermetically seated rectangular case. Length $3^{15} / 1^{\circ}$ $x$ width $258^{\circ} x$ height $45^{\circ}$. Four studs for above chassis mounting. $1^{3 / 4} \times 214^{\circ}$ mount ing centers. Solder lug terminals mounted on porcelain stand off insulators. ..... $\boldsymbol{8} 656$
## Filament Transformer

(E) An excellent filament transformer with 115 VAC ( CO cycle primary. Sec. No. 1 (2.5V-10 amp.). Sec. No. 2 ( 6.3 V . CT at 5.5 amp.). Sec. No. 3 ( 6.3 V CT at 1 amp .). Hermetically sealed with porcelain insulated lugs, 5000 volt insulation test. Overall dimensions $53^{\prime \prime}$ high, $412^{\prime \prime}$ long, $3 \frac{3}{8} 8^{"}$ wide. Fine for Hams and experimenters. 5B6568 Your Cost
$\$ 2.49$

(F)

(H)

(1)

(囚)


## REPLACEMENT FILTER CHOKES

4 Henry, 300 Ma . Heavy Duty Choke

(1)40 ohms DC resistance. Fully enclosed grey steel case with 2 stud terminals on
 conters. centers. $\mathbf{5 S 5 5 1 - Y \text { our Cost. }}$ $\$ 2.25$

## 6 Henry, 50 Ma.

(H) 300 ohms DC resistance. Made to specifications of American Standards Ap-
 centers $2^{7} \mathrm{Y}^{\prime \prime}$. Shpg $^{2}$ wt., 1 lb .

## 6 Henry, 150 Ma. Heavy-Duty Choke

(6) 100 ohms D.C. resistance. Fully en(1) closed grey steei case with 2 solder lug terminais on stand-off insulators through bottom. Size: $4 \times 3 \times 23 / 4^{\prime} .6$ mounting holes on $3 \times 2 \times 11{ }^{\circ}$ centers. 5B6553- Your Cost
$\$ 1.89$

Special Value!

## 10 Henry, 40 Ma. Choke

(1) 260 ohms D.C. resistance. Extremely 1 compact, highly efficient choke particularly well suited for use in auto radio receivers and AC/DC radios. Also excellent filter for general receiver and amplifier use. Unshielded strap-type mounting. Size: $1 \frac{1 / 6 \times 1 / 4 \times}{}$ ${ }^{13 / 3}{ }^{\prime \prime}$. Shps. wt., 1 lb.
C1601-Your Cost.

394

## 10 Henry, 50 Ma.

(H)
475 ohms D.C. resistance. Unshielded strap type mounting. Efficient, small size, with wide variety of uses. Size: $2 \times 15 / 3 \mathrm{zx}$


594

## 10 Henry, 110 Ma .

(J) 235 ohms D.C. resistance. Popular wide frame strap mounting. Unshielded. Long flexible leads. Size: ${21 / 1^{\prime}}^{\circ}$ high, $3^{1 / 6^{\prime}}$ wide, $21 /{ }^{\circ}$ deep. ${ }^{31 / 2 /)^{\circ}}$ mounting centers.
$98 \%$
(G) 120 ohms D.C. resistance. Fully shielded, G) strap type mounting. Compact, efficient, and has many uses. Size: $13 / 182 \times 11 /$ 5B6550 Your Cost.
$69^{\text { }}$

## 20 Henxy, 65 Ma.

(F) 220 ohms D.C. resistance. Fully enclosed black wrinkle finish case with solder lug terminals on bakelite panel through boltom;
Size: $2 \times 21 / \times 3^{\circ} .4$ mounting holes on $1,115 \times 2^{\text {i }}$ centers on top and bottom. 5B5037-Your Cost.....

## 30 Henry, 50 Ma .

## Low Cost Per Henry

450 ohms D.C. resistance. Unshielded, strap type mounting. Ideal for replacement and experimental uses. Size: $21 / 2 \times 1313 x$ $218^{\circ}$ Shpg. Wt., 2 lbs.
C $24 \mathrm{~S}^{\circ}-\mathrm{Your}$ Cost
$73^{9}$

## 



## INPUT-INTERSTAGE-OUTPUT TRANSFORMERS

## Input or Output <br> Transformer

A) Special transformer that would make a good input or output transformer. Center tapped primary, impedance 110,000 ohms. Primary current, 25 M.A. Secondary No. 1 : 70,150 , and 275 ohms. Secondary No. 2 : 310, and 2600 ohms. Haif shell mount. Overall dimensions, $3^{\prime} \times 21_{2}{ }^{\prime} \times 3^{\prime}$. With $6^{*}$ flexible connecting leads. 5B5067-Your Cost

## Midget Input Transformer

(B) $6-8$ ohms to single grid. Unshielded, wit PM color coded leads. For use with small PM dynamic speaker used as microphone Size: $13^{\circ} \times 11 / 8^{\circ}{ }^{10} 1^{1 /}$.


## Interstage Transformer

C) Primary (1-2) 10,000 ohms, secondary finish octagon case with 4 numbered solder lug terminals on top. Size: $2^{\prime} \times 1 \frac{5}{6} /^{\prime \prime} \times 17 / 8^{\prime \prime} .4$ mb5110Your Cost

## Push-Pull Driver <br> Transformer

(D)

High quality driver transformer for pushpull phase inversion. Pri. impedance 10,000 ohms. Pri. current 35 ma . Secondary tapped for following $1 / 2$-secondary impedances and turns ratios pri. to ${ }_{2} \mathrm{sec}$.: 2500 ohms, $1: 1 ; 4.400$ ohms, $1.5: 1 ; 10,000$ ohms, 2:1. Core
 C2079-Your Cost

## Tube to 200 Ohm Line Output Transformer

(E)
2500 ohm primary, 200 ohm secondary primary. Black leads-red, yellow and blue compact construction, ideal for intercoms compact construction, idea
Overall size: $118^{\circ} x^{\prime \prime} \times 18 /^{\prime \prime}$.
585109 -585109-Your Cost

## Tube to $\mathbf{5 0 0}$ Ohm Line Output Transformer

Primary 15,000 ohms, 10 ma ; secondary 500 ohms. Fully enclosed, hermetically scaled, with 4 solder lug terminals. For remote line, and pre-amplifiers. Size: $2^{14^{\prime \prime}} \times 1 \frac{1}{2} \times 112^{\prime}$ Your Cost
$59^{\text { }}$

## Push-Pull to 500 Ohm Line

## Output Transformer

(G) 20,000 ohm primary CT, 8 ma. DC max quency restonse ohm secondary CT. Frecycles. Fully enclosed black crackle finish metal case, with $12^{\circ}$ color coded leads out bottom. Size: $2^{+} \times 2 \frac{2}{8} 8^{\prime \prime} \times 2 \% 8^{\circ} .4$ mounting holes on top and bottom on $19 / 6^{\circ} \times 2^{\circ}$. centers. 586560
Your Cost
$\$ 1.59$

## Single-Ended

## Output Transformer

(D) Primary, single tube 7,010 ohms 30 ma . secondary 4 ohms. Unshielded strap type mounting with color coded leads. Size: $134 x$ C1612 Your Cost

## Universal Output

(H) 15 watts. For single or push-pull plates. With instruction sheet. Primary impedance $2500,5000,6500,10,000,13,000$ ohms 70 ma . Secondary 2, 4, 6, 8, 15 ohms. $214^{\circ}$ $11,35 \%$. W, $212^{\prime} \mathrm{D}$ overall. Shpg. wt. 3 lbs C2082Your Cost
si. 19

## Universal Output

(J) 15 watts. Single or pusl?-pull tubes to coded leads Pr. Hali shell type with and blue Following secondary: red, red-bected to voice coil will match these impedances: black, red yellow 1,000 ohms; black-yellow, red-yellow yellow ohms, yellow, red-yellow 3,000 ohms; red-black, red-yellow 6,000 ohms; black, redblack 7,000 ohms; black, green 12,000 ohms; black, 7,000 ohms; black, green 12,000 ohms; 24,000 ohms. Size: $3^{\prime \prime} \times 213^{\prime \prime} \times 23^{\prime *} .4$ mounting
studs on $2^{1 /} \times 2^{1 / 84}$ centers. studs on $211^{\prime} \times 2^{1} 16^{\prime \prime}$ centers.
$5 B 6558$. 5B6558-Your Cost.

## Output Transformer <br> And Filter Choke

(1)Two units, each with separate cores, potted and hermetically sealed in one steel case. No hum transfer. Single-ended output to line or to high or low impedance headsets. Ideal for communications receivers. Primary impedance 4300 ohms. secondary 4000 ohms with tap at 300 ohms. Reactor section is 61 I at 65 ma , dc resistance 300 ohms . Terminals marked. Diagram on top. $4^{\prime \prime} \mathrm{H}$ $1^{15} /$ P $^{\prime \prime}$ W, $3^{\prime \prime}$ deep overall. Mtg. Ctrs. $1^{1 L^{\prime \prime}}{ }^{\prime \prime}$ 11, 16. Shpg. wt. 3 lbs.
$586570-$ Your Cos


## Battery Charger RA-63-D

Deavy duty ruggedly constructed battery charger that delivers 12 14 volts at $10-13$ amps for rapid charge. Trickle charge switch for 15 volts at $1-4$ amps depending on battery condition. Ileavy duty ful wave selenium rectiner har 12 witharge wo 6 vol inateries connected in series, and one or more 12 volt batteries connected in parallel. Sup plied with four foot, four color coded conductor cable termirated in Hubbell No. 7111 polarized plug. Operates from 115 V 60 cycle AC source. Ideal for garages, filling stations, labs, aircraft shops, and wherever 12 VDC power supplies are required. Size: Shpg. wt. 60 lhs . 5B9544-Your Cost
## Migh Current Transformer

### 5.1 Volts at 190 Amps.

(M) Primary- $105,110,115,120,125$ volts, 60 cycles at .970 K. V. A (M) Secondary- 5.1 volts at 190 amps. Suitable for ageing filaments small welding machines, and numerous other uses in the laboratory or shop. Primary terminals come out to $1^{\prime \prime}$ stand off insulators. Secondary terminals come out at heavy duty stand off porcelain insulators, Mounted in cast iron end bells and finished in baked black enamel Overall size: $20^{\circ} \times 10^{\circ} \times 8^{\circ}$. Mounting centers: $812^{\prime \prime} \times 7 / 4^{\circ}$. Shpg. wt., 01 bs 5B5124Your Cost
$\$ 29.50$
s16.95


## Inverter

(N) Input 12 volts DC, output (N) 115 volts, 60 cy . AC at 150 watts. Ample power for mobile use of AC sound systems or other devices requiring 6(0-cycle input. Numerous uses on farms, boats, in summer homes, etc. Vibrator type, very eflicient, low battery drain. Precision built to exacting specifications. Completely filtered for use with radio equipment. 589567Your Cost
$\$ 16.95$
Vibrator Transformer (P) Primary 24 V CT. Secondary (P) $300 \mathrm{~V} \mathrm{CT}, 60 \mathrm{ma}$. Ilermetically sealed in metal case, black crackle finish. Has eight "fo" mounting holes for upright or inverted mounting. $33 / 44^{\circ} \times 3^{\prime \prime} \times 2^{5}{ }^{\prime \prime}$ overall.
585097 -Your Cost 59

(D)

Battery Charger PE-219
(R) Manufactured to rigid and exacting standards demanded by Signal Corps Specifications, Will charge 6 volt 25 ampere hour battery at a rate of 4 amps minimum from a power source of 6 , 12 or 24 volts DC. Eficiency overall better than $65 \%$. Housed in bonderized steel case finished in olive drab. Size: $103 /{ }^{\prime \prime} \times 12^{\prime \prime} x$ $61 .{ }^{\prime \prime}$. Shipping weight 40 lbs. Parts value alone, with such a wealth of vibrators, connectors, and switching arrangements make this worth far more than the price asked! 5B9545-
Your Cost

Replacement Dual Vibrator for above. 5B9546-Your Cost



## (4)



## VOLTMETERS

(A) 35 volts DC full scale deflection. $213^{\circ}$ with red index mark at scale, black lettering model K25 5B4205-
our Cost
$\$ 1.95$
(B) Voltmeter D.C. (Simpson Model No. (B) 126). 8 ma . Full scale deflection. Plus or minus $2 \%$. Scale reading 0 to $3.21 / 2^{\circ}$ dia. $\times 1^{\prime \prime}$ d. Round face. Black scale, white lettering Your Cos
$\$ 1.95$
C. Voltmeter D.C. (Triplett Model No. 0221T). Same characteristics as above. Round face. Black scale, white lettering. 5B4206.
Your Cost
$\$ 1.95$
(D) Voltmeter D.C. (Gruen GW Model No scale, black lettering.
5 B4208-Your cost
(E) Voltmeter A.C. 0 to 1.5 V . Scale marked (E) 0-2-4-6-8-10. Half wave rectifier. Radium dial. $\mathbf{1 0 0 0}$ ohms D.C. resistance on meter side of rectifier. Dia. $218^{\circ} \times 114^{\circ} \mathrm{d}$. Round face. Black scale, white lettering. $\$$
(F) 0-6 Kilovolt D.C. 1 ma. full scale deflec tion. Roller-Smith type DT. White scale black lettering. $31 / 3^{\prime \prime}$ round flange. Requires two of the multiplier resistors listed below 5B4202-
$\$ 3.50$
Multiplier Resistor. 12 Megohms. 10 kilovolts maximum. Measures $51 / 4^{\circ}$ long by $114^{\circ}$ dia. Hermetically sealed in glass tub ing with metal-to-glass bonded ferrule ends. Two required for meter above.

Weston 507 Scale 0-100 Meter 1 - DC MA White scale black $0-12$ ing. High quality workmanship throughout Black metal case. Flange drilled for pane mounting
3B4215-Your Cost . . ....... \$2,25

## RF AMMETERS

(G) Amperes Radio Frequency. (Simpson Electric Model No. 135). Scale 0-3 amperes. Frequency effect less than $2 \%$ up to 10 megacycles. Dia. $21^{\prime \prime}$ I $1^{36^{\prime}} \mathrm{d}$. Round face. Built-in thermocouple. White scale, black lettering.
$\$ 245$
(H) 0-4 amp. RF meter. Built-in thermocouple. G.E. type DN-56. Black scale, white lettering. $21 / 2^{*}$ round flang YB4203-
$\$ 24.5$
(D) Amperes Radio Frequency. (Hickok Frequency effect less than $2 \%$ up to 65 megacycles Round face. Built-in thermocouple. White face, black lettering. $23 / 4^{\prime \prime}$ flang B4211-
$\$ 245$
(1K) Westinghouse $0-3$ ampere scale. Frequency effect less than $2 \%$ up to 10 couple type. Less thermocouple. White scale black lettering.
$\$ 1=85$

## MILLIAMMETER

(J)

1000 DC MA full scale deflection. Black for panel mounting. 5B4204-Your Cost
$\$ 185$
(D) 0-20 M.A. Precision built DC milliamDeter. $21 \int_{2}$ "flange mounting type. Black dull finish bakelite case. Mtg. Hdwe, included. Large, clearly legible dial calibrations. ed Large, clearly legible dial calibrations.
$0-20 \mathrm{M}$. DC . DC .
584122 Your cost . . . . . . . .
(D) 0-300 DC Milliammeter but in dull black metal case. Requires $21 / 16^{\circ}$ dia. hole for flush panel mounting. Large clearly legible scale divisions. Depth behind panel, $1^{15} 5^{\circ}$ Mounting hardware incl.
5B4118-Your Cost.
$\$ 2.69$

(A)


## MITIIAMMETER

(D) 0-200 MA. $212^{\circ}$ flange mounting type Calibrated for use on 18 steel pane High quality workmanship throughout. Metal case dull black finish. Mounting hardware ncluded.

## C10650-Your Cost

\$2.69

## G.E. DECIBEL METER

(A) G.E. rectifier type AC meter. Full scale A deflection: 3 V AC. Scale calibrated from -10 to +6 Db ., based upon 6 milliwatts and 600 ohms. $2^{11 / 16}$ hange mounting type in black. dull finish bakelite case. An excellent audio meter, suitable for laboratories, schools,
sound men, and experimenters. $\$ 3$
5B4120-Your Cost $. ~ . ~$

## WATT METER

(J)
$0-1000$ Peak Watts Meter 200 Micro amperes DC full scale deflection. Gruen model 250. White scale with black lettering $23 / 3^{\circ}$ round flange. 584200
\$2.69

## TUNING METER

(L) Tuning Meter (General Electric Model Marked "Tuned for Max divisions on scale Marked "Tuned for Max." No numerals Radium pointer. Has built-in pilot light of the "grain of wheat type," 3 V . Mazda No 323. Dia. $2 \xi^{\prime \prime}$ $1^{\prime \prime} \mathrm{d}$. Round face. Aircraft type instrument mounting. Black scale white lettering. 5B4212-Your Cost
s1.69

## OUTPUT METER

(M) Output Units Meter. (Weston Model No (M07). Built-in thermocoupie type. Scale 0 to 10,0 to 120 ma. R.F. Full scale deflection $25 / 16^{6}$ dia. $x^{15} / 16^{\circ}$ d. Round face. White scale black lettering 5B4213-Your Cost

81,95

## MODULATION METER

(N) Modulation Indicator (G.E. D049) Scale, 0 to 75.7 .5 volts. Full scale de flection $134^{\prime \prime}$ dia. $\times 11 / 8^{\circ} \mathrm{d}$. White ${ }^{\circ}$. black lettering.
$\$ 5-5$

# QUALITY CDILS Latnen COW PRICES <br>  <br> C <br>  <br> (E) <br> © 




use with 365 mmf . variable tuning condenser. Brackets furnished Dla gram included with kits for building 4 or $\mathbf{5}$ tube set. I.F. Trams gram inciuded withkits for buitding 4 or 5 tube set. I.F. Tramswith compression mica trimmers adjusted from top of aluminum with compression mica trimmers ad
shielding can. RMA color coded leads.

## R.F. and Antenna Coil Kits

No. Application Freq Shield Mtg
1 Ant. and $550-1750 \mathrm{kc}$ Can Spade lugs
C10071 1 Ant. and 550-1750kc Can Spadelugs . 75

1 R.F. Coil 1 Ant. and

## Permeability Tuned I.F. Transformer

 No. Fig. Appln. Freq. Shield ${ }_{\text {SB5096 }}$ Fize Input 456 Can Mig.Air-Core Condenser Tuned I.F. Transformers


## nill Pruex R LAYS

## SENSITIVE RELAYS



Fully adjustable sensitive relay with 2000 ohm coil. Ideal for plate cir cuit or photocell applications. Minimum pull-in current only 2.5 milliamperes. S.P.D.T. contacts. Mounting bracket has two mounting holes, Size: $3^{8 /} / 8^{*}$ long, $218^{\circ}$ wide, $21 / 8^{\circ}$ high $584033-$
Your Cost
$\$ 1.49$
45-60 VDC sensitive relay, 10,000 ohm coil. Contacts: one set of DPST normally closed, and one set of SPST normally open, rated 15 amperes at 6 volts to 5 amperes at 110 volts. Overall dimensions: $155^{\circ} \times 2^{\circ} \times 11 / 4^{\circ}$

100-130 VDC sensitive relay, 10,000 ohm coil Contacts: 2 SPST, one normally closed and one normally open, rated 10 amps. at 6 volts to 4 amps. at 110 volts. Size $23^{\prime} x^{1 / 2}{ }^{\circ} \times 1^{5 / 8}$ SB3982 98


45 VDC relay, $20(10 \mathrm{ohm}$ coil. Contacts, one set of SPDT rated 50 amps.at 6 volts 10 20 amps at 110 volts, and one set of SI'ST normally open contacts rated 5 amps. at 6 volis to 2 amps al 110 volts This is an excellent relay for tube circuits, photocell alarm systems, and a host of other applications.

 5B3983-Your Cost

## SPDT RELAY



SPDT contacts of $3 / 60^{\circ}$
diameter fine silver rated at 550 watts noninductive load at 60 cycles. Coil operates on 19 to 29 volts 15 C re sistance of 50 ohms, 1500 volt insulation throughout.Overallsize, $2^{1 /} \times 1^{3} 5^{\prime \prime} \times 118^{\prime \prime}$ C5950 Your Cost

## DPST RELAYS



DPST contacts, normally open, of "un fine silver diameter, rated at 550 watts non-induct ive load at 60 cycles. Coil operates 50 dio cycle $A C$, requires from .6 to 1 volt with pull-in current of 4 amps. DC resistance, 1.5 ohms. 1500 vol AC insulation throughout. Overall size, $214^{\circ x}$ $112^{\circ} \times l^{\prime}$. with mig. bracket C5948-Your Cost

894

## DOUBLE POLE RELAY



Double pole relay, with one set of SPST contacts normally open, and one set of contacts normally closed, contacts of ${ }^{3 / 6}$ ine silver, rated at 550 watts non-induclive load at 60 cycles. Coil operates on resistance of 275 ohms. Overall size, $2^{\prime \prime} \times 21^{\circ} \mathrm{x}$ resistance of 27.5 ohms. Overall size,
1585 , with mtg. bracket.
C594-Your Cost . . . . . . . . . . . . 39

## 110 VOLT AC RELAYS FOUR-POLE RELAX



A heavy duty relay with two sets of SPDT contacts, and two sets of SPST contacts, normally closed. All metal parts are bright-plated and all soldered joints are carefully enameled to prevent corrosion. Contact arms and springs are heat-treated beryllium copper, and contacts are $1 / 4$ pure silver slightly crowned Each set of contacts is rated at 6 amperes at 115 volts AC Relay coil consumes 6 VA at 115 volts AC. Normal pull-in voltage, 92 volts; drop-out voltage 75 volts. Base and insulation are natural brown canvas bakelite. Base size $31 / 8^{*}$ square, $1 / 4^{\circ}$ thick. Overall height $1^{17} \%^{\circ}$ 318 square $^{1 / 4}$ thick. Overall height ${ }^{17} 1{ }^{\circ}{ }^{\circ}$
Shmp. wt. $1 b^{\circ}$. C14251 Leach No. 2129BF
1.89


SPST contacts, normally open, of "is" diameter fine silver, rated at 5.50 wats non-inductive load at 60 cycles. Coil operates on 95 to 125 volts 50.60 cycle AC, with IDC resistance of 550 ohms. Ov
$242^{*} \times 178^{\prime} \times 11 / 8^{*}$.

694
C5945
Youst

## 柏 AC RELAY COIL OPERATES ON 110VAC.

Finest material and workmanship. Two separate coils connected in series and mounted on a single $3 \times 3^{1} 2^{\prime \prime}$ phenolic block. $2^{\prime \prime}$ high. Each armature carries a bakelite block on which are mounted a S1DT and a SPST normally open set of contacts rated at 15 amps ., 110 V VC . All sets of contacts are insulated from each other and the frame by bakelite insulation. Screw terminals. Coils may he connected in parallel to work at a lower voltage.
$5 \mathrm{SB4100}$ - $\qquad$ $\$ 2.45$
THERMAL TIME DELAY RELAY


Leach type 1054 T with 375 ohm 21 volt 1D.C. coil. Delay adjustable from 20 seconds to 1 minute. "f fine silver D. P.S.T. contacts normally open. Will handle 50 amps at 12 volts 1 .C. 25 amps at 21 volts 1$). C .6$ amps at 110 vols A.C. Metal base with 8 mounting, holes. Size $31 /{ }^{\circ}$ long, $23 / 4^{\prime \prime}$ wide, $13 / 8^{\prime \prime}$ high
5B4030
Your Cost
$\$ 1.19$

## THERMAL TIME DELAY REPLACEMENT UNIT



Mounted on glazed porcelain base with $6^{*}$ flexible copper braid connecting leads. Adjustable from 20 sec . to 1 minute listed above. 5B3989 Your Cost.

## AC SOLENOID


D.P.D.T., 24 VOLT RELAY

$3 / 4$ : pure silver contacts rated at 6 amps .110 volts a.c. Bakelite insulation. c. 6-32 threaded mounting .c. 6-32 threaded mounting Overall size: $2^{\prime \prime}$ by $18 /^{\circ}$ by 11/4. $69^{\circ}$
583990
Your Cost.
4 P. D. T. 24 VOLT RELAY
$1 / 8^{\circ}$ pure silver contacts rated at 3 amps. 110 volts a.c. 250 ohms d.c. coil for 21 volt operation. 6-32 threaded mounting holes on $171^{\circ}$ mounting centers. Overall size: $2^{\circ}$ by $15 / 8^{\prime \prime}$ by $15 / 8^{\circ}$.
5B3996-
Your Cost
$49^{\circ}$


## STARTING RELAY

(A) 12-14 VDC heavy duty starting relay (A) with 13 ohm coil. SPS' contacts normally open. Excellent for starting dynamotors and heavy motors. Overall dimensions approx. $37 / 8 \times 2^{3}{ }^{4} \times 25$. Similar to General Electric Contactor No CR2800-384B2. O 5B4301-Your Cost
(B) 6 VDC relay, with coil resistance of 16 ormally 6 VIn 20 double break10 amps at 110 volts. Measures $2^{3} 6 \times 1{ }^{5} \times 11$.



## SEEENIUM

## RECTIEIER

* No Warm Up P
$\star$ Costs Less
Saves space-only $11 / 4 \times 11 / 4 \times$ 11 io -lits where tube won $t$. Costs less than tube and socket it eliminates. Long life-built to last the life of set. No warm-up period. Starts instantly and runs cooler because no filament current is required. Installed in less time than tube only two soldering jobs. Two rectifiers may be connected as a voltage doubler to supply 250 volts at 80 ma . from 177 voluct power supply. Siurdy all-metal construction even when charging deformed electrolytic




## CRYSTAL PICK-UP

(A) High quality crystal pick-up mounted in arm or 10 and 12 records. Mounting included. Requires! ${ }^{\prime \prime}$ hole. Shielded lead and cartridge case. Aluminum die cast arm fin-


## Your Cost

## RESISTORLESS NEON BULBS

(B) For use in Test insiruments noise siTypencers, and RF protection on receivers watt NE-2 with a wattage rating of $1 / 25$ X169-Your Cost
10 for

## Carbon Throat Microphone



5B7060 Your Cost

This microphone will work into any 200 ohm impedance input circuit. Has adjustable strap to fit any neck In operation this microphone is strapped around the throat thereby facili tating full freedom of both hands and head movement. Ideal for ultra high frequency mobile work for hams. Supplied with strap $10^{\circ}$ cord and plug.
$29^{4}$

## Light Weight Hand Held T-17B Microphone

High quality and light weight! Sturdily constructed 200 ohm single button carbon mike with built-in hiss filter and press-to talk switch. Complete with 5 -foot rubber cord, PL-68 plug and microphone dust cover.

946 cover.

## Telephone Handset

High quality unit containing a magnetic phone of approx. 1000 ohms impedance and a single button carbon microphone rated at 200 ohms. Has convenient built-in push to talk butterfly witch. Six foot heavy duty rub ber covered cable provided with PL 55 plug on one conductor and PL 68 plug on the other. Overall size, $9^{\circ}$. Extensively used in field telephone work and has numerous other applications. 587061-Your Cost

## 8000 Ohm Headset

With plug-type ear phones and car pads. For use with very low signals or reception where there is noise. Rubbercovered steel headband with one-foot long rubber-covered cord and jack plug 587073
587073
Your Cost
$\$ 1.95$

## Heaxing-Aid Type Headset

Low impedance. With two $3^{\prime \prime}$ long rubor covered leads
587074-
$\$ 1.25$

## Dynamic Type Earphone and Microphone Assembly

## $\star$ For Intercom Units $\star$ Code Practice Sets $\star$ P. A. Systems <br> $\star$ Home Recordings ネ Mobile Equipment

This unit consists of a microphone handset including a dynamic mike ( 50 ohm voice coil) activated by a DPST "push-to-talk" switch conveniently mounted on the handset for thumb control. The mouth piece is of flexible rubber, and the unit is completely waterproofed with oil impresnated cloth inside the oike gill The coth inside The ceadset is o high quality spring steel, fully adustable, leather The earphon genu
 ne leather. The earphones, (2), built on the principle of a P.M. dynamic speaker, have a moving voice coil wound to 50 ohms impedance, and are attached to mica diaphragms. The magnetic field is set up by a very high quality super-alloy electro magnet. The ear phones are $13 / 8$ "speakers solidly encased in black bakelite and equipped with sponge rubber cushions $3,6_{6}{ }^{\circ}$ diameter.
The mike can be removed from the headset and used for P.A. work, home recording, etc. When used separately, the phones may be used as small power speakers in intercom equipment using standard circuits. They may also be used as audible reproducers in midget code practice oscillator sets. The DPST "push-to-talk" switch has separate leads brought out and can be used in battery-saving control circuits for mobile equipment. The equipment is offered you at a small fraction of cost! 5B7055-Equipment less, extension cord.
\$2.79
$37^{\circ}$ extension with receptacle to fit the plug on the headset and mike, facilitates disconnecting the entire unit at will.
587056-Your Cost.

Chromium Plafed Steel Case


A beautifully built, highly polished chromium plated steel case, ideal for test equipment, oscilloscopes, amplifiers, etc. Has removable bottom, ventilating louvres on all sides, particularly sturdy for use with heavy equipment. Measures $934^{\circ}$ high, $75 /{ }^{\circ}$ wide, and $121 / 2^{\circ}$ deep, with $2,3^{*}$ $151{ }^{\text {diameter hole in front panel, and }}$ C22276-
Your Cost
\$1.55

## Antenna Reel

Sturdy, rustproof heavily galvanized wire frame reel with freely turning handle and crank. Ideal for winding and storing antenna wire, cables, clothes


Circuit Breaker



Completely housed in molded plastic case with reset switch on front. Fast positive action. Enclosed case completely llame proof. mounts with two $10-24 \times 1 / 2$ mounting studs which are also the terminals. Can be used to replace fuses as service can be restored after short circuit or overload is corrected by merely throwing the toggle switch to ON" position. Size: $3^{\prime \prime} \times 3^{3}{ }^{3 / 4} \times 1^{\prime \prime}$ Two types as listed below. all are tor use on 115 V AC or DC 584058-
220 MA
${ }^{1.39}$
584059-9 Amp
1.65

## Battery Cord Set

Consists of $71 / 2$ feet of 2 -conductor flexible twisted pair cable, each conductor No. 14 stranded inned heavily insulated copper wire, color coded yellow and black; 2 heavy duty $4^{\circ}$ battery clips on one end and one 4 female contact plug on the other end and fuseholder with 5 amp. fuse in yellow (positive) lead near plug end. For use wherever storage batteries are used.
5B6537-
Your Cost
29

Neutralizing Tool Kit
12 Tools Telescope Info 5 Units


This kit is composed of alligator side wrench. 6 insulated driver-metal nib, ${ }^{5} 16^{\circ}$ and $1 / 4^{\circ}$ nut wrench, 3/4 " insulated square nut wrench. 14 hex metal side wrench. $21 / 2^{\circ}$ insulated driver with metal nib, $1 / 4$ hex driver 5 hex insulated nut wrench, $5^{\circ}$ and $6^{\circ}$ insulated driver.

Mounted on bakelite base $48 / 4 \times 3$. Jumper strip with binding posts also mounted on base with key Has binding post connections and circuit closing switch. $1 / 10^{\circ}$ solid silver keying contacts All metal parts cadmium plated. This is an excellent key for sounder and buzzer telegraph systems, as it is equipped with 2 sets of binding posts, one set mounted on a mounted on the key. 5B6543-Your Cost.

39

## Live Rubber Mounts



Excellent live rubiser mounts for floating gang condensers, sockets, and record changers to prevent microphonics. Size $5 /$ If $^{2} \mathrm{x} 5 / 8$ ". C14798-Per Doz. Per 100


## 7 Tube Chassis

(A) Punched 7 -tube chassis, tern $7^{\circ}$ piate. $2^{4}$, measuring $14^{\circ}$ long, high, excellent for radio and amplitier builders. 5B9564 Your Cost

294

## 1S4 Tube Shields

(B) Miniature tube shield for tubes such as 154 , etc. Aluminum with retainer spring inside.
 10 for.

30c


Jack Box
(C) Consists of one 3 -circuit jack, one single-circuit jack, one 150,000 -ohm potentiometer, and 5 -position rotary switch enclosed in an aluminum case $412^{\prime \prime}$ long, $3^{\prime \prime}$ wide, $3^{\prime \prime}$ high. Shipped complete with knobs. Circuit diagram inside cover. Shpg. wt., 2 lbs. 5B3959-
Your Cost


## Tool Roll

(A)Simulated leather tool roll. Has a strap with 15 slots to carry several pliers, screwdrivers, socket wrenches, etc. When tools are packed in this roll, they make a neat and compact tool kit $589527-$ Your Cost

## Tive-in-One Tool Set



Cadmium-plated steel shank and knurled handle, hollow to store five snap-on tips. End of handle unscrews to remove tools Tips are: $1 / 4^{3} x^{3} 4^{\prime}$ screwdriver and
 wrenchics
sB69 Yoar Cost

## Ceramic Socket For 832, 829

(C)An excellent purchase makes mitting-tube socket available at mitting-tube socket available at
less than manufacturer's cost. 1/4" thick white ceramic, glazed on top side, $2 \% / s^{\circ}$ square with rounded corners, reinforced $311^{\circ}$ mounting holes on $178^{\circ} \times 1 \frac{17}{\%^{\circ}}$ centers. Seven silver-plated powerful spring grip contacts with two soldering holes each, firmly riveted in place and reinforced by cast cutout in the ceramic. $\xrightarrow[\text { Your Cost }]{\text { 5B698- }}$

## E-O. (c)

## Fuse Holder Kit

C Consists of one Littelfuse No. 1068 double fuse mounting, three $5-\mathrm{amp}$. 3AG fuses, two ${ }^{3} / 6{ }^{3} 3^{3 / 4}{ }^{*}$ screws. two No. 6 lockwashers, two $1 / x^{x 1 / 8}$ brass rivets; two Littelfuse clips No. 1011, and
two $3 / 6^{\circ}$ steel nuts. 5B145-Your Cost.

## Extractor Fuse Posts



Black bakelite fuse hold
for type $3 A G$ fuse. For pand mounting with fisf(6; Fushin equipped with in ulating rubber washer, lock washer, and nut. Extends $158^{\circ}$ behind panel and has rugged solder lugs. ${ }^{58238}$ Your Cost
$16^{4}$


Interphone Cable Kit
(C) Consists of: 125' 3-conductor cable, 75, No. 72 Seine Twine, 1 roll $6^{\prime}$ red acetate tape, 1 roll $6^{\prime}$ white acetate tape, 2 cable clamps, 14 -prong Jones plug in aluminum jacket, 1 4prong Jones socket in aluminum jacket, and 2 pull chain assemblies. Useful in P.A. or intercommunication system installation.

## 5B6991-

$98^{\text {c }}$
Similar to 5B6991 but with slightly different quantities. Consists of: $35^{\prime}$ ' 3 -conductor cable .2 lb . No. 72 Seine Twine, 1 roll 6 ' red acetate tape, 1 roll $6^{\prime}$ white acetate tape, 3 cable clamps, 1 4 prong Jones socket assembly in aluminum jacket, 2 4-prong Jones plug assemblies in aluminum jackets, and 3 pull-chain assemblies.
5B6992-
Your Cost


30 MH RF Choke
(A) Wound on ceramic form, by means of screw through cenby means of screw through center hole or two mtg. holes in base. DC resistance is 136 ohms. Maximum $D C$ is 125 ma .
C10134.
Your Cost
$39{ }^{4}$

## APC Aix Padder <br> Condensers



Ceramic insulated air padder condensers ideal for circuits requiring a constant capacity under all climatic conditions such as oscillator circuits, IF transformers, fixed tuned circuits, etc Sizes under 100 mmf have screwdriver slot adjustment The 100 mmf size has $1 / 4^{\circ}$ shaft $7 / 0^{\circ}$ long. A record low price for this high quality item. quality item
Stack No.
583511
583511
583206
583512
583518

| Mmf | Each |
| :---: | :---: |
| 25 | $\mathbf{1 6 c}$ |
| 35 | $\mathbf{1 6 c}$ |
| 50 | 16 c |
| 100 | 19 c |

## Ceramic Octal Socket

(D) A low-loss, heavy-duty sock(D) et on $1 \frac{1}{2}$ mounting centers. Firm gripping cylindrical pin contacts silver plated. Sturdily constructed. Heavy ceramic body structed in pavy ceramic body.
seated in pressed shell. seated in pressed steel shell.
Soldering tabs and four grounding lugs pre-tinned, provided with ${ }^{3}$ si" holes.
C13109-
Your Cost Each
94 10 for

81c

## Low-Loss Octal Socket



Flush mounting high quality low loss phenolic compound sorket seated in heavy rust-resour steel saddle. Provided with our giounding lugs. Tubular gripping s ver-plated contacts end in two-pole terminals. 5B6979 Your Cost, Each....... © 10 for 10 for

## Pilft Light Socket



A A wo-contact bayonet type of focket requiring $3^{\prime}$ dia. hole if mounting flange. Retaining ring included. Two solder lug terminals.
58ea7-
Your Cost
15
10 for


## Unshielded R.F. Chokes

(C) All-purpose unshielded r.f. accurately. Universai-wound, ed. Thoroughly impregnatedwill give long, trouble-free service. C10133 2.5 Millihenries. Your Cost
$18^{4}$
C10135-60 Milli-
henries. Your Cost
$29^{4}$

## Radio Noise Filter

(D)
Keeps hash out of power (D) lines when connected at source of noise, or removes hash from radio when connected to incoming line. In hermetically sealed case $2 \times 2 \times 118^{\circ}$ high, with two mounting lugs on $2^{3 / 8}$ centers. Case is grounded, hot leg of 115 V AC line goes to terminal at one end, out of terminal at other end. Rated at 10 amps. Shpg. wt., 2 lbs.
5B3239-Your Cos
594

## 



## 2 Gang Condenser with Band Spread

(A) Section one 39.7 mmfd min. to 353.4 353 mmfd . max., section two 33.9 mmfd . to 20 mmfd Stux.; band spread both sections 20 mmid . Sturdily constructed, useful for portable or small super heterodyne receiver. bakelite insulation. Both shafts mounted on ball bearings and with ball thrust adjustment. $2^{\prime}$ dial puiley mounted on each shaft. Size $4 \times 21 / 2 \times 212^{\circ}$
5B3562-Your Cost
69

## 3 Gang with Band Spread

(A) 352 mmfd . max. each section, band (A) spread 20 mmfd . max. Sturdily constructed, for use in communications superheterodyne receivers. Single spaced aluminum plates with low loss bakelite insulation. Brass shafts mounted on ball bearings with ball thrust adjustment. $2^{2}$ dial cable pulley mounted on each shaft. Size: $47 / 8 \times 312 \times 28 / 4$.



## U.H.F. 3 Gang

## 3 Gang with Band Spread

(A) 12.5 mmfd min to 410 mmfd . max. each section, band spread 20 mmfd . Sturdily constructed. Replacement for use in nationally known communications superheterodyne receivers. Single spaced aluminum plates with low loss bakelite insulation. Main tuning shaft extends $25 /{ }^{\circ}$ from front of condenser, bandspread shaft extends $13 / 6^{\prime \prime}$ from front of condenser, both shafts have $2^{\prime \prime}$ dial cable pulley attached. Size: $61 / 4 \times 31 / 2 \times 31 / 2^{\circ}$.
5B3561-Your Cost
$\$ 1.19$

## 3 Gang Condenser

12.5 mmfd min. to 562.8 mmfd max each section. Sturdily constructed condenser, used in superheterodyne receivers for standard broadcast and short wave. Single spaced aluminum plates with brass rotor shaft. Shaft is mounted in ball bearings with ball thrust adjustment. Stator plates are mounted on low loss bakelite insulators. Size. $5 \times 32 / 4 \times 28 / 4^{\circ}$. Shaft ${ }^{3} / 8^{\circ}$ dia. $\times 3 / 8^{\circ}$ 5B3564-Your Cost894

(C)6 mmfd . to 54.7 mmfd maximum each section. These sturdily constructed condensers are ideal for use in UHF. Double spaced aluminum plate, ball bearing rotor shaft with ball thrust end adjustment, and micalex insulation. Front rotor is grounded to frame, center and rear rotors have provisions for insulating from frame and each other. Shaft $1 / 8^{\circ}$ dia., $1 / 8^{\circ}$ long. Size: $6^{3} \frac{1}{8} \times 31 / 4^{2}$ 28 other
5B3567-Your Cost $\qquad$

## Broadcast Tuning Condensers

(D) Two sections, RF section 420 mmf., section section 162 mm . Trith ball end. thrust 20 mmf . Ball bearings with ball end: wide, $18 / 8^{6}$ high, $28 / 8^{\circ}$ deep. Shaft extends $84^{\circ}$. Cable drum permanently in talled at factory. Cable drum permanently in talled at factory: Ideal for making small receive
equipment. Shipg, wt. 1 lb
5B3570-With $4^{\prime}$ drum.
$98^{\text {c }}$
(G)

(E)

(1)


## JOHNSON Variable Condenser

(E) Rugged, compact unit for medium and C. low-power transmitters. $032^{\circ}$ thick aluminum plates. Steatite insulation. Heavy phosphor-bronze contact springs. Capacity 12 to 2.14 mmf . $0.45^{\circ}$ spacing. Approximate breakdown is 2000 volts. Slotted shaft $1 / 4$ dia., $1 / 4^{*}$ long.
583572-
Your Cost
$\$ 1.29$

3 Gang Calibrated Condenser
(F) Two 250 mmf . sections and one 260 mmf . $4^{*}$ dia. calibrated dial, Vernier gear drive $5 \mathrm{~B} 3559-$ Your Cost............. $\$$

## (G) Single-Section Condenser Steatite insulation, $500 \mathrm{mmid} .2 \times 17 / 8 \times 65 / 8^{\circ}$

ICA 140 Mmf. Midget Condenser
(H) For communications receivers and transmitters. Compact, rugged and highly efficient. Ceramic insulation, sturdy lug terminals, single hole mounting feature, etc. $1 / 4$ shaft plated to resist corrosion. Capacity 7 to 140 mmfd . 19 plates. With mounting nut. Shpg. wt. 1 lb
C9714-
\$1.03


## Special Assembly

A compact foundation for a transmitter (J) receiver. Metal frame with 10 -contact female receptacle at bottom, 140 mmf . variable capacitor with screwdriver adjustment on top, miniature polystyrene coil socket, dual crystal socket, and male contact socket with spring locking clip. $4^{\prime \prime}$ long, 11/4" wide $\mathbf{x} 23 / 4^{\prime \prime}$ high. Tuning condenser alone is worth more than the price of the entire ${ }_{583553-\text { Your Cost }}$394

## Permeability Tuner

Standard Broadcast Band Ant., RF, and oscillator coils. 455 kc IF. All simultaneously tuned by slugs screwed to moving cradle. Slugs can be individually adjusted for tracking alignment. Cradle moves on rigid slides and is driven by cord and idler assembly from standard large pulley 5B3573-Your Cost62
\$1.49


## Vaxiometer

Smoothly operating perfectly balanced variable inductance with range of 2.5 to 7 microhenrys. Coils are double spaced silver plated solid heavy copper wire mounted on ceramic insulation. Frame is low loss laminated linen base phenolic with ceramic feed through terminals and ceramic shaft coupling. Size: $5 \times 41 / 2 \times 378^{\circ} .4$ mounting holes tapped No. $6-32$ on $31 / 2 \times 2 \frac{2}{8}{ }^{\prime \prime}$ centers.5B7068-Your Cost.
49

## Neutralixing Condenser

(ii) Capacity 3 mmfd , to 11 mmfd . Suitable for neutralizing low power transmitter amplifier stages. Body made of steatite for mounting in a $2 / 8^{\circ}$ hole, or may be suspension mounted. Capacity is variable by plungerlike action.
583171-
Your Cost


## MEISSNER Midgef Alignaire

(N) Bakelite cased 1 to 12 mmid midget air element for mounting. ${ }^{7} / 6 \times 11 / 8^{\prime}$.
C9740
Your Cost

### 2.8 Mmf Dual Condenser

(P) Maximum capacity per section, 28 mmid, minimum, 2 mmfd . Mycalex coupling between sections, isolantite end plates. Each section two plates, $10^{\circ}$ spacing, with rounded corners. Low loss bakelite base with two holes for base mtg. can be removed and each section used as separate condenser if desired. 6-32 threaded stud projects from back of each section, $1 /{ }^{\prime \prime}$ shaft. Overall size: 17 /6 $\times 1^{7}$ K6 $\times 4^{7}$.
5B3503-
Your Cost

(A)
(1)

©

(D)


## PHOTOFLASH COMPONENTS

## Hi-Voltage Power Supply

Type PS-1 power supply. Simple and safe to use, sealed-in metal case. Only three terminals to connect. Porcelain stand-off insulator for high-voltage output. Input 117 v 60 cycle $\Lambda$ C, output will charge capacitors to 2250 v DC. Maximum load 50 mfd . Size: $4^{9}$ 低 $\times 34 \times 5{ }^{3} 2^{\circ}$. Wt. 2.2 lbs.C1989-Your Cost
s11.14

## Energy Storage Capacitors

Small light weight units for use with the PS-1 power supply. Peak (B) volts 2250 , energy storage 7.6 watt-seconds, 3.2 mfd . Professional results can be obtained by the use of 8 or 10 capacitors in parallel, good results with as few as 6 connected in parallel. Increasing number of capacitors used gives increased light intensity. Approximately 15 seconds required to charge 8 capacitors. Size: $4 \times 2 \times 1 /^{\circ}$. Shipg. wt 5 lbsC102

29-Your Cost Each
\$2.91

## AMGLO Photoflash Lamps

Light intensity rated 100 times that of sunlight. Superb results with either Kodachrome or Black and White. Many thousands of flashes per bulb. Duration of flash less than one ten-thousandth second, get clean action shots. High color temperature, $6500^{\circ}$ Kelvin with standard circuits, closely simulates daylight. Requires standard 4-prong radio tube socketC10582-Type 51 Q4X. Energy rating $40-60$ watt-seconds. For use with PS-1 power supply and up to 8 Plasticon capacitors listed above. Your Cost.

## Each.

C10583-Type $48 \mathrm{R} 4 \times$. Energy rating $60-200$ watt-seconds. For (D) use with PS-1 power supply and up to 26 Plasticon capacitors listed ahove.
s14.70 Your Cost, Each
Nour Cost, Each ...es of this cataiog for listings of additional photo-
flash equipment: fransformers, condensers, relays, thyratron control flash equipment: Transformers, condensers, relays, thyratron control tubes.


## Tire Static Neutralizer Powder

(A) Consists of simple injector and bags of anti-static powder, made under patent license from U.S. Rubber Co. When injected into tire, when you step out of a car and touch the door handle, eliminates spark bites in inner tubes. Powder packed in individual bags, one for each tire, including spare. Tire need not be completely deflated to inject. tire, including spare. into valve, fill with powder, and blow air into Simply screw injector into valve, firl with powder, and blow air into tire, through the injector, with air hose at fill effective during the entire life of the inner tube.
C15581-Powder only, sufficient for 5 tires

## TELECTRONIC Induction Telephone Pickup

(B) Picks up telephone conversations. Simply place the phone base, either cradle or upright type, on the pick-up platform and connect the leads of the pick-up to the high-impedance microphone input erminals of any audio amplifier. When used for Public Address work, a speaker at home or in another city can address large audiences without special phone circuits; or use it to record important telephone
conversations conversations

## C22506 Your Cost

\$29.50
Dealers Are Invited to Write for Quantity Discounts

## PLASTICON Glass Mikes

Nision $\rightarrow$ ?
Vacuum sealed hi-voltage capacitors. Tolerance $\pm 10 \%$. Type $A$ hase capacitors. Toler- 82 screw terminals,

## 3 Section Side

## Cowl Antenna

Extends from $31 y^{\prime \prime}$ to $96^{\prime}$, with three sections Special shims eliminate rattle and vibration. Two-hole universal body insulators have grommets to insure accurate fit. Moistureproof braided shield lead-in. Chromium plated finish.

## $\$ 1.89$



Made of heavy steel $16 \cdot$ long and $34^{\circ}$ inch dia. Has pointed end or easy driving
5B7099 Your Cost


## SOLAR Heavy Duty Line Filtex

(A) Power line disturbances caused by refrigerators, oil burners, fluorescent fixtures, barber equipment and other electrical devices are filtered out or eliminated at the source. Building power lines should be protected from radio interference by connecting filter between unit and line. For example oil burner to filter and filter-to-line. If source cannot be determined, then connect between line and radio Case should be grounded with terminal provided. Inductance-capacity type to provide heavy-duty filtering up to 20 amps at $115 \mathrm{VAC}, 600$ VDC. Five terminals, center terminal ground. Dimensions: $41 / 2^{\prime \prime}$ long ${ }_{583}{ }^{3} 5^{\circ}$ wide, $21 /{ }^{\prime \prime}$ high.
$\$ 1.79$

## 6 Volt Vibzator

(B) Replacement for Mallory 294, 4-4, Radiart 5300, SO-1, Utah 5B3950-Y2, Delco 5,040,000, 5,052,378 and Meissner EO1. \$1. . . . . . . . . . . . . . . . . . . . . . 5

## "Zip" Wize Stripper



Strips wire instantly! Fasten wire stripper to bench or other support. Adjustable stop enables wire to be stripped to any length. Pivoted blades will strip insulation clean in one operation Suitable for any wire up to 12 MM diam. Size: $2 \times 2 \times 21 /{ }^{\prime \prime}$. 75 个 C15268 Each


## STANWYCK Midget FM Coils

(A) Complete 10.7 mc IF coils and discriminators in aluminum cans fidelity Corefly engineered for best selectivity and maximum audio fidelity. Compression mica trimmers. Each trimmer paralleled by ceramic capacitors. Extremely stable high quality assembly, Can 8 sq . $17 / 8$
C10353-IF Coil. Your Cost
\$1.23
C10354-Discriminator. Your Cost
\$1.41

## CENTRALAB HI-KAP Ceramic-X Capacitors



Longer life, better performance. Extremely small and compact. Negligible temperature coefficient. Flash tested at 1000 volts DC working volts 600 .


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## Reserve Your Copy

## MAlL

 COUPON NOW!

220 Volt to 110 Volt
Line Cord Resistor


American cord equipped with standard male plug and female receptacle. European iype has foreign plug and standard receptacle. Indispensable to servicemen abraid. Can be used on shavers, tios lup to 7 tubes), and small dios rup
appliances
C5243 Standard 300 ohm for sets using . 3 armp. 11 bers, ${ }^{20}$ ma. plate supply. Tot cap. 350 ma: C5244-Same but foreign C5245-Standardi. 500 ohms for sets using . 15 amp, tubes, 50 ma . plate supply. Tot. cap. 200 ma. C5233-Same but foreign.
Your Cost Each .
$\$ 1.41$

## Genuine Mazda 6-Volt Edison Base Bulbs

Edison base light bulbs for use in 6 -volt lighting cir cuits. Inside roosted.
C12255-15W. Draws 2.5A. Either Type,


## JFD Exact Duplicate Ballast Tubes

1The following listing of ballast tubes will service repliacement ballast tubes. Each tube is an exact electrical and physical ballast tube, and will fit ight into the set without the necessity of culting pits, of choos eliminate the possibillast with reing the incorrect hat of tubes, etc


| Type | Type | Type |
| :---: | :---: | :---: |
| Type | 165 R .1 | 320 R 4 |
| 50132 | 2, 1012 | W45788 |
| 100-70 | -50R | W 16116 |
| $100-77$ | 300 R | -186892-1 |
| 100--9 | 300 R : |  |
| 165 K | 3201 |  |
| c10348-Any Above Type. Specify Type. |  |  |
| Type | Type | Typ |
| BK 12 B | BK 19C | 1555 C |
| BK.42C | BK 19D | L55B |
| BK421) | K191) | L.5ix |
| 5423 | K19H | L.5. |
| K 42 C | L 198 | 62. |
| K12D | L. 49 C | K6B |
| L42B | 55. | L6ic |
| L-12C | 13k55C | K80B |
| L12D | BKE.S | 2 K 24 |
| 13K49B | K53B |  |
| C10349 <br> Specify <br> Each. | $\begin{aligned} & \text { Any alove } \\ & \text { rype. } \end{aligned}$ |  |

## Amperice AC Voitage Regulator Tubes

 Exact units for popular sets. Stuck Amp. For Lie In 13 rem . Tully S81, \$82
C12456 11 -20 ${ }^{2}$ runs. $\$ 14$. S21
C12457 90 Majestic :M Series C12605 70 Majestic 70 Series

## Your Cost Each, <br> Any Above Type <br> $73^{4}$ C12220-Amperite No. 35000. For RCA Part M868892-9 Each.

## Variable <br> Voitaze Regulators

Designed for use ith any 110 volt to compensate for irregular line voltage These units will fit any stand-
ard 110 voli outlet. Compact neat appearing and well con structed, these roltage regulators will lengthen thite life in receivers and protect components. The majority of receivers usid torlay develop trouliles due to excess pimary voltage. l'se of these dependable regalators will insure long trouble-frec service when properly adjusted. Xraximum dissipation is listed helow. Model 211 is wound with high quality alloy wire on an insulated metal Di-el-ite Aclustable five differert Dositions A Hedel? 1113 has air positions. Naxiel which hromote covink heat discipation 1las 8 relbid hea
positions.
Stock Type Wour $\begin{array}{llll} & \text { No } & & \text { Notts } \\ \text { C12521 } & \text { Cost } \\ 211 & 65 & 80 \mathrm{c}\end{array}$ Lots of 10, Each . . . . ..... 75c C12522 211 B 150
\$1.59

## Foreign Plug Adapter

One end of the receptacle designed for stanclard 1 merican plug; other end has round type contacts to plug into foreign type socket. Made of black plastic.
C13300-
$17^{\text {¢ }}$

## BALLASTS AND

 RESISTOR CORDS

## JFD Air-Cooled Adjustable Ballast Kit

Ilandy new kit of adjustable $\Lambda \mathrm{C}-\mathrm{I}$ ( ballasts in air-
 cooled perforated metal tules, desimed to replace more than 2700 different types of ballast tuhes Contains 2 yite , fook sing complete instructions and replacement datal. Shpg, wt. 2 lbs . C6862 Your Cost
$\$ 4.41$
REEPL ACEMENT TUBES FOR ABOVEKIT C6856-Tyje ". '" Ballast 8 Prong Octal c6857-Type " 1 ", Ballast 8 Prong Octal C6858-Type "C" Ballist 4 Prong
$88^{4}$
Your Cost, Any Type....................

| $\begin{aligned} & \text { Use } \\ & \text { Type } \end{aligned}$ | To Replace Types Beginniug With | Numbers | Fnding With |
| :---: | :---: | :---: | :---: |
| A | $\overline{\mathrm{K}, \mathrm{L}}, \overline{\mathrm{I}}$ or $\overline{\mathrm{B}}$ | 10 to 42 | A,B,C,1), B , ( or I 1 |
| B | K,L, М, BK, BL or BMI | $45 \quad 50105$ | A,B,C,1), $1^{\circ},(\mathrm{F}, \mathrm{H}, \mathrm{S} 1, \mathrm{~S} 2, \mathrm{~S} 3$ |
| C | To replace most 4 -prong types such as $\mathrm{LX} 42, \mathrm{KX} 49$, KX55, $110 \mathrm{R}, 165 \mathrm{R}$ and 185 R series. |  |  |

## AMPERITE AC-DC Ballast Tubes

By using these fine regulators, tubes are kept to within 5 \% of their correct voltage. even if the line varies from 85 to 1.45 volts. Furnished complete with starting resistor that saves pilot lights and tubes. All KL types are octal base
*Asterisk indicates sjecial unit.
Any Type Below, Your Cost Each.
$73^{\text {c }}$
Type
KI- 5

| $1{ }^{10}$ |  | No. | Tvpe | No. | Typ | No, | FI |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | C12226 | $2.0 \mathrm{R}^{*}$ | C12245 | KL-4.J | C12234 | K1. |
| C12239 | 3-40 | C12227 | 320R4** | C12237 | KL-75H | C12222 | $155 B$ |
| C12238 | 4P-45 | Ci2228 | E157* | C12236 | K1-.30H | C12221 | KL.50] |
| C12224 | 165R4* | C12233 | K1.-2. | C12229 | KL-50) | C12450 | BK/5lDJ* |

$C 12224$ 4P-45' Ci2228

100-77*
Cl 2225

## Type $\mathrm{KL}-25$ <br> 

REPLACES ALL AC-DC BALLASTS


| Numbers | Ending With |
| :--- | :---: |
| 10 to 36 | A, B, C or D |
| 10 to 36 | F, G or II |
| 36 to 67 | A, B or D |
| 361067 | F G or IH |
| 6710105 | A, C or D |
| 67 to 105 | $\mathrm{~F}, \mathrm{G}$ or 11 |
| 4010100 | S 1 |
| 40 to 100 | S 2 |
| 10 to 100 | S 3 |
| 36 to 67 | E |

$\frac{\mathrm{KL}-\mathrm{joE} \quad \mathrm{K} \text { or } \mathrm{L} \quad 16 \text { to } 1067}{\text { Type 4P-45-4 Prong replaces the following types: }}$

| 140128 |  | 110 L | 1.1423 | J. 198 | LX490 | 55 C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 50132 | 1.10R21- | 16.5. | LX42C | K. 49 C | $1 \times 49 \mathrm{D}$ | LX55B |
| 50 Y 37 | 1101.4 | 165128 | L. 42 D | K. 491 | C, | 1-55C |
| 140124 | 1401.8 | 16.512 .14 |  | LX. 4913 | K K.55B | 1. X55D |

Type 3-40- $\mathbf{8}$ Prong replaces the following types:


## Combination Antenna Wire and AC Line Cord



Combination 3 -wire 115 -volt AC line cord and antenna wire. Eliminates unsightly aerial wires makes table model radios easy $t 0$ move. Special female socket wil tht sets
which have 3 -prong male plug. Used in which have 3 -prong male plug. Used in radios made by Sonora, Belmont and Admiral. Well insu
C5232-Your Cost

|STANDARD AND HEAVY DUTY 45 Volt
 Light Duty Radio " $B$ " Batteries
Binding post terminals. 5308 has insulated terminals, 4156 plain brass. All give exceptionally long service for their weight.

| Stock | Burgess | Volts | Dimensions | Shpg | Std. | Price Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | Volts | 11. W. D. | Wt | I'kg. | Std. ${ }^{\text {P/k }}$ | Si |
| C19861 | 5308 | 45 | $5^{\circ} \times 4^{3} \times 2^{4}{ }^{\text {m }}$ | 4 lbs . | 10 | \$1.50 | 51.65 |
| C19863 | 4156 | 221年 | $3 \times 3{ }^{3}{ }_{k} \times 2$ | 2 lbs. | 10 | . 91 | 00 |
| C20682 | A15 | 22 |  | 15 oz . | 6 | \$1.07 | 51.18 |
| C20683 | X30X | 45 | ${ }_{16} \times 1{ }^{3}{ }_{16} \times 11^{15}$ | 12 oz | 6 | 2.60 | 2.86 |
| C19865 | Z30NX | 45 | $\times 17 / 3 \times 1{ }^{17} 9$ | 16 oz . | 10 | 1.62 | 1.78 |

## STANDARD "C" BATTERIES

Dependable, fong life batteries especially designed for " $C$ " supply in receivers, amplifiers, etc. Also used in test equipment.
Burgess Type 2370 and 5156 are available with either knurled top bindcrew terminals. Others a vailable only with binding plugs,

| screw terminals. Others available only with binding posts. |
| :---: |
| Stock No. Burgess Volt ${ }^{\prime}$ Dimensions $\mid$ Shpg. |


| Stock N |  | BurgessNo | Volts ${ }_{\text {I }}$ Dimensions |  | $\begin{aligned} & \text { Shpg. } \\ & \text { W! } \end{aligned}$ | $\left\|\begin{array}{c} \text { Std } \\ \text { Pkg } \end{array}\right\|$ | Price Each |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Posts | So |  |  |  | Stcl.1. kg . |  | Sing |
| C19866 |  | 53 fio |  | $\times 25 / 8{ }^{13}$ |  | 1 | 10 | \$0.30 | 50.33 |
| 19867 | C19827 | 2370 |  | x $35 / 8$ | 2 | 10 | . 52 | . 57 |
| 19868 |  | 5510 | $71 / 2$ |  | 1 | $10^{-7}$ | . 63 | . 69 |
| C19862 | C19826 | 5156 | $22{ }^{1}$ | $3,8 \times 4$ |  | 10 | 1.19 | 1.31 |
| 20686 |  |  |  | $23 / 8 x^{15}$ | 21 |  | , |  |

*ITas spring clips. Tapped at $3,41 / 2,16,221 / 2 \mathrm{~V}$. +Less plug.
NOTE: Plugs for batteries above are listed at right.

## IGNITION-LANTERN-TELEPHONE BATTERIES

| Stock | Burgess | Voits | Shpg. Wt. | Size |
| :---: | :---: | :---: | :---: | :---: |
| $\mathrm{C}_{19858}$ | 4 FH | $1{ }^{1+2}$ | 11/2 lbs | 2\% $\% \times 2$ |
| ${ }_{C} \mathbf{C 1 9 8 4 6}$ | ${ }_{4}^{4 F 2 H}$ | 3 | 3 lis. |  |
| C19837 $C 19838$ | ${ }_{\text {F }}^{4} 4 \mathrm{H} 4 \mathrm{H}$ | 6 | $7 \mathrm{l} / 4 \mathrm{lbs}$ l | ${ }_{2}{ }^{5}{ }^{5} \times 2 \times 8$ |
| C19839 | 4 F 5 H | $71 / 2$ | 8 libs. | $7^{73} \times{ }^{132}$ |
| C19841 | 4F6H | 9 | $91 / 2 \mathrm{lbs}$. | $81 / 2 \times 3{ }^{31}$ |

## LITTLE NO. 6 BATTERY

Type 4 FI $-11 / 2$ volts. Utility


Either Above
Each.
$6^{1 / 24}$
C20623-Penlite cell. $2 x^{37} / 4$. Your Cost, Each 5

## PERSONAL RADIO "A" BATTERY

Type No. 2R. Not an ordinary flashlight cell Designed and constructed especially for use in personal radio " $A$ " service. Will outlast regular flashlight cells when used in continuous duy service. Same size and weight as No. 2 cells listed above.



[1]

(D)

## GE "One-Day" <br> 6-Volt Charger

## Eliminator

A Designed to replace " A " and batteries in portable and farm set so that they may be used in the home directly from the house current. Provides completely filtered and humfree reception. Excellent for modernizing all battery receivers using from 4 to 7 tery receiverstes from 110 volt, 60 cycle a c. lines. Contain no liquids and can be used in any any position. As easy to install as batteries. I niversal sockets for all types of battery plugs. Uses no tubes. Supplies " $A$ " and " $B$ " power for farm or portable sets using 4,5 or 6 tuhes. Delivers $1.5 \mathrm{~V}^{\prime \prime}$ " $A$ " and 90 V . " $\mathrm{B}^{\prime \prime}$ voltage. Size
Shpg wt. 5 lbs.
C15708-

## Cost

\$9.85
Same as above but uses tube recSame
C15704
Your Cost
\$8.82

## STANCOR Model 752

## Power Pack

(B) Provides well filtered 6 volt DC, 12.5 amp. supply for automobile radio servicing or sales demonstration, effectively operates push button tuning auto sets, for industrial and laljoratory testink. All controls, knobs, voltfroter and terminalso be used for battery charging, nagnetic field exciting and electroplating. Operates on 110 volts, 60 cycle.
C17240-

## lodern design, compact con-

 ruct:on for farm and home use. Selenium rectifier type giving highly efficient and extrenely quiet operation. Delivers 7 to 4 amperes tapering charge Equipped with durable AC cord. DC leads with battery clips, and pilot light to indicate operation Capacity 3 cells. Dimensions ${ }^{71} 10$ cycle. Shpg. wt. 7 lbs. Your Cost ..... \$10.99 Lots of 6, ea.
## GE "Overnite"

## 6-Volt Charger <br>  (C) For car, truck and tractor

 Day" model but for use where higher charging rate is required. Delivers 12 to 7 amperes tapering charge, will charge the average discharged battery in 12 hours or less. Dimensions $71 / 1 \times 5 \times 6^{\circ}$. Shpg. ${ }^{w t .} 8$ lbs Lots of 6 , Co
## 5-Amp. Tungar Charger

(D) Mordel 6RB26A1 for charglivers 5 any 6 -volt battery. Debattery charges, preventing damage to cells due to overcharging. Has receptacle for attaching to car and ammeter so that battery can be charged without removing it from car. With tube and all accessories. For 110 v., 60 cyc . A.C.
Shpg. we., 13 lbs
C15699-.,
Your Cost....

(C)
(ㄷ)


## Model 6AC6

## 6-Volt Charger

(E) Delivers 6 to 4 amperes tadisc rectitifier. Has circuit breaker and large meter indicating rale of charge. $6 \times 8 \times 14^{1}$. With $A C$ cord, DC cord and receptacle for dash mounting. $115 v .50 / 60$ cycle AC operation. Shpr
C15698- wour Cost. . . . $\$ 10$

Model 6AC10

## 6-Volt Charger

10 to 7 ampere charging rate which will completely charge a battery overnight. Employs a dry-hisc rectien arger meter circuit breaker and provicion for horough 6 ft DC cord and re AC cord, 6 . DC cord and re ceptacle for dash mounting. Size: $63 / 4 \times 103 / 453 / 4^{\prime \prime}$. 115 V. $50 / 60$cycle AC. SIıpg. wt. 12 lbs. cycle AC. Slipg. wt.
C15700
Your Cost......

## Model 12AC5

 12-Volt Charger(E)Heavy duty charger for 12 volt batteries as used in aircraft, trucks, boats, buses, etc. Charging rate 5 to 3 amperes. Employs dry-disc rectifier, meter. circuit breaker, and provisions for thorough ventilation. Complete with AC cord, I)C cord and receptacle for dash mounting. Size: $6^{3} \times 10^{3} 4 \times 5 \% 4^{3}$. Shjgg wt., 12 Ihs. C17217-
$\$ 18.26$

TUNGAR Bulbs
(F) Used in battery chargers. A eliminators, etc. Can replace Rectigon bulbs of equal rating. 2 lbs .
ype GE No. Rating Each C21900 A 289881.6 Amp. $\$ 2.94$ C21901 B $12 \times 8252$ Amps. 2.94 C21902 C 2065012 Amps. 2.94 C21904 B 20 X 6725 Amps. 3.67 C21903 1$) 189(4496$ Amps. 3.67 C 21911 D 21728315 Amps. 7.35

## Tungar-Type Bulbs

(B) -2 amp., less tip.

C21907 Yur Cost ... $\$ 2.25$
(C) ${ }^{2}$ amp., with tip.
(D) 6 amp .
(D) is amp.
C2190
Your
Cost
$\$ 2.55$
(D) 15 amp. $\mathbf{C 2 1 9 0 9 - Y \text { Yost }}$. . . . $\$ 4.50$ C21910 -Your Cost . . . . $\$ 11.25$ 6-Volt Battery Booster (G) Type 6AC4 Drydisc rectifier charge. Ilas external circuit breaker with quick front reset. Perforated for thorough ventilation. With $6-\mathrm{ft}$. cord for light socket and a $4-\mathrm{fi}$. cord with clamp on receptacle for dash mounting Dimen.: $41 / 2 \times 71 / 2 \times 31 / 2$ deep. Finished in black wrinkle. For 115 volts, $50 / 60$ cycle a.c.



## RGA BATHABES

RCA batteries are the preferred type and are heing used more and more where dependable service is required. All standard size batteries are manufactured to fit every sort of application. Thouph small in size they are extremely rugged in construction and will give many extra hours of service. Nlade in modern factories with high precision equipment these batteries all meet exacting specifications. All plug-in type except 'S001 standard flashlight cell and YS016 which has snap terminals. $\checkmark$ Sool standard lashight portable "A" Batteries


(H) leavy chromium barrel twohead prevents accidents, beveled plate lens concentrates light, resists breaking. Heavy brass reflector. Three position on-off switch thumb poperated rangeswitch, thumb operated rangeBurgess No 2 flashlight batteries. Less batteries. $\$$

## MICRO-LITE

## Miniature Flashlights

(J) Model 502 C has burnished plossy black or flame red bands. Comes with key chain attached. Push button switch. Uses one penlite cell and GE No. 112 lamp.

## C20560

Each
Lots of 12
$40^{9}$

$$
\text { Model } 50
$$

$$
\ldots .
$$

without key chain. $3 \mathbf{3}$ C20561-Each
$\$ 3.60$
(K) Model 201 K combines mini-
(B) ature Micro-lite decorated in attractive enameled colors, on solid brass. With leather key case. I'ush-button switch.
c20562-Each Lots of 12

(1)

BURGESS TW2 Lantern (L) Handy, powerful light for the Thro s clear beam for quarter of mile. Focusing type polished reflector, easy to operate thumb switch. Compact and light weight Uses one Burgess 4F211, 3-volt bat terv. Iess battery. $\$ 1,9$
C20579-Your Cost

## BURGESS Flashlight

(M) Modernstyled, seamless brass flasher position. Long range spot beam pre-focused lamp, uses two Burgess No. 2 flashlight cells. .ess batteries.
C20580-
Coser Cost
$\$ 1.06$
Baby tubular is smaller in size, Saby tubular is smalier switch does not have flasiler switch mosilion. Otherwise same as bove. Uses two Burgess No. lashlight cells. Less batieries
Cour Cost. . . . . . . . . . .

## BURGESS Penlight

(N) Sturdy rich maroon and chrome metal case with pock et clip and lock-on switch. Uses wo Burgess No. Z penlight bat-
eries. Less batteries. teries. Less batteries. 5 ©
C20582 YourCost..

# TUBEANDSET TESTERS 

## WESTON Model 798 Mutual

 Conductance Tube Checker and Analyzer (A) Good-Bad or Mut ual Conductance reading for all type receiving tubes. Volt-Ohmmeter-Milliammeter section with most commonly used ranges for trouble-shooting. $0-7.5 / 150$, Ohms $0-100,000 / 1,000,0,00$. 1,000 ohms per volt sensitivity on all AC and IDC operations. $3 \%$ accuracy on I)C and $5 \%$ on and DC operations. Wrinkle finished case with test-lead and tool compartnient at left. Detachable hinged cover. Internal battery furnished for ohmmeter operation. Complete with Test Leads. For $105-125$ volts,60 cycles. Size: $17^{3} \times 113 / 8 \times 61 / 8^{*}$. Shpg. wt. 251 bs.
C 21646 . C21646-
s204.05

## SIMPSON Model 330 Tube Tester

(B) For testing tubes in terms of percentage of rated dynamic mutual conductance. 41 " meter with colored dial indicates good, fair, bad and doubtful. Sockets provided for all types of tubes. Ten push button and nine rotating switches provide intinite combinations in tube element and circuit selection. Tube chart for quickly identifying tubes and setting controls. Reset button returns all controls to normal position after use. Size: $151 \times 914 \mathrm{x}$ 61 Shpg. wt. 161 ibs
C21714-Your Cost.
$\$ 96.53$

## Model 330RCP

## C21719

Your Cost
${ }^{5} 110.25$

## Model 305

(C) Emission type tester with 3 way switches makes it poesible to test any type tutse regardless of base or internal connections. Neon short tester. Line control from 100 to 130 volts. Size: $8 \times 10 \frac{3}{4} \times 5^{1}$ C21711-Your Cost

$$
-T
$$

Mo

Model 305RCP
Same as above but with built-in roll chart. \$58. 5.31.
C21708-Your Cost .....................


(E)

## GENERAL ELECTRIC Model YTW-1

 <br> \section*{Tube Checker <br> \section*{Tube Checker <br> (D) Tests all receiving type tubes on emission principle} Extreme flexibility achieved through the use of element switches, allowing each element in a tube under test to be individually and independently connected to either side of the filament supply, high or low side of 13 supply or disconnected entirely from all circuits. High supped or chart placed bencath switches to indicate autoinatically correct position of each. I esigned to expose immediately a tube with an open filament without usual warm-up "Reriod. Protected by fuse on front panel. 415" meter with ohms per , oubtiful and Good sections in color. 1000 volts. Modern, attractive witee] ranges of $0-10100 / 1100$ wrinkle linish. Size: $17^{3} \times 12^{1 /}$. Sase surfaced in grey use on $105-130$ volts, $50 / 60$ cycles.C21581- Your Cost
\$59.50

## EMC Mutual Conductance Tube Tester

 Checks mutual conductance of all tubes from .75 to 117 filament volis on a calibrated Micromho scale, as well as on a "Reject-Good" scale. Detects both shorted and open elements, checks for gas content. Complete switching flexibility allows all present and future tubes to be tested regardless of location of elements on tube base. Tests for radio frequency in multi-purpose tubes. Tests for radio frequency and other noises. Individual sockets for each tube base type eliminate possible errors. Attractive four-color panel and large easy-to-read 3 . meter.(E) Model 200AC

In Sloping counter case. $12 \times 11^{1} \times 5^{\circ}$. C21582-
Your Cost.
48.51

## (E) Model 200AP

In hand-rubbed carrying case with compartment for storaye of leads, etc. $121 / 2 \times 15 \times 5 \frac{1}{2}{ }^{\circ}$. Shys. wt. 18 lbs . Your Cost.
$\$ 5247$

## SUPREME Model 504B Tube and Set Tester

(C) Small compact unit combining functions of tube tester, multimeter, condenser checker and battery conclition tester. Checks all tubes including loktals, octals, miniatures, pilot lites, television video amplifier tubes. New tube data supplied by Mfr. for one year at no extra charge. Rotary tube chart and ArrowWay indicator system. Rheostat line adjustment. Section checks may be made on multi-section tubes. Large $4^{\prime \prime}$ meter with GoodBad reading in addition to other ranges. Push-button selector system. Measures DC volts 0 to 2500 volts in 7 ranges at 1000 ohms per volt. AC volts in 5 ranges rom 0 to 1000 volts. DC current ranges of $0-500$ micro amp. $0-2.5 / 10 / 50 / 250 \mathrm{ma}$. and $0-1-10$ amps. Lowest reading 10 microamperes. Output volts measured in 5 ranges 0 to 1000 volts. No external conderser necessary. Ohmmeter with 5 ranges of 0-200/2000/20,000 ohms and $0-2 / 20$ megs. Lowest reading . 1 ohm. Condenser tester covers electrolytics and papers including high voltage filters and low voltage high capacity bypass condensers. Checks under normal working voltages. Battery tests provide proper load for musi comnionly used A and 13 batteries. Condition of battery is read of English Scale. For use on $100-133$ volts, $50 / 60$ cycles.


SUPREME Model 599A Tube and

## Set Tester

(D) Emission type tube checker with patented Double Filament return selector system which is your guard against obsolescence. New tube data supplied by mfr. at no extra cost. Roller chart, Arrow-Way indication system. Ranges: $0-6 / 15 / 150 / 600 / 1500$ volts DC at 1000 ohms/volt., $0 / 15 / 150 / 600$ volts AC, $0-6 / 60 / 600 \mathrm{Milliamperes}$. Output voits 0 to 600 volts. Resistance to 20 megs. in 4 ranges. Paper condenser checks on high resistance range. Dry-battery check. 1.5/4.5/6/45/90 volts under load. Portable model. $111 / 8 \times 87 / 8 \times 53 / 8^{\circ}$. Shpg. wt. 12 lbs C21754
s 61.25
Model 589A Tube and Battery Tester Same as Model 599A but less set testing features. Shpg.
wt. 10 lhs . wt. 21753 -Your Cost.
$\$ 4797$


## HICKOK Model 534 Tube and Set Tester

(A) All purpose mulual conductance tule tester and set (A) tester. Tests all receiving type tubes under actual oprating conditions, Voltage rankes $0-20)$, $2(k) 5(\%) \cdot 1000$ 5000 volts AC and 1 CC . 20 , (ux) ohms per rolt sensitivity INC, 1100 ohm per volt AC. Resistance from 0.1 ohms to 10) megs in 3 ranges. No batteries needed. Capacitance checks from 000110100 mid . hecks leakage of electroSytic, and paper condensers. Inductance checks 10100 scale For 110 volts, 60 cycles. Size: $17 \times 18 \times 8,2^{*}$. Shpg. M1. 35 is2
Your Cost
Model 532P c . 138.30 C21454. C21454 Your Cost
\$121.20

## HICKOK Model 538

## All Purpose Tube and Set Tester

Similar to Modiel 53.4 hut with additional features, accuracy, dependabiliny of particular interest to the exacting technician and lithoratory engineer. Fspecially valu-
able for use at electronic installations where equipment and human safety depend on positive, accurate, operation. C21586
$\$ 215.76$
RCP Model 802N Tube and Set Tester (B) A compact service shop ready to take out on the joth. 415 meter with large (rood-Bad-Doubtiful section for tube testing. Clear, easily read figures for ser testing. Portable batiery rest. Tests paper, mica and electrolytic capacitors for leakage. Ranges: $0-10 / 50$ S(K) $10(10$ volis DC or AC at 1000 ohms per voli. IDC milliameter 0 ! 10 / 100,1010 ma., 010 amperes. Onmmeter $0.500,000$, 109,010 ohms, 10 megohms. $100,0 x$ ohm range battery
 some hand-rubbed hardwood carrying cate with compartment and self latching cover, hattery and test leads. Size: $13 \times 9^{1} \times \mathrm{x}^{\circ}$. Shpg. wt. 15 lbs . for $100-130$ volts, $50 / 60$ cycles. Your Cost
\$58.31

## Rolindex Tube Chart Model 103

Tube testing data at a glance Designed to fit snugly in tool compariments of RCP Noodele $322,322 \mathrm{P}$ and 81)2N. Crackle !inish steel case. $3 \times 8 \times 22_{4}^{3 / 4}$. Shyp, ${ }^{\text {wit. }} 4$ 1bs.
C21588
Your Cost

## TRIPLETT Model 3413 Tube Tester

## (C)

Multi-purpose test circuit provides for emission test, comparist and open element test and transconductance tubes. gascous rectifiers. ballasis and pilot lamps. Neon short indicator. Meter indicates whether tubes are Good, Bad or Moubtul. Built-in roll chart. For 110 volts, 60 cy . Size: $10 \mathrm{x} 10 \times 5 \frac{3^{\circ}}{}$. Shpg wt. 12 lbs.

## C21603-

## Your Cost

## (E) Counter

## Your Cost

$\$ 53.65$
$\$ 62.23$

## JACKSON 637 Dynamic Tube Tester

(-) Combination quibe tester and multimeter. Tests all receiving and television amplifier tules and has 1 wo
spare socket prositions, spare switch positions and circuits for use if new tubes are sinmounced. It ynamic" method tinds poor tules which might other wise indicate good. High plate voltages usid for accurate resulis. All readings direct on Goud llad seale. Jacks provided for audible noise tests. Includes ballast-tule and neon con tinuity testers. Push buttons select ranges with minimum of test prod relocating. DC and AC voltmeter ranges cover 02500 volts in 6 tanges with 1 ,(00) ohm volt sensitivity. DB's fiom -10 to +54 in 3 ranges. 1 milliamineter, 0.110 10, 250 . In ammeter, 0.10. Ohmmeter, 0.30 meg in 3 ranges. Commlete with test prods id. Dimensions $143_{4} \times 13 \% 3^{2} \times 6^{\circ}$. Shpg. wt. $1 / 4 \mathrm{Ibs}$. C21601Your Cost
s87. 71

## RCP "Dynoptimum" Tube Tester

## (G)

Model 322. Easy to operate. Exclusive "Dynopti curate checking of wide variety of old or new tubes, inclucling the new niniature and sub-miniature receiving typls lrovisions for checking individual stections of multi purpose tubcs. Jack provided for headphone tests of tube nois. Neon lamp for quick tests of shorts and cakage between elenenis. Operates on 32 is opent, 50 to ci cycle AC power supply. Model 322 is open face, in
black crackle steel cabinet with sloping panel. $0_{4} \times 121,4 \mathrm{x}$ $\frac{b l a c k ~ c r a c k l e ~ s t e e t ~ c a ~}{7}$

## C21599- <br> Your Cost

\$37.19
Moriel 322 F in steel carrying case with detachable cover. Shpg, wt. 13 lbs .
Yotir Cost


## R.C.A. RIDER Chanalyst

(A) Permits systematic methorl of analycis on any type radio receiver. Any point tested wilhout interrupting operation of recejver. various conditions can be determined at tube elvments while signal is present. Checks mined at tube elements while signal oprating and control presence or athsence of signal, operating operation of various types of filter circuits checked at radio, intermediate and audio frequencies. check at radio, intermediate and aurio frequencies.
I ocates failures in minutes instead of hours and solves the 1.ocates failures in minutes instead of hours ancl solles the
(A) problem of intermitents quickly and more positively oscillating AF stages and finds sources of noise. Complete with test leads prods and complement of 12 tube Ciray crackle finish, steel case with carrying handles. 9xlox $103_{4}{ }^{*}$. Shpg. wt. 28 lbs.
C21666-
$\$ 162.50$

## JACKSON Model 655 Audio Oscillator

(Not illustrated.) Provides both AF for radio and sound lork, and supersonic for bactericides, homogenizers, sonar, etc. 20-200),006 cps in $f$ ranges, accurate to $3{ }^{\circ}$ Permanently locked calibration of the R-C tuned circuit, no zero adjust. necessary. Fundamentals only, no har monics. Transformer-coubled or resistive outputs, im pedances $10,250 / 500,5000$ ohms or "]ligh." Outpui continuously variable. Output power with transformer coupling from 20 to $20,000 \mathrm{cps}$ is 12 watt. Flat response curve, $\pm 1 \mathrm{db}$ from 30 to $15,000 \mathrm{cps}$ with transformer coupling. less than $5 \%$ waveform distortion from 30 to $15,100 \mathrm{cps}$. 11 um down 60 db from maximum. Stable, larye line-voliare changes do not atfíci frequency, wavelarge line-voltage changes with its 5 tubes instailed. $13 \times 91,99$. Shpg. wt. 30 lbs.
c21602-
Your Cost

## MEISSNER Analyst

(B) New, Improved Most modern complete servicing instrument on the market. Locates faults by signal tracing method. Five separate channels, all of which may be operated at the same time. 4 range electronic voltmeter, wide ringe audio test channel, oscillator troublesheroter channel. $95-1700 \mathrm{KC}$ RF-IF test channel and line current indicator channel Controls accurately calibrated lipmed and laboratory tested. Complete with 12 brated ligned and laboratory tested. Complete with 12 ubss and ready for service. 110 volt, (io cycle. Includes test calples, prods and
101,2 . Shpg. wi. 35 lbs .

## C21706-

Your Cost
\$111.57

## Analyst Manual

Contains a general discussion of the Analyst and its capabilities; schematic circuit; instructions on servicing any receiver.

## C19994

$25^{4}$

## HICKOK 156 Indicating Traceometer

C Permit operator to rapidly trace signal through receiver from antenna to speaker. Operaton of RF, mix-er, local oscillator, 1F, detector, discriminator. limiter, AF and power supply can be checked simulianeously and without changiny can be cherate meters for cacho five channels. Built-in speaker for monitoring of IF, RF, or $\Lambda F$ channels. Vacuum tuhe volimeters cannot be damaged by overloads. Waltmeter permits measurements of power consumption from 0 through 150 wat is. No test leads necessary. For operation on $105-125$ volts, $50 / 70$ cycles. $14 \times 16,2 \times 11^{\prime \prime}$. Shipg. wt. 32 lbs.
C21590-
Your Cost
\$160.20

# ELECTRONIG MULITIESTERS 



RCA VoltOhmyst Model 195-A
(A) High values of resistance can be measured, constant protection against meter burn-out. Ranges: $0-5 / 10 / 50$ $00 / 500 / 1000 \mathrm{DC}$ volts at input impedance of 10 megs. $05 / 10 / 50 / 100 / 500 / 1000 \mathrm{AC}$ volts on a linear scale; $0-1000$ /10,000/100,000 ohms/1 meg./ 10 megs./ 1000 megs. by using internal source of 3 volts, as an AF voltmeter has frequency response from 30 cycles to 100 KC . Input impedance 200 M ohms plus 170 mmid . $0-5 / 10 / 50 / 100$ volis. -20 to +62 db . readings equivalent to volume units for a reference level of 1 milliwatt across 600 ohm line. FM alignment indicator with plus or minus meter reading. New style easily read meter face. Shpg, wt 14 lbs.
$\$ 79.50$

## RCA Crystal Probe

(B) Designed for converting the DC circuit of any VoltOhmyst to read AC so that voltages up to a frequency of 10) megacycles are indicated directly on the DC scale.

## SUPREME Model 565 V. T. Voltmeter

(C) A balanced highly degenerative bridge circuit. Negligible frequency error from 50 cycles to 100 megacycles. AII ranges selected by push buttons. Zero adjustment control. Wour-inch full-vision type meter. Fuse AC volts $0-1 / 25 / 10 / 50 / 250$. megohms on 1 volt range, 40 megohms on 500 -volt range; AC- 10 megohms on 1 -volt range, 20 megohms on 2.00 Act range. Audio frequency voltages up to $20,0(0)$ cycles may be measured. The input capacity of the probe is 5 MMFDS. Attractive metal case with a hinged cover.


## TRIPLETT Model 2450 Analyzer

(D) Electronic Volt-Ohm-Milliammeter. Long scale $6^{*}$ meter with three color markings. Full line voltage compensation. 51 megohms impedance on DC. Low frequencies loading er,ual to 8 megohms, 35 mmf . High frequency loading equal to 8 megolims, 5 mmf . Detachable probe furnished. Ranges: AC and DC volts; $0-2.5$ 10/50/250/500/1000; I) ${ }^{\circ}$ milliamperes $0.1 / 1 / 10 / 50$ 250/1000; Ohms $0-1000$ (midscale 10 )/10,000/100), (0) 10 , Megohms 0-1/10/100/1000; Capacity in MFD; (). On5] $.05 / 5 / 5 / 50$. Two voltage regulator tubes. Netal case finished in brown hammered enamel. Brown leather strap handle, nickel plated hardware and rubber feet. $10 \times 10 \mathrm{x}$ $5^{8,4}$. Shp Your Cost
\$97.51

## ELECTRONIC DESIGNS <br> <br> V-T Volt Ohmmeter

 <br> <br> V-T Volt Ohmmeter}(H) The Model 100 . Extreme care in the matchine and choice of component parts has resulted in a high quality test instrument. DC Ranges: $0-3 / 10 / 30 / 100) 300 / 1010$ volts. All ranges have a constant input resistance of $11,000,000$ ohms. Accuracy $3 \% \pm$. AC Tanges: $0-10$ / $30 / 100 / 300 / 1000$ volts. $1,000 \mathrm{ohms}$ per volt sensitivity with accuracy of $5 \% \pm$. Eectronic Ohmmeter Ranges: $0-1000 / 10,000 / 100,060$ ohms; 1 meg $/ 10$ megs ${ }^{1} 11600$ megs. This extremely neat meter is complete with signal tracer prove, two test leads and hatteries. $9^{\prime \prime}$ "ximx $43^{\prime \prime}$. Shpg C21710- Your Cost EDIPROBE for use with Model ion oz-50 C21703-

## SILVER "VOMAX"

(J) True vacuum tube voltmeter. Complete measurements and visual stgnal tracing can be done on all AF, of 20 cycles through over 100 NIC, by withdiawable $R F$ cliode probe and test leads. Ranges: with zero adj. 0-3 12/30/120/300/1200 VDC at 51 megohms and 0.7 .5 $30 / 75 / 300 / 750 / 3000$ VIDC at 126 megohms, $0.3 / 12 / 30$ $120 / 3(0) / 12(0) \mathrm{VAC}$ at 6 E megohms and 8 mmid., 0.2 $2 \mathrm{~K} / 20 \mathrm{~K}$, 200 K ohms and $2 / 20 / 2(150 \mathrm{me}$ gohms, $0-1.2 /$ $30 / 120 / 300 / 1200 \mathrm{MI}$ and 12 amps. IX , and -10 to $+10+30 /+501313$. Polarity reverse switch on front paned separate ohms zero adj. Five non-confusing scales on $4^{3}$ neter face, meter fully protected from overloads. $115 \vee 50 / 60$ cycle operation. Size. $123 / 4 \times 7^{3} 5^{\circ} \times 5^{\prime \prime}$. Shpe C21540-Your Cost
$\$ 59.85$


## HICKOK Model 203 Electronic Multitester

(E) Compact universal test instrument for AC-DC volts, Ohms, DC milliamperes, Capacity and Inductance. Ideal for alignment of FM and relevision receivers. Circuit prevents damage to meter. Voltage regulated power supply. Ranges: Volts AC or DC $0-3 / 12 / 30 / 120$ / 300/1200, Mils (dc) $0-3 / 12 / 30 / 120 / 300 / 1200$, Caracity $0-100,000 \mathrm{mmf}$ in 2 ranges, $0-1000$ in 5 ranges fiduc tance 50 mh .-100 henries and Ohms 1 ohm-10,000 megohms in 7 ranges. AC to approx. 5 megacycles may 12 measured. Input impedance 15 megohins on DC 12 megohms on AC. For $105-125$ v., $50 / 70$ cycles $9 \times 111 / \frac{1}{2} \times$ lacouer case. C24453-Your Cost
$\$ 84.60$

## HICKOK Model 214 Volt-Ohmmeter

(F) Compact, self-contained, battery operated electronic volt-ohmmeter. No warm-up. Always ready for mstant use Time switch automatically shuts off battery at end of 4 minutes. May be shut off manually. AC and IDC voltage measurements from 0 to 1200 in 6 ranges. 15 megolim constant impedance. ( 10 mmf . on AC.) Resistance from 0 to 1000 ohms in six ranges. Meter electronically protecterl against burn-out. Clear, easily read meter scales. $8^{1} \times 6 \times 44^{\circ}$ Shpg. wt. 9 1bs. Finished in lammertex blue lacquer. With batteries. $\mathbf{4} 21565.40$

## PRECISION EV-10MCP

## - Multi-Range Tester

G) $81 / 2^{\circ}$ meter and a voltage regulated power supply anges: eight zero-center vacuum-tube volt-meter ranges $0 / 3 / 6 / 12 / 60 / 300 / 600 / 1200 / 6000$ volts at 13 to 133 meg. input resistance; six circuit probing zero-center ranges, sensitivity as above, using coaxial cable for measurement in AVC. AFC, FM and television circuits $0 / 3 / 6 / 12 / 60 / 300 / 600$ volts; resistance $0 / 2010 / 200,000$ ohms and 0/2/20/200/2000 megohms; eight A.C. and D.C. voltage ranges at 1000 olims/volt to $6 \times 100$ volts ).C. current $0 / 600$ microamps., $0 / 3 / 12 / 60 / 300 / 1200 \mathrm{ma}$. $0 / 12$ amperes; output ranges from -26 to +70 db Shpg. wt. 20 lbs
C21765 Model EV-10MCP in black
with handle. $12 \times 10{ }_{2}^{2} \times 6^{\circ}$
Your Cost
Model EV-10P, as above, in hardw $=10$ C21766.
as above, in hardwood
porta Each.
RF-10 PROBE: for Precision EV-10 FO1of R.F. and U.H.F voltages. With 955 acorn tube

## WESTON Model 769 Analyzer

One instrument providing a conventionally Volt OhmAiliameter with self-contained power source, a high impedance electronic Volt-Ohmmeter using 115 volt, 60 -cycle power and a stable, probe type vacuum tube voltmeter for use up to 300 Megacycles. When used as a standard analyzer, there are available six $10,000 \mathrm{ohm} /$ volt IC ranges to 1200 volts, six 1000 ohms/volt recitfier type AC voltage ranges to 1200 volts, three ohmmeter ranges to $200,(000$ ohms and six DC current ranges to 600 MA-all without use of external power. Usines 115 volt, 60 cycle power. it is a 15 megohms input resistance electronic DC volt-ohmmeter with ohmmeter ranges extended to 20010 megohms. As an AC vacuum tube vitmeter with ranges of 3 to 120 volis, frequency coverave extends from fo cycles to 300 megacycles is completely isolated from any IX inlluences. All tubes including RF diode are standard commercial types. Input resistance is 5 megohms, 5 mmfd . Special I)C probe. In hardivood


## RCP Electric Multitester Model 668

(K) A portable, highly accurate instrument. Matched resistors. Capacity meter reads directly in microfarads. Entire instrument thoroughly shielded. AC and DC vacuum tube voltmeter direct reading with input impedance of 16 and $16 i 0$ megohms. (00005 mfd. $03 / 6,{ }^{\prime} 30 / 150 / 600 /$ $1,00 / 6000$ volts. Signal and output voltages from 10 c.p.s. to 10,000 c.p.s. Ohms from 1 ohm to 1000 megohms. 0000.$)$ to 2000 mid on direct reading meter. Ready to



ANALYZERS MULITIESTERS

## TRIPLETT Model 2405

## PRECISION Model 832S

(A) This compact 31 range tester measuring only " $\times 4{ }^{1}{ }^{2} \times 3^{\prime \prime}$ and utilizing a $3^{\prime \prime}$ square 8100 microampere meter has the following cales: D.C. vollage ranges at 1000 ohms per volt; (L-6, $0-30,0150,0.300,0600$, $0-1200$. A.C. volt ranges at 500 ohms per volt: 012 , 0 (6). $0-300,0-600,0-1,(4), 0) 21(1), 1) C$. current: $0-1.2$, 0 12. $0-120$, 0 -ti00 milliamperes. Resistance ranges: 0.5000 ohms, $0.500,(00)$ ohms, and up to 5 megs. by ising an external battery. leecibels: -10 to + to. Output ranges: $0-12-60-300-600-1206)-2100$ volts. Furnished in a


## PRECISION Model 844P

(B) Single rotary master range selector Large $4 \%^{\circ}$ rectankular meter. Ranges: Ac and IX volts 0-12/60/ $0.1212160,3001200$ and $0-12$ anmss: $0,400 / 100.000$
 ohms and $0-1 / 10$ megs. Decibel ranges from -12 to +70 ; Case with cover H.V., test leads and batteries. case with cover. 9 ibs.
9x10x $6^{\circ}$ Shps. wit. 91656 Your Cost. ................. $\$ 5.13$

## WESTON Model 779-1 Analyzer

 (C) 10C voltage ranges at a sensitivity of either 1000 or 20,000 ohms volt. Precision resistors used. Ranges: AC and DC volts. $0-2.5 / 10 / 50 / 250$ 1000; DC current $0.1 /$ $1 / 1050250$ milliamperes, $0-1 / 10$ amps.; $0-3000 /$ $30.000 / 300,000$ ohms and $0-30$ megohms; 1 cibe's -14 to +51 Solid oak case. $6,8 \times 918 \times 478^{\circ}$.
## C21647-

s89.25
CHICAGO INDUSTRIAL Model 458 D)

## ilitate rectangular meter set at 45 degree angle to

 facilate reading. $1(X X)$ ohms per volt all 1$)$ C ranges. 125 volts, $05,10,50,1(00,500 / 2000$. AC volts, $0-12.5 / 25 /$ 125250,1250 . IC milliamps, $0-1,10 / 1(10$. AC milliamps,$0-2,5 / 25,250$. Ohms full scale $10 \times 0 / 200,000 / 2,0 \times 0,000$. Output -5 to -55 db . Enclosed standard $22^{1} 2^{2}$-volt Rattery supplies test current. Furnished with tesi leads and battery. Specially treated aluminum instrument and battery. Specially treated aluninnm instrument panel is nounted on a welded steel case, rubished feet harmonizing brown wrinkle, equipped with rubber fect
and collapsible handle for portability. 10 , $6 \times 6:$ a $x 5$, and collapsible
Shpg. wt. 8 lbs.

## c21567 Your Cost

s25.48

## SUPREME Model 567 Speed Set Tester

 J) Deluxe Portable set tester. J'ush button operated Direct current measurements o to 100 microamperes, 1 to 500 ma . and 1 to 50 amps . in 9 ranges. Ac current in 3 ranges: 0 to :. amps. Total of 14 Ix voltage ranges, 7 each at 1 (k) and 20 ,000 ohms per volt to cover $0-5 / \sim 5$ ) 100,250/500/1000/5000 volts. AC voltage ranges: $0-5 \quad 25,100250)^{\prime} 500,1000 \cdot 5000$ volts at $1(060$ ohms per volt, with same ranges for output measurements. No external capacitor required. Calibrated for 500 ohms lime when working with I)13 measurements. 5 rankes -10 to +49 db. 7 resistance ranges. Low ohms: two ranges of meg. 50 meg . Ail ranges operated on self-contained batteries. Sturdy steel carrving case $91, \times 9^{1}, \times 5^{3}$. Shpg. wt. 14 lbs
## C21570-Your Cost

s62.13

## RCP Model 447P Multi-Tester

(K) 1000 ohms volt. DC voles $0-5 / 50 / 2=0 / 500 / 2500$ ) DC Ma. $01,10,1(00 / 10 \times 0$. DC amps. 0-1, 10. AC volts $0-10 / 10 \%$, $5(1010$. Ohms $0-5(1) / 100 \mathrm{M} / 1 \mathrm{Meg}$ DB -8 to +55 . Output ranges same as Ac wolts. Size. 5 lhs. In hardwood case with compartment and Shpg. Wt. 5 lhs . In hardwood case with compart ment and
cover. Test leads and battery supplied.
C21721-Your Cost...................

## Model 447

Same as above but in open face hardwood case.
C21722

## RCP Model 461AP Multi-Tester

 20,000 ohms per volt sensitivity on all DC measurements. AC sensitivity 1 (M) ohms per volt. AC \& DC volimeter with ranges of $0 / 2.5 / 10 / 50 / 250 / 1000 / 5000$ volts each. $0-10 / 100 / 500$ IDC milliamperes, microamperes. Ohmmeter has ranges of $0-2000 / 2(0), 000 /$ ohms and (0) 20 megohms. Decibel meter with readings from -10 to +55 db . In attractive natural grain hardwood case. self latching cover and compartment for test leads. With lest leads and self-contained batteries. $8 \times 7^{1} \times 4^{1 / 8}{ }^{\prime \prime}$. Shpg. w1. 6 lbs. (Not illust rated.) C21571Your Cost
$\$ 42.63$


(A) C21779-Your Cost Shpe. wt. 11 lbs
C21568-Your Cost C21569
Your Cost
 illustrated.) C21705-Your Cost.
(E) 5.6" scale for greater accuracy. 0 10/50/250/500/ 1000 volts AC and DC 25,000 ohms/volt on DC, 1000 ohms $/$ volt on AC . $0-.5 / 1 / 5 / 10 \mathrm{AC}$ amps., $0-10 \mathrm{DC}$ ohms $/$ vole on AC. $0-.5 / 1 / 5 / 10$ AC amps., 0 . 0 . $1 / 10 / 50 / 250$ DC ma., $0-50$ microamperes. $0 \mathrm{mps}, 0 / 40,000 / 5 \mathrm{ohms}=0-4 / 40 \mathrm{megohms}$ on self-contained $0-4000 / 40,000$ ohms $=0-4 / 40$ megoh ms on sell contained batteries. Condenser in series with AC volts ranges. Db ranges from -10 to +55 db . Capacity check of paper condensers. In portable, metal case with detachable cover. $10 \times 10 \times 53$ Shpg. wt. 13 lbs.
c21482-Your cost..................... 5 . 51.

## TRIPLETT Model 625NA

(F) Multi-range, dual sensitivity Large $6^{\circ}$ meter with mirrored scale. Ranges: DC vol ts $0-1.25 / 5 / 25 / 125 / 500 /$ 2500 at $2.0,000$ olims per volt, $02.5 / 10 / 50 / 250,1000 / 5000$ at 10,000 ohms per volt. AC volts $0-2 / 5 / 10 ; 50 ; 250 / 1000 /$ 5000 at 10 . (k) ohms per volt. DC microamps 0-50, DC milliamps $0-1 / 10 / 100 / 1000, \mathrm{DC}$ amps. 0-10. All DC current measurements at 2 JO MIV . Resistances $0-2000$ / $200,(00$ ) ohms $/ 40$ megs. Direct reading decibel ranges from -30 to +69 db . Compact portable molded case 6 high $\times 51^{\prime}$ wide $\times 2^{1}{ }^{\prime}$ deep. Leather carrying strap, test leads, alligator clips and instructions. Sipg. wt.
12 lbs.
C21475_Your Cost..................... $\$ 4,4$

## Altractive C21476- <br> Your Cost <br> $\$ 5.14$

## G-E YMW-1A Unimeter

G) Rapid, correct measurements of ohms, volts, current and decibels. Singie rotary switch controls all ranges 41." meter. DC functions 20,000 ohms/volt, AC 1000 ohms/volt. Ranges: $A C$ and $1 \subset$ C volts $0-2.5 / 10 / 50 / 250 /$ 1000. 3 resistance ranges from 1 ohm to 20 megohms. DC current scales from 0 to 500 ma . and 0 to 50 microamps. Db scalefrom -4 through +62 db . 0 level is 1 mw . in (b) ohms. With test leads. In portable carrying case of fabricated steel finished in grey wrinkle
\$39.50
High Voltage Multiplier Type YYW-1
(H) lead and prod for measuring up to 10,000 volts. Ideal for checking television high-voltage supplies.
s18.75

## TRIPLETT Model 2002 <br> Dual Appliance Tester

(L) Test nower consumptionof radios, small motors and household appliances under running conditions. Permits watts and line volts to be read simultaneously Scale black on white, $2^{1 /}$ at outer arcs. AC-IDC Watts: $0-1500-3000$ at 10 amps. rated, 15 amps max. AC-DC Volts: 0-130-260 volis at 12 ohms per volt. In heavy leather case with snap button cover and leather handle.
$\$ 27-93$
SIMPSON Model 390 Appliance Tester
Small compact meter for testing all yypes of AC single phase motors and appliances. Ranges: $0-150 / 300 \mathrm{VAC}$; $0-3 / 15$ amps. AC; $0-3(\mathrm{~K}) /(\mathrm{O}(1) / 1500 / 3000$ Watts AC. Ilas $3^{\circ}$ meter with easily read scales. Volts read in normal position, amps. or watts read by pressing respective button on the panel. Complete with break-in plugs. 3 lack bakelite case. Size: $3 \times 57 / 8 \times 23 \cdot 2^{\circ}$. Shpy.
$\$ 38.71$

## Model S-10-A

## POCKETSCOPE Oscilloscope

(M) Complete with synchronization means and selfcontained power supply. Use for study of wave shapes, measurement of modulation, frequency, phase shift, voltages, power. distortion-adjustments of audio-amplifiers, radios. television and FM receivers. Cathode ray tube magnetically shieldet. Controls placed to permit easy adjustnient. Response of vertical and horizontal amplifiers within -2 db from 20 cycles to 100 KC and within -6 db to 200 KC . Vertical and horizontal sensitivity 1 volt RMS/inch; ifput resistance. 5 megohm; input shunt cap 36 mmird.; input series capacitance . Mfd (60) volt. Linear time base oscillator 10 cycles to 50 KC with sweep from left to right. Uses miniature glass tubes and 2 AP1 Cothode Ray Tube $6^{3.8 \times 4 \times 10^{\circ}}$ Shpg.

## POCKET-SIZE MULIITESTERS


$\frac{(0.8)}{\left(-600^{\circ}\right.}$
©

(D)

## RCP Model 420-S

(A) Basic meter is $0-100$ microamperes, accurate to wit hin $2 \%$. Voltages multipliers are metallized matched pair resistors having a tolerance of $1 \%$. DC volts, $0-2.5$ Ohmmeter, 0-500-109, (010 1.000 000 , 0-10-100-1000 250-1000-5000. Output volts, 0 . AC volts, 0-10-50-250-1000-5000. Output volts, 0-10-50-250-1000-5000 Secibel meter: minus 10 to plus 69 Decibels. $63 \leqslant \times 3^{1}{ }_{2} \times 3^{\circ}$
Shpg. wt. 3 lbs.
C21723-Your Cost. . . . . . . . . . . . . . $\$ 23.03$

## MODEL 449

(B) Basic meter is $0-200$ microamperes, accurate to within $2 \%$. Sensitivity 5000 ohms per volt. DC voits,
$0-5-50-250-1(\times 0)$. AC vol ts $0-5-50-250-1000$ Out $0-5-50-250-1(100$. AC volts, $0-5-50-250-1000$. Output volts,
$0-5-50-250-1$ (K). DC MA, $0.5-10-100-1000$ Onms: $2000 / 20.000 / .2 \mathrm{meg} . / 2 \mathrm{meg}$. Decibels: -6 to +10 , -11 to $+-26,-28$ to $+40,-40$ to +52 DB ranges calibrated tor $500-\mathrm{ohm}$ line. Chart supplied for other inputs. $6 \times 3 \mathrm{x}$ C21724 Your Cost.

## CHICA

## USTRIAL INSTRUMENT

## Miniature Model 450 A

(C) Ideal for service where compactness and precision are required. Dustproof construction with sealed jacks and bakelite case this unique meter has sensitivity of 1000 ohms per volt. Multipliers are held to within $1 \%$ Includes two standard penlight cells. Ranges: $0-5,10 / 50$. $500 / 10010$ volts DC; $0-1$ milliamperes DC; $5000 / 50,000$ 500,000 ohms full scale, $30 / 300 / 3000$ ohms center scale C21506-Your Cost wh 2 lbs

## Model 451A

Similar to above but for use on both AC and DC at 1000 C21507-Your Costges.

## Model 4518

Same as Model 451A but 2500 ohms C21580
Your Cost

## Model 452A

A sensitive compact 100 microampere meter providing 10,000 ohms per volt sensitivity on all voltage ranges. $0-10 / 50 / 100 / 500 / 1000$ volts I) $: 0-20 \xi K) / 20,010 / 200,(000$ / 2.000, (140 ohms full scale, $30 / 300 / 3000 / 30,(210$ ohms center scale. Shpg. W

## CHICAGO INDUSTRIAL INSTRUMENT

 Portable Volt-Ohm Milliammeters Model 371(D) Strictly a DC meter, its ranges are as follows: $03 / 15 / 30 / 300$ volts. $0-25$ nilliamperes and a resistance scale of 0 to 10,040 ohms. Operates on two standard flashlight cells which are included. Size: $17 \times 2^{3}, 4 \times 37 / 8$ Shpo wit. 3 lbs.
C21504-Your Cost
\$5.14

## Model 312

Similar to above but for use on both AC and DC voits: $0-25 / 50 / 125 / 250$; Milliamiperes to 50 mils .; up to 100 , 000 ohms. For use on 110 volt $\Lambda C$ or DC.
C21505-Your Cost
6.51

## Model 431

(E) 400 microampere meter mounted on an etched aluminum panel, and set in a black wrinkle metal case Inclosed flashlight battery. Ranges include: $0-15 / 150$ volts $1 \mathrm{C}-10000$ ohms per volt; $(0-30 / 300 / 1500$ volts DC2500 ohms per volt: $0-150$ milliamperes $1 \times$; $300(1) / 300,000$ ohms full scale; $35 / 3500$ ohms center scale. With $48^{\circ}$ test leads. Size: $5^{5}{ }_{16} \times 2^{15}{ }_{16} \times 2!{ }^{\prime \prime}$ overall. Shpg. Your Cost
$\$ 15.27$

## Model 421

(F) $211^{\prime \prime} 650$ microampere meter. $0-7.5 / 15 / 150 / 750 / 1500$ volts AC and DC- 1000 ohms per volt; $0-7.5 / 75 \mathrm{DC}$ milliamperes; $5000 / 504$ ), ( 1 (1) ohms full scales; $35 / 3500$ ohms center scale. A copper-oxide rectifier. Ranges are brought out to silver-plated jacks, with engraved identification. Battery and $48^{\circ}$ te
3 lbs . Size: $5^{7} \mathrm{io}^{\prime} \times 3^{\circ}$ overall.
C21500-Your Cost

## Model 432

(G) Three-inch square 100 microampere meter. Sensiivity of 10,000 ohms per volt on all ranges. Four DC voltage and four resistance rankes. Volts IDC: $0-3 / 30 /$ $300 / 600$. Ohms full scale: $0-2000 / 20,000 / 200$, (100) 2,000,000. With test leads and battery Shpg. wt 4 lbs .
C21573-Your Cost
\$21.02
Model 433
Same as Model 432 but 50 Micro-ampere meter movement for 20,000 ohms per volt on all voltage ranges Ohms full scale: $0-5000 / 50,000 / 500,000 / 5,000,000$. Your Cost
\$22.93

(c)

$\oplus$



## SUPREME Model 542B

(A) $\Lambda$ pocket size laboratory that incorporates a highly sensitive meter. Has pin jack terminals, includes the following ranges: 4 DC mil. ranges of $0-0.3,6.30$ and 150 ; 4 DC voit ranges of $0-6,150-300$ and $1500 ; 4 \mathrm{ohm}$ ranges of $0-2000,20,040,200,000$ and 2 megs.; 4 AC volt ranges of $0-6,30,150$ and $600 ; 4$ output ranges of $06,30,150$ and 600 : 4 decibel ranges of -6 to +10 , +8 to $+24,+22$ to +38 and +31 to +50 . Uses a fullsize $3^{\prime \prime}$ meter with a rugged, accurate 200 microampere movement and a knife-edge pointer. Sensitivity of 5000 ohms per volt! All resistance ranges are operated by batteries furnished with the unit. Housed in sturdy Bakelite case. Size: $57 / 8 \times 3^{1}{ }^{1} 66^{2} 21 / 8^{\circ}$. Shpg. wt. 2 lbs. Your Cost.
s23.18

## Model 543B

Similar to above but 1000 O.P.V. Ranges: $0 / 2000 /$ 200,000 ohms: 0 ( $6 /(60 / 6 \times 1$ IX $M A ; 0 / 15 / 150 / 600 / 3000$ volts AC and DC. Shpg. wt. 2 Ibs.
C21745 -
Your Cost.
\$18.57

## EMC Model 100 Voltmeter

(B) Pocket meter of 1000 ohms per volt sensitivity $\Lambda C$ and DC voltage ranges of $0-3 / 12 / 60 / 300 / 1200 / 6000$ volts. DC current ranges of $0-.6 / 6 / 60 / 10(0)$ milliamperes. Resistance ranges of $0-3001 / 300.000$ ohms and $0-30$ megohms. 4 db ranges from -10 to +48 . AC volts from megohms.
25
cycles to 1 megacycle $w i t h$ no temperature errors. Bakelite panel mounted in wood case prevent any voitage breakdowns between panel and case when measuring high voltage. $63 / 8 \times 3 \vdash_{2} \times 3^{\circ}$. Shpg. wt. 3 ibs.
C21575-
Your Cost
s21.51

## TRIPLETT Model 666HH Pocket Meter

(H) (Above). 1000 ohms per volt. "RED DOT" life-time meter $0-10 / 50 / 250 / 1000 / 50010$ volts AC and IDC $0-10 / 100 / 50$ ) milliamperes, DC at 250 MV . and $0 / 2000$, $400,(001)$ ohms, center scale $12 / 2100$. Black molded case and panel. Complete with battery and $50^{\circ}$ test leads and clips. Size: $3^{1 / 16 \times 57 / 8 \times 21 / 8 " . ~ S h i p g . ~ w t . ~} 3$ lbs.

## C21576-

## Your Cost

$\$ 19.60$
Carrying case for above. Heavy duty sewe strap handle
$\$ 3.92$

## SIMPSON Model 240 Hammeter

(C) Completely self-contained. Sensitivity of 1000 ohms per volt. Ranges: $0-15 / 150 / 750$. $3(10)$ AC volts, $0-15 / 75$ / $300 / 750 / 30 \%$ UC volts, $0-15 / 70$ 300/750 IXC milliamperes, $0-3(00) / 300,000$ ohms. Center scale $30 / 3000$ ohm accuracy $3 \%$ on IXC and $5 \%$ on AC. All figures engraved and tilled with white enamel. Meter of shock proof bridge type construction with soft-iron pole pieces Matched resistors. Test leads furnished. S
Shpg. wt. 3 liss.
C21579-Your Cost
\$21.31

## SIMPSON Model 260

(D) Black Bakelite Roll top afety case. Accurate full scale readings. Ranges: Volts $A C$ and $D C \quad 02.5 / 10 / 50$ / $250 / 1000 / 5000$ at 20,000 ohms/volt DC and 1000 ohms/ volt AC. Output AC volis $0-2.5 / 10 / 50 / 250 / 1000 / 51510$ DC . Microamps 0-100, Milliamps $0-10 / 100 / 500$. 1) A Amp $0-10 \mathrm{DB}$, five ranges from -10 to +52 db . Ohms: ()-2000) 200,000 and 020 megohms, center scales $12 / 1200 / 120 \mathrm{M}$ $51,07 \times 3^{\circ}$. Shpg. wt. 3 lbs . C21578 Your Cost....
$\$ 42.87$ Same as above but without roll-top case. $\$ 38,171$
C21713- Your Cost...................... 71
ILL. ATLANTA GA


## sienal GENERATORS



00, 9

## 0 Pocket Signal <br> \section*{erator}

small in size, accurate in cali-fitput-all at very low cost. Can to the pocket and taken out on ting and localizing faults so that iediate, accurate repair estimate. aent provided for by lixed frequen550 KC . IF alignment by using 6 and 165 KC . Suitable trimmers for C or IDC operation. Complete with ut cable, line cord and plug. Attrac.
$\$ 17.59$

## RCP Model 705

Wide range from 95 KC to 100 MC . Fundamental rom 95 KC ies in five bands are continuously variable is 400 cycle sine wave generator which modulates the carrier at $30 \%$ or $80 \%$ as desired. 400 -cycle frequency also available for external use. Alignment of FM " 1 IF " stages is accurately obtained by means of zero discriminator current method. Five step ladder attenuator controls voltage from zero to maximum. Frequency calibration is accurate to 25 up to and including broadcast hand and $3 \%$ for the high frequency bands. All coils not in use are $3 \%$ for the high frequency bands. All coils not in use are automatically shorted. Individual shielding of RF cir cuits, coil assemblies and attenuator insures stable operation. High ratio planetary drive tuning condenser with choice of vernier or direct drive for ease of operation Operates on $110-130$ volt, $50 / 60$ cycle. In handsome, black/crackle finished steel housing with white enamel highlights and carrying handle. $8 \times 113 / 4 \times 5$131 bs.
$\mathbf{C} 21720$
$\$ 48.51$

## SILVER FM/AM

Eight fundamental ranges. direct frequency calibrated to $1 \%$ accuracy, 90 KC through 170 MC . RC audio oscillator provides 100 cycle AM modulation, variabie from 0 to nearly $100^{\circ}$. FM 90 KC through 210 MC with built-in electronic FM sweep variable from 0 to 500 KC . Output continuously variable from less than 1 microvolt, to over 1 volt. Metered output, dual variable and 4 position ladder attenuators, complete in iliple turret $0: 1$ vection line filter, coils mounted in rotary AM and FM receivers by aural, meter or visual alignment methods. Complete with $105 / 125$ volt, $50 / 60$ cycle ment methods. Complete with $105 / 125$ volt, $50 / 60$ cycle built in mains-isolating power supply, tubes, output,cabie and terminal box, 6 ft . cord and plug. Size: $12^{3 /} 8^{\prime \prime}$ cable and terminal box, 6 ft . cord and plug. Size: 12 is" leather carrying handle. Shpg. wt. 11 lbe C21542 Your Cost
\$99.50

## HICKOCK Model 288X

(A) Model 288X. Iligh degree of accuracy for servicing amplitude and frequency modulated and television equipment. Fundamentals used throughout entire range of 100 KC to 110 MIC on AM output and 100 KC to 160 MC on FMI output. Variable audio output: 0 to 15 KC is produced by heterodyne type oscillator. Decibel meter provides convenient means of measuring power and voltage and determining resonance in alignment work. A 110 KC and $10(6) \mathrm{KC}$ crystal controlled signal, accurate to $0.01 \%$ unmodulated or modulated at 400 cycles is available. By using harnonics of the crystal controlled available. By using harnmonics of the crystal controded oscillator, accurate signals up to 125 . ACs are obtained in multiples of 100 KC and 1000 KC . Complete 1 with alt $50 / 60$ cycles. $14 \times 161 \times 1 \times 8{ }^{\circ}$. Satin chrone sinish panel and blue bi
Your Cost
\$159.06

## MEISSNER Signal Calibrator

Portable self-contained unit designed to generate marker signals at 10, 50 and $1(0) \mathrm{KC}$ intervals over he RF range of 10 KC to 20 MC . Push-button control of requency. Radio transmitters, receivers and laboratory equipment easily and accurately set to a desired freguency Unknown frequencies positively and quickly determined. Component parts mounted on a single chassis to which front panel is attached. All controls mounted on front panel. Incorporates a precision type quartz crystal operating on 100 KC . Easily adjusted by front panel control to exact frequency. Output signal may be amplitude modulated at (i) cycles by front panel control. For operation on 115 volt, $50 / 60$ cycle source. Size: $8 \frac{1}{4} \times 81^{1} \times 121^{\circ}$. Shpg. wt. 19 lbs. C 21707 Your Cost\$77.17

(D)

©


## APPROVED ELECTRONIC Model A-200

 (D) Extremely stable signal generator covering long 5 NC in six bands of fundamentals and 19 MC to 75 MC in two bands of harmonics. Internal modulation of 440 c.p.s. variable from 0 to $100 \%$ RF and AF oscil4. c.p.s. variable fromble to 10 . Ror 110 volt 60 cycle lators of new highly stable diss
## Size $8 \times 10 \times 12^{\prime \prime}$. Shpg. C21709-Your Cost

\$39.50

## PRECISION Model E200C

(E) Units are individually hand calibrated to better than $1 \%$ on all 8 bands which range from 88 KC . to 120 MC . Fundamentals to 30 MC . Direct reading: no charts needed. Large full vision $6 \frac{1}{2}$ no-glare dial with a $0-1000$ point vernier scale allowing direct reading to one part in 1000. 400 cycle sine-wave audio oscillator provides modulation and external test signal from zero to 50 volts Complete shielding including electrostatically shielded transformer and AC line is RF filtered. $0-100 \%$ modula tion control more than triples signal utility. 110 volt $50 / 60$ cycle. Black ripple finished, heavy c21715-Your Cost.

## SUPREME Model 576

Compact Signal Generator incorporating electron coupled circuit giving great stability. Iron core coils Leakage minimized by double shielding. RF ranges from 65 to 20,500 kilocycles and harmonics to 82 megacycles Audio frequency: 400 cycles-voltage output continuousAudio frequency: 40 cycles-vol tage output continuous y variable from minimum to maximum. Internal modula tion at approximately $50 \%$ on RF carrier. Jack provided


## SIMPSON Model 315

(G) Designed for extreme accuracy, great stability, minimum leakage and good wave form. $9^{\circ}$ meter type dial with knife edge pointer for high readibility and close settings. $30 \%$ modulation at 400 cycles. Six bands from 5 KC . to 30 MC , with frequency accuracy of $1 \%$. Volume level of each step of the ladder type attenuator is regulated by a smooth non inductive control which provides RF output from microvolt to 11 volt and 400 -cycle out put from 0 to 5 volis. Coils, attenuator and signal selector are individually shielded. Effective live thlter and ine cord shield for negligible leakage. Coils individually calibrated at the factory. Designed to retain original inductance regardless of temperature or humidity changes. In fully enclosed welded metal case. $16 \times 10 \times 6$ Shpg. wt
Model 415. Eight bands-70 KC to $130 \mathrm{MC}, 0-100 \%$ nodulation from $60 \mathrm{c} . \mathrm{p.s}$. to 10 KC .
$\$ 11270$

## HICKOK Crystal Controlled

## Microvolt Signal Generator

Model 191X. (Not illustrated). Accurate, dependable source of calibrated radio frequency test voltages ranging srom 125 KC to 120 MC on fundamentals. $8^{\prime \prime}$ dia. dial. Signal leakage kept at minimum by use of newly develSignal leakage kept at minimum by use of newly devel for accurate and direct calibration of RF output from for accurate and direct calibration of Re output 5 400 cycles fixed, and $0.70 \%$ at 400 cycles, and variable. 400 cycles ined, and 0.70 at 400 cycles, and variable. Provisions made for external modulation from 5 to 10,000
cycles. Decibel meter for power deter mination. Provision made for measuring both input and output of unit under est. For operation on $105-125$ volts, 50-70 cycles. Satin chrome finish panel with Blue baked lacquer finished ase. Dimensions $14 \times 16^{1}{ }^{1} \times 8^{\circ}$. Shpg. C21450 Your Cost
s145.92

## TRIPLETT Model 2432

Extremely accurate Signal Generator employing large etched metal dial with $40^{\circ}$ total length made up of 6 arcs approximately 330 degrees each. Output connections AF AF and one for RF. Voltage regulated power supply proide for greater accuracy. Six bands are used: 75-224, $220750,700-20300,2450-8500,8000-25,000$ and 21,000 50,000 kilocycles. Output attenuators provide coarse and fine control through two shielded resistor networks Circuit selector provides for internally modulated signal $(30 \%$ at 400 cycles), unmodulated signal or 400 cycle audio. Enameled finished case with rubber feet. Size $10 \times 1\left(0 \times 64^{3}\right.$. 110 volts, 60 cycles. Shpg. wt. $15 / 2$ iths. Your Costs86.73


## CATHODE-RAY OSCCLLOSCOPES

## RCA 3-Inch Model $155 C$

## Oscilloscope

(A) Employs 9061PI tube and two 6SJ7's for vertical and horizontal amplifier stages, one 6C8Gs timing oscillator stage and two $5 \% 3 G T / G$ rectifier tubes; total of 6 tubes. Bar knob controls all located on front panel. 20 volts (RMS) per inch deflection without amplifier 0.5 volt (RMS) per inch with amplifier. Amplifier response flat from 10 to $60,000 \mathrm{c} . \mathrm{p} . \mathrm{s}$. Amplifier gain 10 db . Timing frequency from 10 to fo,ino $\mathrm{c.p.s}$. Operates on 110 volis, $50 / 60$ cycles a.c. Wrinkle lacquer metal case has etched panel. Size: $15 \times 8 \times 14^{\circ}$. Complete with tubes and instructions. Shpg. wt. 32 lbs.
C21447-Your Cost.
s115.00

## DUMONT 3-Inch Oscillograph

 Model 164E(B) Employs either $3 A P 1$ or 3AP5 tube. Amplified sweep circuit over continuous range from 15 to 30 ,(00) cycles. Input inmedance vertically: $1,000,000$ ohms; horizontally: 800,060 ohms. Max. potential 400 DC volts. ieflection sensitivity: max. vertical 0.80 r.m.s.
volt/in.; max. horizontal $0.65 \mathrm{r} . \mathrm{m} . \mathrm{s}$. volt/in. Frequency range: vertical and horizontal/amp. both uniform within $20 \%$ from 510 100,000 cycles. Handy deflection-plate terminals available at rear. Horizontal amp. may be switched to amplify either sweep circuit or external signal, so that Lissajou patierns for frequency determination may be employed. 115 volts, $40-60$ cycles. Size: $1158 \times 73 / 8 \times 14^{\circ}$. Shpg. wt. 25 bs.
C21557-
$\$ 115.00$

## DUMONT 5-Inch Model 208B

(C) Uses 5LP1 tube. Has a calibrated removable scale. Frequency range: Y-axis, plus or minus $10 \%$ from 2 to 100,000 sinusoidal cycles; $x$-axis, plus or minus $15 \%$ from 2 to 100,000 sinusoidal cycles. A voltage gain of 2000 times on the $Y$-axis and 43 times on the $X$ axis. Deflection sensitivity: max. $Y$-axis $0.010 \mathrm{r} . \mathrm{m} . \mathrm{s}$. vol $\mathrm{t} / \mathrm{in}$. Max. X-axis $0.500 \mathrm{r} . \mathrm{m} . \mathrm{s}$. volt/in. Direct deflection plates- 21 and 22 r.m.s. volis/in. Y-axis and $X$-axis range iinom 2 to 50,000 cycles. 110 volis, $40-60$ cycles. $144_{4}^{1} \times 8^{13} 16^{10} \times 1912^{\circ}$. Shipg. wt. 67 ibs . C21782-
$\$ 270.00$

## G-E Type CRO-3A <br> 3-Inch Oscilloscope

(G) Ideal for accurate and rapid service work. Entirely portable and compact. Designed for general radio servicing. Sweep rates from 20 to 30,000 per second in seven ranges. Fine adjustment vernier. Vertical and horizontal sensitivity 3 volts RME/inch. 500 volts RN iS
maximum input either amplifier. Input impedance maximum input either amplifier. Input impedance vertical is 1 meg . 45 mmf .. horizontal 1 meg., 50 mmf . Equipped with 3 AP1 cathode ray tube with green screen. All controls conveniently located on front panel. V'ertical amplifier frequency response 20 cycles to $100 \mathrm{KC} \pm 10 \%$
(sinusoidal). Horizontal 20 cycles to $70 \mathrm{KC} \pm 10 \%$ (sinusoidal). Welded steel case in gray wrinkle tinish. Etched aluminum front panel. Size: $8 \times 12!2^{2} \times 13^{\circ}$. Shpg. wt. 301 l
Your Cost
\$98.50

## G-E Type CRO-5A 5-Inch Oscilloscope

(H) Designed primarily for studying voltage and current wave forms. May also be used to study any variable which can be translated into electrical potemials by means of associated apparatus. All amplifier and sweep DC potentials are electronically regulated to give a stable trace even under arlverse power line variations. input impedance: Vertical-1.25 meg., 50 mmf., Horizontal 3.3 meg., 32 mmf. Maximum input potential 5 or 500 volts RMS on vertical and 5 volts RNIS on Horizontal. Sensitivity: vertical-. 02 volts RMis inch, horizontal 2 volts RMS/inch. Vertical amplifier frequency response from 20 to 350 , 000 cycles (sinusoidal). Horizontal amplifier from 20 to 200,000 sinusoidal cycles. Both amplifiers flat within $-10 \%$. Sweep generator 20 to 20,000 cycles in five stens. Sync control internal, external or 60 cycles. Retrace is blanked. Direct connections available at rear of cabinet. $14 \times 8 \times 19^{\circ}$. Shpg, wit. 45 lis. For use on C21593
Your Cost.
\$195.00

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(1)

©



## Electronic Development Labo.

 5-Inch Oscilloscope-Model(D) Amplifiers compensated to give high frequen and square wave response, wide range linear swee
freedom from hum effects. Horizontal and ver freedom from hum effects. Horizontal and ver sensitivily. 5 RMS volt s/inch through ampliwer and 14
RMIS volis/inch direct. Horizontal and vertical amplifie input impedance . 5 megohm in parallel with 20 mmfd. Terminals at rear of instrument provicle low capacitance connections direct to deflecting plates. For $105-120$ volis $50-60$ cycles. $8 \frac{1}{2} \times 14 \frac{1}{2} \times 18 \frac{1}{2}$. Shng. wt. 44 lbs. C21595-
Your Cost

s 113.00

## DUMONT 5-Inch Model 274

(E) Amplified Sweep Circuit over continuous range from 20 to 50,000 cycles. Input imperance: Horizontal, 5 megohms; Vertical. 1 megohm. Dellection sensitivity: Max. vertical 0.65 RMS volt/in.: horizontal $(1.65 \mathrm{KMS}$ volt in. Input signal may be applied to the vertical plates either directly or through the vertical amplitier Plates either directiy or through the vertical amplifier
through a switch provided on the front panel. Internal modulation of the horizontal beam is provided for by a moculation of the horizontal beam is provided for by a separate terminal. Horizontal amplifier may be switched to (ither sweep circuit or external signal. For 115 volts, $50 /$ /50 cycles. $14 \times 8,8 \times 19 \frac{18}{} 8^{\circ}$. Shpg. C21774
$\$ 127.50$

## SUPREME Model 552

## 5-Inch Oscilloscope

F) Sweep oscillator with frequency range of 20 to 30.000 cycles. linear control for fine adjustment. Sync control for positive locking of pattern on screen. Yertical and horizonial amplitiers will pass 60 cycle square wave. Rated sensitivity at .3 volts RMS, inch deflection. Vertical amplifer 20 cycles to 100 KC ; Horizontal atmplifier 20 cycles to 55 KC . Switches arranged for external sync and horizontal sweep. Ileavy steel case. Gray wrinkle case. $12 \times 99^{1} 2 \times 18^{\circ}$. Shpg. wt. 32 libs. with
C21591 Your Cost
\$97.51

## SUPREME Model 546-A

Same as Model in but 3 tube and voltage sensitivity tubes.
C21598 Your Cost
\$87.95

## HICKOK Model 195 5-Inch Oscillograph

(J) Sinusoidal sweep with phasing control. Wide range swecp circuit oscillator. Deflection sensitivity; Vertical-
.05 volts IRNS/inch, direct 15 volts RMis/inch Iori. 05 rolts RMS/inch, direct 15 volis RMS/inch. Horizontal - 15 volts RNIS/inch, direct 20 volts IRMS/inch. Vertical amplifier 30 cycles to 50 KC -llorizontai amplitier 10 cycles to 50 KC . Input impedance: vertical1 meg., 25 mmf., I )irect- 2.2 meg. Ilorizontal-1 meg., i5 mmt. Direct-2.2 meg. Light shield and catibrated screen for accurate work in brightly lit rooms. $105-125$ volts, $50-70$ cycles. $\cdot 8{ }^{5}{ }^{i 6} \times 18 \frac{1}{2} \times 13^{3}$. Shpg. wt. 30 lbs . Complete will tubes
C21594-
Your Cost
$\$ 132.00$

## HICKOK Model 505 <br> 5-Inch Oscillograph

(K) Wide band vertical a mplifier from 30 cycles to 1 MC. Ilorizontat ampliner 10 cycles to 50 liC . Deflection sensitivity .2 volts RMiS'inch on vertical, .3 volts RMS'inch on horizontal, 15 volts RMS /inch on horizontal direct. Input impedince is 1 megohm, 25 mmf on both vertical and hotizontal. Includes: built in wide and narrow band FM oscillator, 3 range frequency compensated attenuator network, Demodulator which pernits modulated signal to be viewed, Simnal tracer jack Which permits signal being viewed to be heard by phones. Self-contained mixer circuit for frequency modulated output with any good signal generator. Return eliminator speeds up FM and AM alignment. Modulation circuit permits $F M$ uscillator to be either internally modulated or from anes microphones. Sinusoid sweep with phasing control. Rize: $14 \times 111 / 2 \times 15^{3}$. Shpg. wt 35 brightly it areas. Size: $14 \times 111 / 2 \times 15 \frac{1}{2} 2^{\circ}$. Shipg. wt. 35 lbs. Complete with C21451 -
Your Cost
\$165.60


## INDUSTRIAL INSTRUMENTS OSCILLATORS

## DUMONT Electronic Switch and Square Wave Generator

(A) Model 185A. Permits the simultaneous observation, for purposes of comparison, of two or more independent signals on the screen of a single cathode ray oscillograph. Square wave signals may, be used in studies of vacuum tube amplifiers and other networks over a range of 10 to 500 c.p.s. Switching rate $10-2000$ times per second. Input resistance 100,000 ohms. Output resistance 50,000 ohms. All controls and connections on front panel. For 115 V. $40-60$ cycles. Complete with tubes. Black wrinkle finish steel cabinct. $11^{1}{ }_{2} \times 7{ }^{3} \times \mathbf{8} \times 13^{*}$. Shpg. wt. 17 lbs. C21783
Your Cost
$\$ 105.00$

## Type 215 Low-Frequency Linear Time Base Generator

(B) Sweep frequency range of 2 to 125 cycles per second. Balanced output signal voltage. Maximum undistorted output of approximately 400 volts peak to peak. Single sweep initiated either manually or by observed signal. Excellent linearity assured by compensating circuit. Return trace blanking. For 115 or 2.30 volts, $40-60$ cycles. In black wrinkle finished steel case. $141 / 4 \mathrm{x}$ $83 / 4^{1919}{ }^{\prime}$. Shpg, wt. 40 Ibs .
C21556-Your Cost
\$215.00

## Type 224-A 3-Inch Oscillograph

(C) For study of signals such as pulse and square waves involving frequency components as high as 2 meyacycles. Wide band vertical amplifier response within 3 db . to 2 megacycles. Provision for intensity modulation. Uses Type 3GP1 C.R. tube, For use on 115 vol ts, $50 / 60$ cycles. In portable steel cabinet with carrying handle. Rugged instrument for field as well as laboratory use. Size $141 / 8 \times 83 / 8 \times 151 / 8^{\prime \prime}$.
c21558-Your Cost.
$\$ 290.00$

## FERRET Audio Oscillator

(F) Incorporates recently engineered developments. Uses (F) Incor miniature tubes to achieve a range of 20 to 24,000 cycles. $\mathrm{R} / \mathrm{C}$ type oscillator with sine or square wave on cycles. R/C type oscillator with sine or square wave on same calimations with accuracy of sine or square wave Output is high impedance, 25 volts sine or square wave selected by a simple rotary switch. Output lead is coaxia cable. Three colored dial with 3 to 1 vernier glass enclosed for protection against damage and dirt encased in a molded escutcheon. Front panel of three color iridescent blue-gray finish. Housed in an attractive blue-gray Hammer-tone finish aluminum case with leather carrying handle. For use on $110-120$ volts, $50 / 60$ cycles. Size $101 / 2 \times 10^{1 / 4} \times 51 / 2^{\prime}$. Shpg. wt. 10 lbs .
c21431-Your Cost.
s89.95

## G-E Signal Generator-YGS-3

(G) Comprised of four units, any of which may be used independently or in any logical combination by switching front panel controls. Includes RF oscillator with funda mental frequency range of 100 KC to 150 MC . FM scillator wit center frequencies of 1,20 and 50 MC and osciliatory requency devicycle crystal calibrator; variable frequenc tively; 1 megacycle crystal calibrator; variable frequency audio oscillator. Internal mixer enables operator to obtain any desired FM frequency within the beat fre quency range of the RF and FM oscillators. Both AMI and FM oscillators may be modulated at any frequency within the range of the audio oscillator or by an external source. Percentage modulation or frequency deviation is continuously variable and is indicated by calibrated sections of a dual electron ray gun. RF level control in conjunction with step and fine attenuators provides control of the output level with negligible frequency shift. Good stability, low distortion and essentially flat output throughout the entire frequency range of $1(10$ to 12,000 cycles is provided by an RC type audio uscillator A one megacycle low-drift crystal in the calibrator unit provides modulated or unmodulated harmonics to 150 MC. Separate audio and RF output cables are supplied. In copperplated fabricated steel case, outside gray in copperplated finish. Leather carsying handle. Removable wrinkle finish. Leather carrying handle. Removable cover with compartment for output cables. $17,16 \times 93 / 4 \mathrm{x}$ C21562
Your Cost
\$225.00


## RCA WV-75A Voltohmyst

(D) Model WV-75A Voltohmyst is an electronic voltmeter with full wave diode probe for reading peak-topeak RF voltages to frequencies of 250 MC. Push-pull DC VTVM circuit is exceptionally stable and Linear Large electronically controlled burn-out proof DC meter with crystal clear anti-static coated one-piece unbreakable front.
Ranges: $0-3 / 10 / 30 / 100 / 300 / 1000$ VDC; with diode probe 0-3/10/30/100 VAC. Frequency with diode probe probe $0-3 / 10 / 30 / 100$ VAC. Frequency with diode probe $30 \mathrm{c.p.s}$ to 250 MC . diode probe and lead 30 cps to 30 MC and probe with AC multiplier 30 c p.s. to 15
$\mathrm{KC}: \mathrm{DC}$ resistance $0-1 \mathrm{M} / 10 \mathrm{M} / 100 \mathrm{M}$ ohms and $0-1 / 10 /$ 100 megohms. Input impedance using diode probe; 650 M ohms and 15 mmfd . at 1 MC . 32 M ohms and 145 mmfd at 10 MC and 100 ohms and 13 mmfd . at 250 MC Input impedance using diode probe with AC multiplier: 1.65 megohms and 2 mmfd . at 1 KC and 1.65 megohm and 2 mmfd . at 10 KC .
Steel case with grey w'rinkle finish and etch brush chrome finish front panel. Complete with tubes, diode probe, test eads, and instructions. 105-115 volt.50-60 cycle oper C21772-Your Cost.
\$125.00

## RCA Audio Voltmeter

(E) Unusual sensitivity and wide range of .001 to 1000 volts AC. Excellent frequency response over the audio range ( 20 cycles to 20 KC ). May be used as an AF amplifier with high gain and good fidelity. Unvarving meter readings despite line voltage changes or tube replacements. l.ogarithmic scale and overlapping attenuator proments. logarithmic scale and over lapping attenuator pro vide accuracy even when pointer is at either end of scale. harm. High level rectifier designed to produce an output harm. High level rectifier designed to produce an oulput a meter reading that agrees very closely with an RNIS meter for all usual distorted wave forms. Input imped ance 1 megohm and 25 mmf . Attractive cabinet finished in dark cobalt gray Metalustre with front panel of scratch brushed aluminum. 131, $\times 93 / 4 \times 7 / 4$. Sh C21561
s 175.00

## SUPREME Audio Oscillator

(H) 15 to 15,000 cycles. Dial calibration spread over a 12 -inch arc covering 280 degrees. Large 6-inch metal dia! with laboratory type tuning knob. Output impedances of 250/500/5000 ohms. Each center-tapped for push-pull and other balanced input systems. Output continuously variable from minimum to maximum. Open circuitvoltage approx. 65 RMS volts at 5000 ohms section. Properly loaded, produces 50 volts total or 25 volts either side of center tap. Sinusoidal type wave form with harmonic distortion at least 30 db below fundamental at 5000 cycles. Output virtually flat over the entire frequency rangePlus or minus 1 db from 30 cycles to 10,000 cycles. 2 db down at 15 and 15,000 cycles. All controls arranged for speed and simplicity of operation. Neon lamp for zero speed and simplicity of operation. Neon lamp for zero adjustment. Housed in grey wrinkle finish steel case Steel panel finished in grey wrinkle, with white letters and markings, red highlights. Leather carrying hand
$110 / 125$ volts, $50 / 60$ cycles. Size: $13 /-1 \times 9 \times 6{ }^{7}$ $110 / 125$ volts, $50 / 60$ cycles. Size: $131 . x^{1} \times 9 \times 6{ }^{7}{ }^{\circ}$
C21563-Cost . . . . . . . . . . . . . . . . . . . . .
Your Co

## SUPREME AF and RF Oscillator

(J) Designed to produce all the various signals required for test and repair of radio receivers Two distınct and separate instruments-either of which may be operated independently $\rightarrow$ or together. FM oscillator for visual alignment of IF amplifers in amplitude modulated re ceivers. Large three-inch round meter used to set amount of modulation. Variable from $11080 \%$. AF Oscillator flat to within 1 db from 30 to 10,000 cycles. 15 cycles and 15,000 cycles down approx. 2 db . Center tapped transformer with push-button selector of output impedances at $50 / 500 / 5000$ ohms. High impedance resistor of 50,000 ohms. Attenuator controls voltage from 0 to open circuit voltage of 35 volts. RF Oscillator covers 65 KC to 205 MC in push-button selected five bands. Har monics above 60 MC . Tuning knob geared to capacitor with a rat io of 5 to 1 . Meter used to set carrier level at a predetermined value, aligned for accurate and variable per cent of value, aligned for accurate and sariabl available over the range of the RF oscillator Ladder type four-position the range of the RF oscillator. Ladder type four-position resistor push-bution attenuator thernier control For use maximum to minimum on any of the four steps. For use


## CAPACITOR CHECKERS SIGNAL TRACERS




## SOLAR Exam-Eter CF-1-60

(A) Accurate Wien bridge for capacitance and power actor measurements A ay swit ype bridge for resistance measurements. Capacitance from 10 mmid . to 2000 mid . Insulation resistance from 3 to $10,(4) 0$ megs. and resistance of resistors from $1(x$ ohms to 7.5 megs. may be accurately checked. Uses
 C21790-Your Cost
\$58.50

## SOLAR Capacitor Analyzers

(B) For measuring the canacity of any electrolytic. paper mica. or aur condenser betheren the e"rennely wide linnits of (000(0) and 800 mfd . Fileeron-ray bridge-lalance indicatior. Also thea ures power factor of electrolytics in percentage. Detects defective condensers. (hecks resistance from 50 ohms to 2 megs. Insulation resistance tests Shpe tubes.
C21781 Your Cost
$\$ 39.00$
Model CBE-2-U. Same as alove but for $110-220$ volt 25/60 cycles. C21777-Your Cost
$\$ 45.96$

## SILVER Model 904 C-R Bridge



(C) Highly accurate, "ide range, electronic bridge Neasures resistors and capacitors of all types. Ilas "ye" with varialse sensitivity for accurate readinss, power factor and insulation resistance tests, and variable applied test voltages of $0105(0)$ volls $1 \times($ lour ranges each for resistance and capacitance: 10 ohms to 1000 megohms, 10 mmifd to $10(\%)$ mfd for 115 volts, $50-60$ cycle 141 bs .
949.90

## GE Model YCW-1 C-R Bridge

(D) Wein Bridge princinle assures accurate measure ments. Measures: Capacity from (K)O(n)5 mid. (1) $2(0)$ míd. in three ranges, Electrolyis leakage, Insulation resistance from 0) 02500 megolms, Resistance from 5 ohms to 20 megolims in two ranges. power factor and turns ratio of transformers. Voltmeter reards 0500 I) turns ratio of transformers. foltmeter reards 0) ofo DC. Push-button switching. Sensitive electron ray tube for bridge-balance indication. Completely portable $\rightarrow$ weighs
$10 \mathrm{Jbs}, \mathrm{l} 115$ volt, 50 or 60 cycle. Size: $934 \times 12 \times 7^{\circ}$. Steel 10 lts., 115 volt,
C21597-Your Cost
$\$ 59.50$

## C-D "BE-50" Analyzer

(E) Incorporates a "Wien" bridge with single stage of amplification and visual "eye" for measurements. Built-in power supply for making leakage and insulation resistance tesis. Whasures payser, mica, air and electrolytic condensers, from ( 0 (0) 1 to 240 mids. Measures power factor, leakage. lests for shorts. Complete with tubes. In Walnut por atble case, dimension: $6 \frac{1}{2} \times 12 \times 93 / 4$ C21727
s41.80

## C-D "BN" Capacitor Bridge

(F) Measures accurately and quickly all capacitors between ( $(X K X) 1$ and .00 mids. Employs Wien bridge circuit, with visual "cye" to indicate balanced conditions. llas direct reading scale, and $f \cdot \mathrm{mploye} 2$ tubes, a $12 \Delta 7$ and fiAlfir;. Indicites power factor, shoris, etc. In Walnut brkelite case, dimension: $3^{\circ} 8 \times 5 \times 3$ ". With test leads and instructions, and tubes. For 110 V., 60 cycles. C21/28-Each
s19.50

## C-D Capacifor Decades

(G) Accurate standards covering a wide, range of capacily in 3 units. For use with Type "BN" Capacity bridge shown above or similar precise unit. Capacity range: (0H1) to 11.1 midd. Calibration chart with each. Rating $6(6) \mathrm{V}, 1)^{2}-220 \mathrm{~V}$. AC; Folerance $\pm 5 \%$. Walnut Bakelite case, dimension: $3^{*} \times 5 \times 3^{\prime \prime}$. Shpg. wt. 4 lbs. C21729-.011 mid. in .on01 steps. C21730-1.1 mid. in . 01 steps. Your Cost, Each Above C21731- 10.0 mfd in 1.0 mfd . steps
\$8.33 Your Cost
s17.15

## SPRACUE TO-3 Tel-Ohmike

(H Sperdy check locates open, intermittent, or shorted condeners without removing them from the circuit. Dial of direct reading callibrated type, color conded to correspond to selector switch. Measures ( $\times$ (x) $102,000 \mathrm{mid}$. in 1 ranges, power factor from () to $5.0 \%$ at 60 cycles, 0 to $2,5 \%$ megohms insulation resistance, 2,5 ohms to 25 Megohm- in 3 resi tance ranges, and DC voltage in three three fingily and power factor of electrolytic condensers ma. Capacity ind power measured ylic leakage measured in MA. at rated DC voltage.

Your Cost

## FEILER Signal Tracing Analyzer Model TS-3

(A) New electronic "stethoscope" that gets to the heart of radio troubles in a flash. Completely portable and AC operated. Usexs biased diode delector probs. I owes not upset the most critical circuits. 5" PM dynamic speaker included Makes audible atl signal- 30 cps to 120 MC $\mathrm{KF}, 1 \mathrm{~F}$, Audio-without using special controls or tuning Provision for output meter for silent tracing and for RF vacuum lube voltmeter for visual indications. In handsome broun iridescent imish
Co1778-Your Cost
$\$ 3495$

## Model TS-2

Same electrical characteristics and ph bul haltery operated. Lees batteries. C21798-Your Cost
\$29.95 $\$ 1.65$ C20617-Your Cost Each
Burgess G3 batteries. 1 required. C20610 Your Cost Each

## Model TS-1

Rapid point to point testing. Portable metal case contains compartment for cable, probe and batteries llandy sized probe contains tube and circuit components Operates on one 22 -volt batery and one No. 2 flash light cell. Reenires set of magnetic heirdphones. Witl operating instructions. Size: $63 / 4 \times 13 / 4 \times 3 \frac{3}{4}$. Shpg. wi. 6 lbs. Not illustrated. C21797
Your Cost (Less batteries and phones)
$\$ 9.85$
C19862- $22 \frac{1}{2}$-volt luattery
C20622-No 9 Cell
C13892-2000 Ohm lieadset

## PRECISION Signal Tracer

(B) Unit complete with high frequency probe and tubes, ready to operate on $110-120$ volis A.C. 6io cycles covering 100 M. F.M. and television sound. 30 cycles to well over 100 Megacycles with a separate channel for audio frequency. Ifigh frequency lube in probe with 3 -tube Iligh Gain Impliser of 5 watts for R1F-1F frequency makes all signals audible. Full control of the RI- IF stage is protided by a variable control and attenuator. Shps. wi. 11 lbs C21799 Your Cost
s29.95

## PRE-CHECK Midget Analyzer

(C) Nakes fast accurate tesis for open circuited condensers. ANY I Illi, in trouble shoxting for low volune, excessive oscillation or distortion. "'est for presence or lack of vollage on filament, plate or screen; open bleeder resistors and cat hode resistors: continuity of any receiver circuit. Made of highly polished libre tubing. 111 joints fitted and pernanently sealed, then baked. lenuth overall $83^{\circ} 6^{\circ} 8^{\circ}$ " dia. Furnished with test lead, neom lamp and rubber insulated alligator clip). Shpg. wt. C11305 Your Cost
s2.25

## FERRET Deluxe Test Set

(D) Designed to eliminate the necessity of removing set spaker from radios, for servicing. Vise coil connections pet mis substitution of any output pansformer. Input and field switches on front panel permit matching to any single or push pull output tube. 1'rovides substitution for chokes electrolytic condensers, coupling by pase condensers and a wide range of resistors Eliminates soldering densers and a wide range of resistors. until all defective parts atre located and sulssituted. A compact, portable lightwerght unit $6^{\circ}$ PM speaker. Atractive front panel with red and white lettering. Completely enclosed in black wrinkle aluminum case with leather handle. Size: $10 \frac{1}{4} \times 10 \frac{1}{4} \times 5 \frac{1}{2}$ Shpg. wi.
7 lbs.
C 21430 -Your Cost. . . . . . . . . . . . . $\$ 28.85$

(C)




ICA Aligning Kit
(A) $\mathbf{1 4}$ tools telescope into six alignment tool, alligator side wrench, $6^{\circ}$ insulated driver metal nib, ${ }^{56}{ }^{\circ 6}$ and $1_{4}$ " nut wrench, ${ }^{1 /}$ insulated square nut wrench, 1 . hex metal side wrench, 21, insuhex metal side wrench, sloted insulated wrench driver, ${ }_{3 / 15}$ hex insulated nut wrench, $5^{\circ}$ ${ }^{3} / 6$ hex insulated nut
and $6^{\prime \prime}$ insulated driver.
C15088 Kit
$\$ 4 \leq 1$
Like above, but less flexible screwdriver and aligning tool.
C15089 Your Cost
\$2.75
Neon Electrical Tester
(B) Indicates from $6010.500 \mathrm{~V} A \mathrm{C} /$ grounded circuits.

## Neon Circuit Tester

(C) Shows open circuits, polarity, in circuits. Tiny neon Checks fuses in circuits. Tiny neon lamp glows on only . ma . Coded leads have phone tips. 90-550 \%. For AC or
DC,
C11310 Each
Low Voltage Type. Range 5 to C11308

## Hex. Socket Aligner

(D) $6^{\circ}$ long with hrass $11^{\circ}$ socket iriver bit. Shaft dia. C15104 Your Cost 41 ,

## ICA Aligning Tool Set

(E) Two twols, one lits within other. Dre is $6^{*}$ long. $3 / x^{" ~ d i}$ ameter with litted brass wrenches for $1 / 4^{\prime \prime}$ and ${ }^{5} 16^{\prime \prime}$ hex nuts. Other is if rod litted with screwdriver C15083 Your Cost 7 3

## AMPHENOL

U.H.F. Aligning Tool
(F) Pure Polystyrene- no cicuits.
$15^{4}$

## 15075-Each

Aligner
(G) A low capacity screndriver bone fibre, with 2 driver nibs. Oie extends ; for padding conextensers. Other has recessed screwdriver for permeability tuned circuits.

## C15145

434

## ICA 5-in-1 Aligner Kit

(H) Combines in a fountain pen位 driver for all aligning and a fullsize insulated handle screwdriver. 3-piece set.
C15082 Your Cost..

## FIBRITE Screwdriver

(1) $7^{*}$ long; driver at both ends for all trimmer condensers C15150 7 diameter......23c C15151- ${ }_{16}$ " diameter ....... 41c
Flexible Tuning Wand
(K) For determining correct ne end brass loadied-the other core steel. Placing either end in magnetic field of coil will show inductive condition. 5

## Solid Tuning Wand

 Similar to above, except that the C14976-Your Cost Ea. 396
## Neon Test-O-Lite

(L) Will check any voltage beeither a cor do will also check ither a.c or d.e. wis also check park-plugs, radio sels, appli nom, de. Batite ashes a.c pocket clip.
C12983 Your Cost...
(M) For aligning coils, condens

4-1 Neutralizing Tool
(N) Ilas pen clip for pocket. mut wrench with aligning screwdriver. Bakelite. C14915-Your Cost 504

## Heavy Duty <br> Pencil Prod Kit

(O) Spring pronks at the end of prods allow changing from spade lugs to phone tips ar to spring Iandies are $6^{*}$ long. ${ }^{1}$ diameter. Five foot red and
black kinkless wire. Complete with two alligater cling black kinkless wire. Complete with two alligatur clips. c12971- pooint phone lips and two tapered lugs. Your Cost
$\$ 1.47$
C12882 Per Set but fixed Spring Clip Ends 73 c C12883 Per Set With Phone Tip Ends 68 c

## ICA Test Lead Kit

(P) Leatherette pocket case. With one pair of testone end has ing 60 of red and black kinkless wire; removable banana plugs. Also includes one pair each: ineulated alligator clips; insulated spade plugs; insulated needle points (all i red, I black) C12861- needle points (all 1 red, 1 black). $\$ 28$ Each.
s2.06

## Weston Type Test Leads

(R) $5^{\circ}$ long handles of red and black phenolic. With Kinkless rubber wire. Molded linger grip tip C12988 Your Cost
$\$ 1.03$

## Test Prods

(S) High grade insulated prods, available with three less phone tip with knurled collar: Type $\mathbf{B}$ has chuck and nut to hold plain phono needle: Type $C$ has banana plug to fit standard banana jack. Red or Black-specify color.

| No. | ESS PF | Each |
| :---: | :---: | :---: |
| C12881 | 51* | 24 c |
| C12884 | 63 * | 29 c |
|  | PHONO NEEDLE TIP (B) |  |
| C12868 | 13/4" | 24c |
| C12869 | 51 | 26 c |
|  | BANANA PLUG TIP (C) |  |
| C12912 | $21 / 4$. | 24c |
| C12910 | $3{ }^{3}$ | 26 c |

Alligator Clip Test Leads
(1) Has 6 red and blac c12980-Your Cost

834

## Prods and Leads

## 10,000 Volt Test Leads

(V) Safety test up to 10.000 volts. A necessity and (Vife saver for all cathode-ray tuhe work: X-ray repair jobs and transmitter work. large diameter bakelite prods 6 inches long with guarded mideet phone-tip prods on one end and 2 inch phone tips on the other end The conductors are heavy duty heavily insulated cables 18 pauge stranded tinned copper for low voltage drop gauge One lead is red, the uther black. Shpg. we. Itb. C12885-
\$2.35

## ICA "No Break' Prods

(W) Of solid brass, nickeled and covered with shock ips Other end $50^{r}$ lin black; sharp pointed solderless in ulated phone tips. C12999 Pair C13000 Same as above with standard phone tips 59c

## ICA Laboratory Prods

(X) Removable phono needle chucks. Extra-long Slim black and red handles knurled at end for easy grip. Haniles $6^{\circ}$ long with $48^{\circ}$ long heavy duty kinkless tlexible rubber wire.
C12978-Spade Tips
$8_{8}^{\text {Each }}$

## Needle and Solderless Tip Prods

(y) Chucks and nuts hold plain phonograph needles (type N). Fibre handles dong, $^{8}$ lon is solderless tip with long point. Leads $50^{*}$ long.
NEEDLE TIP PRODS (A)
No. Wire Ends
C12976_Phone Tips
C12975_Spade Lugs
C12977-Alligator. . . . . . . . . . . . . . . . . . . . . . . . . . . . .

C12977-Alligator.
SOLDERLESS TIP PLUGS (B)
C12968-Phone Tips
C12970-Alligator




Incorporate precision engineering, the finest materials and workmanship. Molded cases, all terminals nolded in. Sapphire jewels in adjust able screws. Accuracy within 2 .
D.C. Milliammeters-Round and Square Case

|  | $2^{2}{ }_{221} \text { Round }$ | $\begin{aligned} & \text { "square } \\ & 22 \overline{\mathrm{~A}} \mathrm{~A} \end{aligned}$ |  | $\begin{array}{\|c\|} 3^{*} \text { Round } \\ 321 \end{array}$ | $\begin{gathered} 3^{\circ} \text { square } \\ 327 \mathrm{~A} \end{gathered}$ |  | $\begin{aligned} & \text { quare } \\ & +26 \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rang | C112 | No |  | 1 | No. |  |  |  |
| $0-$ | C1120 | C112 |  | 11 | C113 |  |  |  |
| 0-1.5 | C11209 | C11289 | 6.08 | C11201 | C11321 | 7.35 |  |  |
| $0 \cdot 3$ | C11415 | C11290 | 6.08 | C11411 | C11322 | 7.35 |  |  |
| 0-5 | C11416 | C11298 | 5.10 | C11412 | C11323 | 6.08 | C11337 | 7.64 |
| 0-10 | C11210 | C11299 | 5.10 | C11202 | C11324 | 6.08 | C11338 | 7.64 |
| 0-15 | C11211 | C11300 | 5.10 | C11203 | C113 | 6. | C113 | 7.64 |
| 0-25 | C11398 | C11306 | 5.10 | C11394 | C11326 | 6.08 | C11340 | 7.64 |
| 0-50 | C11212 | C11309 | 5.10 | C1120:4 | C11327 | 6.68 | C11341 | 7.64 |
| 0-100 | C11213 | C11311 | 510 | C11205 | C11328 | 6.08 | C11342 | 64 |
| 0-150 | C11417 | C11312 | 5.10 | C11.113 | C11329 | 6.08 | C11343 | 7.6 |
| (0-200 | C11214 | ${ }^{C} 11313$ | 5.10 | C11205 | C11330 | 6.08 | C113 | . 64 |
| 0-250 | C11418 | C11314 | 5.10 | C11414 | C11331 | 6.08 | C11345 | 7.64 |
| 0-300 | C11287 | C11315 | 5.10 | C11395 | C11332 | 6.08 | C11346 | 7.64 |
| 0-500 | C11215 | ${ }_{C} 11316$ | 5.10 | C11207 | C11333 | 6.08 | C11347 | 7.64 |
| 0-750 | C11400 | $C 11317$ | 5.10 | C11396 | C11334 | 6.08 | C11348 | 7.64 |
| 0-1000 | C11401 | C11318 | 5.10 | C11397 | C11335 | 6.08 | C11349 |  |

## D.C. Microammeters-Round and Square Case

| $\begin{aligned} & 0-50^{*} \\ & 0-100^{*} \end{aligned}$ |  |  |  | C11352 | C11354 | \$17.05 | C11358 | \$22 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | C11353 | C11355 | 15.29 | C11359 | 20.38 |
| $0-200$ | C11432 | C11350 | \$8.92 | C11434 | C11356 | 12.45 | C11360 | 14.01 |
| 0-500 | C11433 | C11351 | 7.64 | C11435 | C11357 | 2.5 | C11361 | 14.01 | | $0-200$ | C 11432 | C 11350 | $\$ 8.92$ | C 11434 | C 11356 | 12.45 | C 11360 | 14.01 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $0-500$ | C 11433 | C 11351 | 7.64 | C 11435 | C 11357 | 9.51 | C 11361 | 10.78 |

A.C. Voltmeters-Round and Square Case

|  | $\begin{gathered} 2 \text { Round } \\ 231 \\ \hline \end{gathered}$ | $\begin{aligned} & \text { square } \\ & 237 \mathrm{~A} \end{aligned}$ |  | $\begin{gathered} 3^{*} \text { lound } \\ 331 \end{gathered}$ | $\begin{gathered} 3^{\circ} \text { Square } \\ 33^{\circ} . \mathrm{A} \end{gathered}$ |  | $\left\lvert\, \begin{gathered} 4^{\prime \prime} \text { Square } \\ 436 \end{gathered}\right.$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Range 0-5 | $\begin{aligned} & \text { No. } \\ & \text { C11280 } \end{aligned}$ | $\begin{gathered} \text { No. } \\ \text { C11449 } \end{gathered}$ | Each $\$ 5.10$ | C11273 | C11459 | Each $\$ 6.08$ | C11466 | $\begin{aligned} & \text { Each } \\ & \$ 7.64 \end{aligned}$ |
| 0-10 | C11281 | C11454 | 5.10 | C11274 | C11460 | 56.08 6.08 | C11466 C11467 | $\$ 7.64$ |
| 0-15 | C11282 | C11455 | 5.10 | C11275 | Cl1461 | 6.08 | C11468 | 7.64 7.64 |
| 0-25 | C11283 | C11456 | 5.10 | C11276 | C11462 | 6.08 | C11469 | 7.64 |
| (1-50 | C11284 | C11380 | 5.10 | C11277 | C11381 | 6.08 | C11382 | 7.64 |
| 0-150 | C11286 | Cl1457 | 6.88 | C11279 | C11463 | 7.35 | C11470 | 7.64 9.31 |
| 0-300 | C11409 | C11458 | 7.45 | C11406 | C11464 | 8.43 | C11383 | 10.29 |
| 0-15-150 |  |  |  | C11408 | C11465 | 8.60 | C11383 | 10.29 |

D. C. Voltmeters

Model 321-1000 Ohmis/Volt

| No. | Ratuge | Each |
| :---: | :---: | :---: |
| C11240 | 0-10 | $\$ 8.43$ |
| C11241 | 0-50 |  |
| $\stackrel{C 11242}{ }$ | $\begin{aligned} & 0-100 \\ & 0-150 \end{aligned}$ | \$8.72 |
| C11244 | 0-500 | 11.07 |

## D.C. Voltmeters

125 Ohms per Volt

| ModelNo. | $\begin{gathered} 1321 \\ \text { Each } \end{gathered}$ | Range | Mod |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | No. | Each |
| $\mathrm{Cl}^{\mathbf{C} 1230}$ |  | ${ }_{0}^{0-5}$ | ${ }^{\text {C11247 }}$ |  |
| ${ }_{C}^{C 11231}$ | 6.0 | - 0 | C11248 C11249 | 55.10 |
| C11233 |  | 10-25 | C11250 |  |
| C11234 | \$6.08 | 0-50 | C11251 | \$5.10 |
| C11236 |  | 0-150 | ${ }^{\text {C11253 }}$ |  |
| C11237 | \$7.35 | 0-250 | $\overline{\mathrm{C} 11254}$ | 17 |
| C11404 | 9.51 | 0-510 | C11405 | 7.74 |



## A.C. Milliammeters



| A.C. Ammeters |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Mode | Each | Amus | Mode | 1231 |
| ${ }_{C 11255}$ | \$6 | 0-1 | C11260 | \$5.10 |
| C11256 |  | +-3 | C11261 | 5.10 |
| $\begin{aligned} & \mathrm{C}_{\mathrm{C} 11257} \end{aligned}$ | \$6.08 | (0-5 | $\mathrm{C} 1262$ | \$5.10 |
| C11259 | \$7.35 | 1-25 | C11264 | . 08 |
| C11429 |  | 0-30 | C11384 | 0 |
| C11431 | 5.31 | (1)-519 | C11385 | \$7.64 |

## D.C. Ammeters

## With intermal sbunt.

| Model 321 |  |  | Model 221 |  |
| :---: | :---: | :---: | :---: | :---: |
| No. | Each | Amps |  | Each |
| C11216 |  | 0-1 | C11223 |  |
| C11372 |  | (1-3 | C11376 |  |
| C11217 |  | 0-5 | C1122 |  |
| C11218 | 9.08 | 0-10 | C11225 | S5. 10 |
| ${ }_{\text {Cl1 }}{ }^{\text {C11373 }}$ |  | (0-15 | C11377 C 1378 cher |  |
| C11375 |  | 0-30 | C11379 |  |



## TRIPLETM' D. C. Ammeters

These precision instruments incurporate the tinest materials, and are assembied by skilled craftsmen. Molded
 in. With external shunt. Prices on higher range meters, or
ammeters with current transformers, available on application.

| Amps. | $231-2 "$ No. | Kou | $\begin{gathered} 321-3^{\circ} \\ \text { No. } \end{gathered}$ | Round Each | N | Each |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.30 | C10926 | \$ 6.86 | C10937 | 58.23 | C10948 | 510.29 | C10959 | \$12.15 |
| 0-75 | C10927 | 6.86 | C10938 | 8.23 | C10949 | 10.29 | C10960 | 12.15 |
| 0-100 | C10928 | 10.39 | C10939 | 11.66 | C10950 | 13.52 | C10961 | 15.39 |
| 01.0 | C10929 | 10.39 | C10940 | 11.66 | C10951 | 13.52 | C10962 | 15.39 |
| 0200 | C10930 | 10.39 | C10941 | 11.66 | C10952 | 13.52 | C10963 | 15.39 |
| 0-300 | C10931 | 11.37 | 10942 | 12.45 | C10953 | 14.31 | C10964 | 16.37 |

NOTE: These meters also available in ranges up to 1000 amps.


| Thermo-Ammeters with Built-in Couples |  |  |  |  | Thermo-Ammeters with External Couple |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| For r.f. mensurements, ant. radia- |  |  |  |  | Model 341 |  |  | Model 241 |  |
| tion indications etc. |  |  |  |  | $3^{*}$ Round |  | Amps. | ${ }^{2}{ }^{*}$ Round |  |
| Mindel 341 <br> $3^{\prime \prime}$ Round |  |  | Model | 347A | No. | Cost |  | No. | Each |
|  |  |  | 3 Ma |  | C11389 |  | 0.5 | C11428 |  |
| No. | Each | Amps. | No. | Earh | C11391 |  | 1.0 | C11425 |  |
| $\bar{C} 11229$ | \$7.06 | 0.5 | C11220 | \$7.06 | C11390 | 0.39 | 1.5 | C11430 | 31 |
| C11235 | 7.06 | 1.0 | C11221 | 7.06 | C11392 |  | 2.5 | Ci1426 |  |
| C11238 | 7.06 | 1.5 | C11222 | 7.06 | C11393 |  | 5.0 | C11427 |  |
| C11239 | 7.06 | 2.5 | C11227 | 7.06 | Replac | ement |  |  |  |
| C11246 | 7.06 | 3.0 | C11228 | 7.06 | any ra | ge, sp | pecisy | . Eac | \$3.75 |

## 1000 Ohms-per-Volt Foundation Meters



0-1 d.c. milliammeter Foundation Instruments with internal esistance of 100 ohms ( 10000 ohmsver volt: Scales read: 0-10-50 $250500-1000$ vols; $0-1-10-, x)-2 . x$ milliamperes; low ohms, 2
to 20 ; high ohms to 100,000 . Shpg, wt. cach,

 C11285—Mode! 726. 7 Spuare 10.98
18.23 N C TRIPLETT equipment not listed on this page Serd for FREE TRIPLETT catalog and write us your requirements. Your correspondence will receive prompt and courteous attention.

## LITTELFUSES For Test Instruments



Protect delicate instruments. Break circuit immediately on reaching blow point. Jenyth
1 diam. Alay be used on 250 voits, AC or DC. Iligh Speed action. Type 8AG

| Stork No. | $\begin{aligned} & \text { Rat } \\ & \text { img } \\ & \text { inms. } \end{aligned}$ | $\begin{aligned} & \text { l.oad } \\ & \text { Mia. } \end{aligned}$ |  | Your Cest Each | Your <br> Cost <br> Per 100 | $V M$ Ohms Per V . | TolProtect Millianmeters |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C12339 | 1200 | , | 480 | 18 c | \$14.70 | over 1000) | Galv. |
| $\begin{aligned} & \text { C12385 } \\ & \text { C12396 } \end{aligned}$ | 110110 | 10 | $\begin{aligned} & 160 \\ & 46 \end{aligned}$ | $126$ | $\$ 9.80$ | $\begin{gathered} 1(000 \\ 50010(0) \end{gathered}$ | $\begin{aligned} & \text { up } 100-1 \\ & 110 \end{aligned}$ |
| C12387 | 118 | 60 | 5 |  |  | 100.300 | 1025 |
| $\begin{aligned} & \text { C12388 } \\ & \text { C12390 } \end{aligned}$ | 38 | 100 200 | 3.5 |  |  | 20-1(0) | -5 |
| C12391 | 8 | 300 | 3. |  |  | 1020 $5-10$ | 75150 <br> 150 <br> 50 |
| C12392 | 12 | 400 | 2 |  |  | 3-5 | 2503.50 |
| C1239 | $3 / 4$ | 600 | 2 |  |  |  | 350, 30 |
| C12394 <br> C12395 | $1$ | $1000$ | $24$ | $64$ | 9 |  | $510750$ |


"Meter Back'
Fuse Niount Mounts directly on Will not touch other posts. Takes $1 \times 1 / 6$ instrument fuses only.
C11049-Your Cost, Each$12^{9}$


## SHURITE METERS

Model 550, round, with clamp (A). Model 950, square, flange mounted (B) Black enamel finish. Both require $2 \%$ hole. DC polarized-vane solenoid type; AC double-vane repulsion
D.C. MILLIAMMETERS

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Each |  |  |  |
| 111 | S1.96 |  |  |  |
| c1105 | 1.81 | 0-5 |  |  |
| C1111 | 1.71 | 0-10 |  |  |
| C11101 | 1.32 | 0-15 | c111 | 1.47 |
| C111102 | 1.27 | (1-25) | C1111 | 42 |
| C11103 | 1.27 | 0-50 | C11 |  |
| c11104 | 1.27 | 0-100 | C1 |  |
| c11105 | 1.27 | 0-150 | C1 |  |
| 11 | 1.27 | 0-200 | c111 | 1.42 |
| C11107 | 1.27 | 0-300 | C1115 |  |
| C11108 | 1.22 | -100 | C11159 |  |
|  | D.c | M |  |  |
|  | 1.2 |  |  |  |
| C11092 | 1.27 | 0-3 | C11163 |  |
| C11093 | 1.27 | 0-5 | C11164 | 1.42 |
| C11094 | 1.27 | 0-10 | C111165 |  |
| C11096 | 1.27 | 3-n-3 | c111 |  |
| C11097 | 1.27 | 6-10-6 | C11168 |  |
| 1098 | 1.27 | 114-0-10 | C11169 | 1.42 |
| C11099 | 1.37 | 20-10-20 | C11170 | 1.5 |
|  |  | LLIA | MET |  |
| 108 |  |  | C11000 |  |
|  | 30 | 0-100 | C110 |  |
| C11089 | 2.30 | (1-250 | C1100 |  |
| C11090 | 2.30 | $0-50$ | C11003 |  |
|  | A.C. | AN | ERS |  |
|  | \$2.30 |  |  |  |
| C11082 | 20 | 0-3 | C11005 |  |
| 1083 | 2.30 | $0-5$ | C1100 |  |
| 1084 | 2.30 | a-10 | C11007 |  |
| 1085 | 2.94 | (1)50 | C11008 |  |



## MARION Multi-Ranger Meters

Foundation meter is designed to permit the user to assemble a highly accurate Volt-Ohm-Milliammeter, Have full 100 degree three-color scales. Uses the new Alnico magnet. Scale readings are $\mathrm{AC}-1)$ C Volts $0-10$, s. Miniamps 0-1, 0-10, 0-50, 0-500 Milliamps. Ohm electrically interchangeable sizes.

| Stock No. | Miodel | Size | Your Cost |
| :---: | :---: | :---: | :---: |
| C10720 | 53SN | $3^{\prime \prime}$ Square | \$7.84 |
| C10721 | 55 | $45.841 / 8{ }^{\circ}$ | 9.80 |
| C10722 | 57 S | 7"x8 ${ }^{\text {a }}$ | 13.06 |

## Shunt and Resistor Kit

Kit for Marion Multi-Ranger foundation meter. Consists of 14 metalized carbon film resistors and 4 Manganin wire wound shunts. Complete with
schematic diagrans.
C10719. Your Cost............................................... C10719. Your Cost

## MARION Hermetically Sealed Meters

(0) These precision meters will withstand extremes in temperature without affecting the calibration. Heavy steel case affords magnetic and electrostatic shielding for use with hi-freq. equipment. Protected permanently against dirt, dust and moisture
Guaranteed! If seal has not been broken, meters will be replaced FREE within 6 months from date of purchase; after 6 months, provided seal has not been broken, meters will be replaced at a charge of $\$ 1.50$ to $\$ 2.50$, depending on sensitivity. Guarantee applies regardless of electrical use or misuse of meter

|  |  |  |  |  | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stock No. } \\ & \text { C10723 } \end{aligned}$ | Range | $\begin{aligned} & \text { Your Cost } \\ & \$ 7.67 \end{aligned}$ | Stock No. <br> C10728 | $\begin{aligned} & \text { Range } \\ & 0-100 \end{aligned}$ |  |
| C10724 | 0-5 |  | C1 | 0-200 | \$7-18 |
| C10725 C10726 | 0-10 0 |  | C107:0 | $0-300$ |  |
| $\begin{aligned} & \text { C10726 } \\ & \text { C10727 } \end{aligned}$ | 0-25 0 |  | C107.0 C10731 | $\begin{aligned} & 0-300 \\ & 0-500 \end{aligned}$ |  |
| Stock No.C10732$\mathbf{C 1 0 7 3 3}$ |  | D.C. MICROAMMETER' |  |  | Your Cost$\$ 9.48$$\mathbf{8 . 6 5}$ |
|  | Rang | Your Cost | Stock No. | Range |  |
|  | $0-50$ $0-10$ | $\begin{array}{r} \$ 14.70 \\ 11.44 \end{array}$ | C10734 C10735 | $0-200$ $0-500$ |  |
| $\begin{gathered} \text { Stock No. } \\ \text { C10736 } \\ \text { C10737 } \end{gathered}$ |  | D.C. AMMETERS |  |  | $\begin{aligned} & \text { Your Cost } \\ & \$ 7.18 \end{aligned}$ |
|  | n | Your Cost | Stock No | 12 |  |
|  | 0-10 | \$7.18 | C10738 |  |  |
|  | 0-15 | 7.18 |  |  |  |
| $\begin{gathered} \text { Stock No. } \\ \text { C10739 } \\ \mathbf{C 1 0 7 4 0} \end{gathered}$ | D.C. <br> Range <br> $0-10$ $0-50$ | VOLTMETER | (1000 ohms per volt) |  | our Cost$\$ 9.31$ |
|  |  | Your Cost | Stock No. | Range |  |
|  |  | \$8.82 | C10741 | 0150 |  |
|  |  | 9.14 | C10742 | 0-500 | 10.12 |
|  |  | A.C. VOLTMETER |  |  | $\begin{aligned} & \text { Your Cost } \\ & \$ 10.78 \\ & 10.95 \end{aligned}$ |
| Stock No. | Rang | Your Cost | Stock No. | Range |  |
| C10743 | 0-15 | \$10.29 | C10745 | 0-150 |  |
| C10744 | 050 | 10.61 | C10746 | 0250 |  |
| Interchangaeble round and c10747-Square 3 c10748 - Round 31 . Your |  | d square flanges for above meters. |  |  |  |
|  |  | $\cdots \cdots \cdot \mathbf{4 4 c} c$ |  |
|  |  | Your Cost |  |  |  |

## Shurite.mlarion meters



Instrument Rectifiers
General replacement rectifiers for all types of meters and relays.
Type $E$ for applications requiring more than one milliamp current output. Disc diameter .50 inch.
Type $F$ for applications requiring good frequency response and less than one mil. current output.
Type G. Same characteristics as Type F but outside cise small enough to fit standard midget fuse clip. Ratings shown are continuous peak ratings. Intermittent ratings are twice ligures shown. Instantancous ratings are three times the figures Shown.

| Stock |  |  | Rating |  | Your |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Diag. | Fig. | Volts | M. A. | Cos |
| C10569 | 1 | E | 10 | 30 | \$2.06 |
| C10550 | 2 | E | 5 | 30 | 1.59 |
| C10551 | 3 | E | 10 | 30 | 1.59 |
| C10552 | 4 | E | 5 | 30 | . 88 |
| C10572 | 1 | F | 10 | 5 | 2.06 |
| C10553 | 2 | F | 5 | 5 | 1.59 |
| C10554 | 3 | F | 10 | 5 | 1.59 |
| C10555 | 4 | F | 5 | 5 | . 88 |
| C10556 | 1 | G | 10 | 5 | 2.0 |



BRADLEY Universal Rectifier (H) New "Coprox" model CX2E4U copneeds within the rectifier rating. Circuit uses include:

Half wave
Double half wave
Full wave.
6 volts AC 3ma DC 12 volts AC 3ma DC

6 volts AC 3ma DC


Full wave bridge
12 volts AC $5 m a \mathrm{D}$
Your Cos

| $A C 5 m a$ |
| :--- |
| $\$ 2 C$ |
| 20 |

## ELECTROX Rectifier Units

Full wave copper oxide rectifier in
metal housing with four insulated 3 -inch leads. Continuous output of 5 ma at max. of 3 volts DC. Max. input 4 volts
AC.
$\$ 2.59$
(K) Full wave copper oxide rectifier in bakelite housing with five insulated 3 -inch leads. Continuous output of 20 ma AC.
AC
C10567-Your Cost ...... \$1, \$5
(L) Full wave copper oxide rectifier with five insulated 3 -inch leads. ContinuDC. Max. input 4.1 volts AC. $\$ 15$

## BRUJAC Meter Rectifier

(M) Replacement for meter circuits vary mps will siand amps. Size ${ }^{1 / 4} \mathrm{x}^{3} \mathrm{n}^{4}$.
 2.95

## RCA Testpoint Adaptoz Set

(N) Permits point to point and stage by stage testing of receivers and amplifiers above the chassis, without removing rom the cabinet. V'oltage tests and signal tracing accomplished at the tube base after inserting in the adaptor and replaced in the tube socket. Complete set consists of one each of $4,5,6$, and 7 prong sniall, 7 prong large, octal and loktal types mounted on attractive wooden base. Shpg wt. 2 lbs.
Shpg. wt. 2 lbs.
C21773-Your Cost
$\$ 7.50$

## （ SpRave

## SPRAGUE＂ATOMS＂Ultra－Compact Dry Electrolytics

Ulira－compact capacitors sealed in tubes with outer insulating sleeve，
Protected against＂Blow－ups．＂ All have $31 / 2^{\circ}$ bare wire leards riv－ eted to end caps．

| No． | Mfd． | Whg | V．D．－L． | Each |
| :---: | :---: | :---: | :---: | :---: |
| C769 | 10 | 25 |  | 44 c |
| C770 | 25 | 25 | 9／6x15 ${ }^{\text {\％}}$ | 50 c |
| C2680 | 5 | 50 | 916x ${ }^{15 / 8}$ | 44 e |
| C2682 | 10 | 50 | 116x15\％ | 47c |
| C771 | 25 | 50 | $5 \times 15$ | 53 c |
| C2841 | 50 | 50 | $11 / 16178$ | 62. |
| C772 | 4 | 150 | $5 \mathrm{mxI}{ }^{5}$ 名 | 44 c |
| C773 | 8 | 150 | 8／6x15／8 | 47 c |
| C774 | 12 | 150 | 3／8x15\％ | 50c |
| C775 | 16 | 150 | ${ }^{31} 10 . \mathrm{S} 1^{5}$ 8 | 53 c |
| C776 | 20 | 150 | ${ }^{3} \mathrm{i} 11^{5}$ | 56 c |
| C2840 | 30 | 150 | 13 ir $\times 17$ \％ | 59 c |
| C777 | 40 | 150 | $7 \times 1{ }^{7}$ | 65 e |
| C778 | 4 | 4.50 | 3的15 | 53 c |
| C779 | 8 | 4.50 | 3 ¢x15 | 56 c |
| C780 | 12 | 450 | $78 \times 15$ | 68 c |
| C781 | 16 | 450 | $13{ }_{16} \times 2$ ！ 8 | 79 c |
| C782 | 20 | 450 |  | 88c |
| C783 | 10－10t | 50 | ${ }_{5} \times{ }^{2} 2^{4}$ | 68 c |
| C3164 | 8－8＊ | 150 | $58 \times 238$ | 68 c |
| C2842 | 12－30＊ | 150 | ${ }^{11} 1{ }^{1} \times 22^{3} 8$ | 73 c |
| C3165 | 20－20＊ | 150 | ${ }^{3} \times 1 \times 2$ | 76 c |

## Type＂ELe＂Prong－Base

 Dry Electrolytics

In uninsulated metal cans with self－ mounting feature metal ears bend back under chassis． Lug terninals are conded．All are per－ fectly sealed and are imper vious to mois ture．Bakelite and metal mts．plates listed below at right．


## 400 VOLTS WORKKING

No．Mid．${ }_{2}$ Dimen．，Each
C2779 C2780 $22_{8}^{3} \times 1,8 \times 1 / 8 \quad 1.06$ 600 VOLTS WORKING $\begin{array}{llll}C 2781 & 1 & 23,{ }_{3} \times 118,16 \times 11 / 8 & \$ 0.82\end{array}$ 1000 VOLTS＇S WORVIGNG



No．Mfd．Wkg．V．D．－L．Eaeb C2683 20－20† $1.50 \quad 1 \times 2^{-8} \quad \$ 1.18$

| C744 | 20－30＊ | 150 | $7{ }_{3} \times 2^{3} 8$ | ． 82 |
| :---: | :---: | :---: | :---: | :---: |
| C797 | 30－．．1）＊ | 1.00 | ${ }_{16}^{16} 122^{3} 8$ | ． 88 |
| C745 | 20－40＊＊ | 150 | ${ }^{1} / 16 \times 2{ }^{3}$ | ． 88 |
| C746 | 40－30＊ | 150 | $1 \times 2{ }^{3} 8$ | ． 94 |

Photo Flash Brochure
Sprasue＇s complete Brochure on Photoflash，Jrinciples，Ilow to Build 1－lash Unit，how to Use． C19997
$25^{4}$
Your Cost
el－U－How Write for
C19999－FREE．

## ＂LM＂Cardboard Tube Compact

## Dry Electrolytics

All provided with universal mtg．lugs that can be soldered on top of chassis， anchored with
screws or extended through holes in chassis and bent under．All have sep－ arate neyative and ends are well scaled with high melting point com－ pound；units are moisture proof． $\begin{array}{ccccc}\text { Stock } & \text { Cap．} & \text { Wkg．} & \text { Size } & \text { Your } \\ \text { No．} & \text { Mfd．} & \text { VIts．} & \text { D－L．} & \text { Cost }\end{array}$
 C2665
C2665
C2666

$\begin{array}{lllll}C 2669 & 8-8 & 450 & 1 \times 3 & 1.65 \\ 8-16 & 450 & 13 & 1 \times 33 & 159\end{array}$


## Type AP Hi－Voltage Can



Dry Electrolyic for public ad dress and theater applications where working voltage is high and surge voltage runs over 600 ．
Stock Voltage Dim．Your
No．Mid．DCW Surge D L Cost

| $\mathbf{C 2 7 7 6}$ | 4 | 600 | 800 | 1 | $4 z_{10}$ | $\mathbf{S 1 . 7 6}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | | $C 2777$ | 8 | 600 | 800 | $1^{3}$ 夕 | 47 í6 |
| :--- | :--- | :--- | :--- | :--- | :--- |

## Type PLS

＂Tiny Mince＂
Dry electrolytic can type．May be mounted in any position．Stand－ ard through－chassis by $t$ hreaded bushing on can which is completely in－ sulated from the sec－ tions．Separate positive nd negatill size Ex－ iremely small size made possible by use of exclusive Sprague etched foil
process．
450VoltsWorking 525 SurgeVolts

| Stk． <br> No． | Cap． <br> Mid | $\left\lvert\, \begin{aligned} & \text { No } \\ & \text { Lea } \end{aligned}\right.$ | l）imen． Dia．Lg． | Your <br> Cost |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{C 2 7 9 5}$ | 4 | 2 | $\times{ }^{3} 3 / 4$ | \＄1．00 |
| C2796 | 8 | 2 | $1 \begin{aligned} & 1 \\ & \text { x }\end{aligned}$ | 1.03 |
| C2797 | 12 | 2 | $x 3$ | 1.26 |
| C2798 | 16 | 2 | $1 \begin{aligned} & 1 \times 3\end{aligned}$ | 1.41 |
| C2786 | 20 | 2 | $13{ }^{3} \times 215$ 化 | 1.56 |
| C 2787 | 25 | 2 | $13^{3} \times 3$ ？ 16 | 1.68 |
| C2788 | 30 | 2 | $13^{3} \times 3{ }^{1} 16$ | 1.76 |
| C2789 | 40 | 2 | $13.8 \times 3{ }^{15} 16$ | 2.00 |
| C2790 | 4－8 | 4 | $1^{8} 8 \times 22^{15} 4$ | 1.47 |
| C2799 | 8.8 | 4 | $1^{1} 2^{\times 2} 2^{15}$ | 1.62 |
| C2791 | 816 | 4 | $1{ }^{1} 4^{7} 16$ | 1.91 |
| C2801 | 16－16 | 4 | $11 . \times 3{ }^{7}$ | 2.06 |
| C2800 | 8－8－8 | 6 | $11 \times 2{ }^{15}$ | 2.5 |

## 600 Peak Volt <br> Replacement Drys

Highly formed dry electrolytics especially designed to replace wet electrolytics．Guaranteed to carry the ac ripple．Similar in appear－ ance to PLS units

| $\begin{array}{c}\text { Stock } \\ \text { No．}\end{array} \begin{array}{c}\text { Cap．} \\ \text { Mfd．}\end{array}$ | $\begin{array}{c}\text { Replaces } \\ \text { Wet }\end{array}$ | $\begin{array}{c}\text { Your } \\ \text { Cost }\end{array}$ |  |
| :---: | :---: | :---: | :---: |
| $\mathbf{C 2 5 1 5}$ | 8 | 4 to 8 mfd. | $\$ 1.47$ |

$\begin{array}{lrrrr}\mathbf{C 2 5 1 5} & 8 & 4 \text { to } 8 \mathrm{mfd} . & \$ 1.47 \\ \mathbf{C 2 5 1 6} & 16 & 12 \text { to } 18 \mathrm{~m} \text { id．} & 2.20 \\ \mathbf{C} 2517 & 25 & 20\end{array}$

## Photo－Flash Condensers

 | 9 |
| :--- |
|  | each $.01,02, .1$ and one .25 all 600 v C2676－Your cost

Paper Tubular Kit of 10 condensers Contains four ．．．\＄2，283 C2677－1．All 600 V C2677－Your Cost
Kit of 5 Atom electrolytics．Contains two 8 md at 450 v ．one 0 C2678 Your Cost
$\$ 2.97$
Kit of 5 Atom electrolytics．Contains two $20 / 20$ ，one 16 mfl each 8． 20 at 450 V ．
\＄3．49

## ＂IF＂Noise Filters



Small compact units for elimination of electrical noise．${ }^{1}$ ypes 1 F 15 and $1 F 21$ for small motors．＇I ype 11 for 1 I1 motors or larger．Type IF S 1 for thermo－ stats．relays，door－bells，etc．lype IF 37 for single sluorescent lamps．All rated 220 V AC－DC．

No．Sprague sec．Size Each No．Sprague Sec Size Each



## WBLUE BEAVER <br> Type BR Dry Electrolytics

Extremely small and very handy to use. Feature: Electro-Chemical tching that eliminates corrosion; Hi-Formation Process that afords higher voltage breakdown; Hi-Pressure Centrifuge that provides better impregnation and gives a lower power factor

| No. | Mdd. | Wkg. 17 ts | In. | Each | No. | Mfd. | Wkg. VIts. | In. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1090 | 10 | 25 | 8/8×11/16 | \$0.44 | C1104 | 40 | 150 | $3 / 4 \times 2$ | \$0.65 |
| C1091 | 20 | 25 | 5/8x11/6 | . 47 | C1105 | 4 | 250 | $888 \times 116$ | . 47 |
| C1092 | 25 | 25 | 8/8x11 ${ }^{16}$ | . 50 | C1106 | 8 | 250 | $5 / 8 \times 13 / 16$ | . 47 |
| C1093 | 50 | 25 | 5,819\%16 | . 56 | C1107 | 12 | 250 | 5,8x2 | 57 |
| C1094 | 5 | 50 | $5 / 8 \times 1$ ! 16 | .44 | C1108 | 16 | 250 | $3 \times 1{ }^{11} 16$ | . 61 |
| C1095 | 10 | 50 | $8 / 8 \times 11 / 16$ | . 47 | C1109 | 20 | 250 | $3 \times 1110$ | . 71 |
| C1096 | 20 | 50 | $3 \times 17{ }^{16}$ | . 50 | C1110 | 40 | 250 | 7 $7 \times 21 / 2$ | . 82 |
| C1097 | 25 | 50 | 3.8×17\% | . 53 | C1111 |  | 450 | 5/8×1716 | . 53 |
| C1098 | 50 | 50 | $5 / 8 \times 1{ }^{11} 16$ | . 62 | C1112 | 8 | 450 | $3 / 4 \times 2$ | . 56 |
| C1099 | 4 | 150 | 5 \% x $11 / 16$ | . 44 | C1113 | 12 | 450 | $7 / 8 \times 2$ | . 68 |
| C1100 | 8 | 150 | 5/811/16 | . 47 | C1114 | 16 | 450 | $7 / 8 \times 2 \frac{1}{2}$ | . 79 |
| C1101 | 12 | 150 | $5{ }_{5} \times 1{ }^{1} 16$ | . 50 | C1115 | 20 | 450 | $1 \times 2 \frac{1}{2}$ | . 88 |
| C1102 | 16 | 1.50 | 5,8x 1 $^{7} 16$ | . 53 | C1055 | 30 | 450 | $1 \times 3$ | . 97 |
| C1103 | 20 | 1.50 | $38 \times 111 / 16$ | . 56 | C1116 | 8 | 500 | $7 / 8 \times 1116$ | . 76 |
| C1054 | 30 | 150 | ${ }^{3} \mathrm{x}$ 2 | . 57 | C1117 | 16 | 500 | $1 \times 2$ ! 2 | 1.18 |


"BRL" Dual Beavers (Comit. Neg.)
Dual "Beavers", with common negative. Provided with sturdy center mounting strap; only one screw mounts to chassis. With long color-coded leads.

| No. | Mfd. | VIts | , | Each | No. | Mi | Wkg. Vits. | In. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1118 | 5-3 | 25 | ${ }_{5}^{5} 8 \times 1{ }^{3} \frac{1}{4}$ | \$0.56 | C1124 | 20-20 | 150 | ${ }^{7}{ }_{8} \times 21 / 2$ | 0.76 |
| C1119 | 10-10 | 25 | ${ }_{5}^{5} 8 \times 1{ }^{3}{ }^{3}$ | . 62 | C1125 | 8-16 | 250 | 7/8x23, | 94 |
| C1120 | 5-5 | 50 | ${ }^{5} 8{ }^{13}$ | . 68 | C1126 | 16-16 | 250 | $1 \times 23$ | . 00 |
| ${ }_{C 1122}$ | 10-10 | 50 | ${ }^{5} \times 1 \times 21 / 4$ | . 68 | C1127 | S-8 | 450 | $1 \times 23$ | 1.00 |
| C1123 | ${ }_{8-16}^{8-8}$ | 150 | ${ }^{13} 16 \times 21 / 4$ | . 71 | C1128 | 8-16 | 450 | $1166 \times 31 / 4$ | 1.18 |

## "UP // Dry Electrolytics

 Smallest can type dry electrolytics. Hermum cans with terminal lugs on bakelite insulating cover. Can negative. Projecting tongues for vertical mounting on chassis or sakelite mounting plate. Tongues have wire holes. Feature low leakage and power factor, depentable operation over wide temperature range.
Mrd.
10
20
40
$20-20$
$30-30$
$50-50$
$20-20$
$10-10$

$50-50-30$ | 1 IS. |
| :--- |
| 450 |
| 450 |
| 450 |
| 150 |
| 150 |
| 150 |
| 250 |
| 450 |
| 25 | range.



Dry Electrolytics Extremely compactetched color coded leads. May be mounted in any position sub-panel. Seamless belown metal can equipped nished with long insulated. color coded leads. Duai unts have separate

| 450 Volts DC Working |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock | Cap. | Size |  |
| No. | Mfd. | Ins. | Cost |
| C1295 | 4 | $1 \times 215$ | \$1.00 |
| C1296 | 8 | x'21/2 | 1.03 |
| C1297 | 12 | $\mathrm{x} 21 / 2$ | 1.26 |
| C1298 | 16 | $1 \times 31 / 2$ | 1.41 |
| C1299 | 4-8 | 18/63 | 1.47 |
| C1300 | 8-8 | 13:83 | 1.62 |
| C1354 | 8-16 | $188 \times 412$ | 1.91 |
| C1302 | 88-8 | 1848412 | 2.50 |
| 600 Volts D.C. Working |  |  |  |
| Stock | Cap. | Size | Your |
| No. | Mifd. | In. | Cost |
| C1050 | 8 | $18 / 8 \times 1 / 2$ | \$2.35 |
| C1051 | 16 | 13294 3 | 2.94 |

Type "WR" Dry to Replace Wet Electrolytics

## Dry electrolytic capaci-

 cans especially designed o replace wet electrolytic terminal. Rated at 450 W. V. in four universal ypes. The 10 mid . dry nits will replace wet elec 20 mfd ., 16 to 20 mfd ., 30 mid . 20 to 30 mid., 40 mfd . 30 to 40 No. Mfd. Size Each Quadruple Unit, Common Neg,

# Tubular Capacitors 

(Conell ©ubuller CONDENSERS

Compact tubular metal can type units designed to withstand severe climatic conditions. Noninductively wound, impregnated and filled with Dykanol 10 m
sulation resistance.


## "DA" Metal Cased Paper By-Pass Condensers



Non-inductively mpregnated and oil cooled


Compact ntica condensers in molded bakelite housings. It ith wire leads. Individually tested; will rive dependable service. 1 ype 1 W (ing. A)
is ${ }^{13} \mathrm{X}^{13}$ is ; type 5 W (ig. I3) areonly ${ }^{5} \mathrm{x}^{16}$. 16 . All are 1000 volts iest, 500 volts $D C$ working except sizes higher than OOO mind. Which are 600 volts test, 300 volts DC working.
No. $\quad$ Nifd. Each

| No. <br> C1355 | Mid. | F ${ }_{\text {B }}$ | Each |
| :---: | :---: | :---: | :---: |
| C1356 | 10002 | B | 15c |
| C1357 | . 100025 | B | 15c |
| C1353 | . 00005 | 13 | 12 c |
| C1359 | . 0001 | B | 12c |
| C1360 | . 00015 | 13 | 12c |
| C1361 | . 0002 | B | 12c |
| C1362 | . 00025 | B | 15c |
| C1363 | . 0005 | B | 15c |
| c. 1364 | . 001 | A | 28c |
| C1366 | . 002 | A | 24c |
| C1367 | . 003 | A | 29c |
| C1372 | . 004 | A | 32 c |
| C1373 | . 005 | A | 35c |
| C1374 | . 006 | A | 44c |
| C1377 | . 01 | A | 71c |


ed Kraft tis ues, Wax impregnated ube, wax-potted ends, oil-cooled Conservative $D C$ rating.

|  | 400 Volts D.C. Wk |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| No. | Mifd. EachNo. Nifd. Each |  |  |  |
|  | . 01 | 15c C1228 | . 06 | 21 c |
| C1222 | . 015 | 15c C1229 |  | 21. |
| C1223 | . 02 | 15c C1230 | 2 | 24 c |
| C1224 | . 025 | 15c C1231 | 25 | 26 |
| C1225 | 03 | 15 c C1232 | 5 | 35 c |
| C1226 | . 04 | 15c C1233 |  | 53 c |
| C1227 | 05 | 18c |  |  |
|  | 600 Volts D.C. Wk |  |  |  |
| C1234 | .0001 | 15 c C1247 | . 02 | 18c |
| C1235 | . OOO25 | 15c C1249 | . 03 | 21 |
| C1237 | . 001 | 15c C1250 | . 04 | 21 |
| C1238 | . 002 | 15c c1251 | . 05 | 24. |
| C1240 | (1)4 | 15c C1252 | . 06 | 24 |
| C1241 | . 005 | 15c C1253 | 1 | 26 |
| C1242 | . 006 | 15c C1255 | 25 | 32 |
| C1245 | . 01 | 18c c1257 | 5 | 47 |
|  | 1600 | Voits D.C. |  |  |
| Oil impregnated units especially de- |  |  |  |  |
| signe | for auto | radio use. |  |  |
| C1262 | (605 | 32c C1269 | . 03 | 35 |
| C1264 | . 007 | 32c C1270 | 04 | 38 |
| C1266 | . 01 | 35 c C1271 | . 05 |  |
| C1258 | (12 | 35c |  |  |



Etched foil plectrolytic capacitors that are widely employed in port able radio power rectifying circuits electric fence devices, etc. In drawn aluminum cans with cardboard sleeves. Mfd

| No. | Mfd | olts | Size | a |
| :---: | :---: | :---: | :---: | :---: |
| C2567 | 100 | 6 | 3/8x1 | 0. |
| C2568 | 500 | 6 |  | 1.0 |
| C2569 | 1000 | 6 | $\times 2$ | 1.32 |
| C2573 | 1500 | 6 | x | 1.76 |
| C2574 | 2000 | 6 |  | 2.29 |
| C2575 | 100 | 12 | ${ }_{5}^{6} \times 1$ | 1 |
| C2577 | 500 | 12 |  | 1.12 |
| C2578 | 100 | 15 |  | 1.00 |
| C2579 | 100 | 25 | $8,8 \times 2$ | 7 |
| C2553 | E(0) | 25 | $1 \times 21.2$ | 1.3 |
| C2554 | 100 | 50 | 3 $\times 2$ |  |



Designed for use in electronic cir cuits where frequency stability must be maintained. Nolded in ow-loss red bikelite and provided with tinned brass wire leads. Al units rated 500 voits d.c. working 1000 volts d.c. test except on capacities higher than .0025 which are rated at 300 V. d.c. whg., 600 volts d.c. test.

$$
\text { Type B-7 } \mathrm{f}^{11} \mathrm{f}_{\mathrm{n}}
$$

No. Mffl. Each No. Mfd. Each
C1352 00001 24c C1387.0002 26c
C1353 000025 24c C1388.00025 26c

| C 1371 | .00004 | 24 c | C 1389 | .0003 | 32 c |
| :--- | :--- | :--- | :--- | :--- | :--- |
| C 1383 | .00005 | 24 c | $\mathbf{C} 1390$ | .0004 | 38 c |

$\begin{array}{llllll}\text { C1383 } & .00005 & 24 c & \text { C1390 } & .0004 & \text { 31c } \\ \text { C1384 } & .00007 & \mathbf{2 4 c} & \text { C1391 } & 0005 & \text { 41c }\end{array}$
$\begin{array}{ccc}C 1385.0001 & 24 c\end{array}$
Type A- ${ }^{13}, 16$ " Square

C1392 .001 $50.65 \mid C 1396.003 \$ 1.21$ | C1393 | .0015 | .79 | C1397 | .004 | $\mathbf{1 . 2 6}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| C1394 | .002 | .79 | c1398 | .005 | 1.32 | c C1395 .0025 1.06

# (MALIORY Conotishe 

## TC Dry Electrolytics



Small dependable hermetically sealed aluminum case type condensers. Supplied with leads and insulating tube. Ideal for under chassis mounting. Can be used under all climatic conditions. Average diameter one inch. Single Section-Type TC.

| Stock No. | Cap. Mtd. | Wkg. <br> Volts | Your Cost |
| :---: | :---: | :---: | :---: |
| C829 | 1000 | 3 | \$1.06 |
| C830 | 500 | 6 | 1.00 |
| C831 | 1000 | 6 | 1.32 |
| C832 | 500 | 15 | 1.23 |
| C848 | 10 | 25 | . 44 |
| C875 | 25 | 25 | . 50 |
| C876 | 50 | 25 | . 57 |
| C833 | 100 | 25 | . 71 |
| C987 | 10 | 50 | . 47 |
| C897 | 25 | 50 | . 53 |
| C898 | 50 | 50 | . 62 |
| C834 | 5 | 150 | . 44 |
| C835 | 10 | 150 | . 50 |
| C836 | 15 | 150 | . 53 |
| C837 | 20 | 150 | . 56 |
| C882 | 30 | 150 | . 57 |
| C988 | 40 | 150 | . 65 |
| C838 | 50 | 150 | .71 |
| C839 | 60 | 150 | . 76 |
| C840 | 10 | 250 | . 56 |
| C841 | 20 | 250 | . 71 |
| C842 | 10 | 350 | . 57 |
| C843 | 20 | 3.50 | .76 |
| C844 | 5 | 450 | . 53 |
| C888 | 8 | 450 | . 56 |
| C889 | 10 | 450 | . 62 |
| C845 | 15 | 450 | . 76 |
| C846 | 20 | 450 | . 88 |
| C847 | 30 | 450 | . 97 |
| C849 | 40 | 450 | 1.18 |
| C850 | 10 | 500 | 1.59 |
| C851 | 10 | 600 | 1.73 |

"TP" Paper Tubulars


Oil treated non-inductive units, wax filled and impregnated. All tripie sealed. Not affected by have wire leads. conditions. All No wire leads.

| No. | Mfd. | Volts | Each |
| :---: | :---: | :---: | :---: |
| C3896 | . 01 | 400. | . 15 c |
| C3897 | . 02 | 400. | 15c |
| C3898 | . 05 | 400 | 18c |
| C3899 | . 1 | 400. | 21c |
| C3818 | . 2 | 400 | 24 c |
| C3900 | 25 | 400. | 26c |
| C3901 | . 5 | 400. | 35 c |
| C3819 | 1.0 | 400. | 53 c |
| C3902 | .0001 | 600. | 15c. |
| C3903 | 00025 | 600. | 15c |
| C3904 | . 0005 | 600 | 15c |
| C3905 | . 001 | 600. | 15c |
| C3906 | . 002 | 600. | 15c |
| C3907 | . 005 | 600 | 15c |
| C3908 | . 006 | 600 | 15c |
| C3909 | . 01 | 600 | 18c |
| C3910 | . 02 | 600 | 18 c |
| C3820 | . 03 | 600 | 21c |
| C3821 | . 04 | 600 | 21c |
| C3911 | . 05 | 600 | 24 c |
| C3912 | . 06 | 600 | 24c |
| C3913 | 1 | 60. | .26c |
| C3914 | 25 | 600. | 32c |
| C3915 | 5 | 600. | 47c |
| C3823 | 1.0 | 600. | . .73c |

Compact Type TCD
and TCS Tubulars and TCS Tubulars


Similar to TC types, extremely compact, averaging one inch in diameter Hermetically. sealed in aluminum casing. Withstand moderately high hunidity. Common negative with insulating
covering. Type TCS covering. Type TCS is the same
but two independent sections a
Dual Common Negative-
Type TCD

| $\begin{aligned} & \text { Stock } \\ & \text { Nock } \end{aligned}$ | Cap. Mfd. | Wkg. Volts | Your |
| :---: | :---: | :---: | :---: |
| C852 | 25-25 | 25 | 50.65 |
| C853 | 20.20 | 150 | . 76 |
| C854 | 30.30 | 150 | . 88 |
| C855 | 40-10 | 150 | 1.00 |
| C856 | 10-10 | 250 | 88 |
| C857 | $20-20$ | 250 | 1.06 |
| C858 | $10-10$ | 350 | . 94 |
| C859 | $20-20$ | 350 | 1.23 |
| C860 | 8 8-8 | 450 | 1.00 |
| C861 | 10-10 | 450 | 1.09 |
| C862 | 15-15 | 450 | 1.29 |
| C863 | 20.20 | 450 | 1.41 |
| Dual'Separate SectionType TCS |  |  |  |
| C864 | 15-15 | 150 | \$1.15 |
| C865 | 20-20 | 150 | 1.18 |
| C866 | 30-30 | 150 | 1.35 |
| C867 | 40-10 | 150 | 1.47 |
| C868 | 10-10 | 250 | 1.29 |
| C869 | 20-20 | 250 | 1.59 |
| C870 | 88 | 350 | 1.23 |
| C871 | 15-15 | 350 | 1.59 |
| C872 | 8.8 | 450 | 1.29 |
| C873 | 15-15 | 450 | 1.76 |
| C874 | 20-20 | 450 | 1.94 |

## Oil Impregnated Tubulars



Compact oil impregnated paper dielec tric condensers available in two types:
OW: oil impregnated and filled. Suitable for vibrators, etc. Paner tube, with mount ing lracket. 1600 working volts d.c
OT: oil impregnnted and oil filled Metal tubes. 2000 whg. volts d.c.
Type OW (1600 V.D.C.)

| No. | Cap. Mfd. |
| :---: | :---: |
| C4011 | . 0005 |
| C4012 | . 001 |
| C4013 | .002 YOUR COST |
| C4014 | .003 EACH |
| C4015 | . 004 |
| C4060 | .005 |
| C4016 | . 006 |
| C4017 | . 007 |
| C4018 | . 008 ) |
| C4062 | . 01 |
| C4063 | . 015 |
| C4064 | . 02 |
| C4065 | . 03 ) |
| $\begin{aligned} & C 4066 \\ & \text { C4067 } \end{aligned}$ | .04 05 4 |
| Type | OT (2000 V.D.C.) |
| No. | Cap. Mfd. Your Cost |
| C4021 | .0025.... ....... 73c |
| C4022 | .005 . . . . . . . . . . . 73c |
| C4023 | (0)75 . . . . . . . . . 73 7 |
| C4024 | . $01 . . . . . . . . . . . . . . . ~ 73 c$ |
| C4026 | .015. . . . . . . . . . 76c |
| C4027 | .02 . . . . . . . . . 79 c |
| C4028 | . 03 . . . . . . . . . . .82c |
| C4029 | .04. . . . . . . . . . . . 82 c |
| C4030 | .05 . . . . . . . . . . . . 85 c |



## Type FP and WP Compact Dry Electrolytics

These capacitors, long considered standard for metal encased units, are ideal for many types of service. Light in weight, compact and provided with a complete mounting feature, they save assembly space and time. Thousands of these units have given exceilent service under extreme conditions of high altitudes and humidity.


## Alum. Can Dry Electrolytic Capacitors

A high quality line of compact round can type filter condensers urnighed complete with palnut and flat washer. All have color coded insulated leads. Shpy. wt. 8 oz

| Stock No. | Mallory <br> Type | Cap. Mid. | Wkg. <br> Volts | Dimen sions | Your |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C3964 | RS213 | 8 | 450 | $1 \times 23 /{ }^{\prime \prime}$ | \$1.03 |  |
| C4058 | IIS693 | 8 | 600 | $13 / 8 \times 4=$ | 2.35 |  |
| C3966 | 12S215 | 12 | 450 | $1 \times 23 / 4$ | 1.26 |  |
| C3967 | IRS216 | 16 | 450 | $1 \times 31 / 3$. | 1.21 |  |
| C3969 | RS219 | 20 | 450 | $13 / 8 \times 3^{\prime \prime}$ | 1.56 |  |
| C3970 | 12 S 223 | 30 | 450 | $13 / 8 \times 3$ " | 1.76 |  |
| C3971 | RS224 | 40 | 450 | $13 / 8 \times 3^{\prime \prime}$ | 2.00 |  |
| C3972 | RM262 | 8-8 | 450 | 13/8x $38 / 4$ | 1.62 |  |

Cardboard Tubular Dry Electrolytics


In waxed cardboard tubes furnished with an adjustable strap for horizontal mounting. Insulated leads. Mallory type numbers marked ${ }^{*}$ ) have leads out both ends. The other types have all leads out one end only. The convenience of the insulated leads and the mount ing ease make these capacitors popular for replacement and original application.



## Cornell－Dubilier＂Quietones＂

Most satisfactory results are obtained uhen Quietones are installed at the source of the mierterence．Where source of interierence cannot be locitrd a Quietone connected to the electric supply line of the radio receiver will alleviate，if net fully correct，the condi－ tion．Each has plug end and receptacle．


1F－18

For These Use $\quad$ For These Use Adding Machines IF－18 C＇ash Registers IF． 18 Addressing Machines IF－18 Dishwashers IF－19 Biilling Machines IF－18 llowr Polishers IF－18 Dental Machinis Dictating Machines Drilling Machines Wishing Marhints Air Conditioners Auto Call Sistens IF－19 Food Mixers IF－19 Fins IF－19 Juice lxtractors IF－19 JF－19 Massagers IF－18 Radias IF－18 Rufrigerators IF－18 IF－21 Iacuum Cleaners IF－6 1F－21．All－Wave capacitive－inductive filter．For 110 V．， 1.6 amps． max．In Walnut bakelite case．Shpg．wt． 2 lbs C12495 Your Cost Each
1F－19．Like above，but 5 amps max．
C12494－Shpg．wt． 2 lhs．Your Cost Each ．．．．．．．．．．．．．\＄4． 2 IF－18．All－Wave capacitive inductive filter．For 110 volis， 5 amps． C12493 Your Cost Eacli
\＄4．91
C12425－IF－6－Your Cost Each
1.03


## MALLORY Interference Filters



X－3 Plug－In type for use between set

and outlet．Rated 5
 C12510－Each 2－2．Canacitive－induc C12511－

## W－7 Motor Type

 Dual capacity unit．Use on
motor brushes Or rings．
Bracket for mtg．to frame．For moderate in－ terterence．110－220
$79^{4}$ ${ }_{W}{ }^{16512}$－Each． 1 ins 1.23 terierence． $1^{13} \times 3^{\circ}$ ．
c12513 Each．
Heavy Duty Filters
 LC－5．Induct－ ance－capacity filter for severe interference．
Rated $110-220$ 1． 5 amps． 1 las cord，plug and receptacle． $27 / 8$ $3 \times 3{ }^{\prime \prime}{ }^{\prime \prime}$ high．Case lias mig．flanres．
Wt． 8 lbs. C12514 Your cost LC－10．same as above， c125is－Ezch $\$ 8.82$

## Deluxe＂Plug－In＂

Z－6．A dual inductance capacity filter withprovision or return lead o rround Recommencled for sumpressing severe interference．Ratedllo 220 volts． 3 amps．Use at radio or noise source
C12516－Each．．．．
Heavy Duty Type LB Industrial Filters
For use with equipment hat is perma necled to the power line or
which draws 10 amps．or more．Con tains capaci－
tors and chokes in
 tandard typ metal cut out loxes．Installation is made by cutting the power line as close as practical to the offending device，and inserting the proper LB tulter in series with the line at this point．Instructions enclosed For 110 or 220 volts AC or DC No．Amps．Size Wt．Each C12517 $10 \quad 6 \mathrm{x}$ 6x4 12 lhs． $\mathbf{\$ 1 0 . 2 9}$ C12518 20 10x10．36 6 lbs． 27.93 C12519 $40 \quad 12 \times 10 \times 6 \quad 25$ the 34.54

## MALLORY X－6 Noise Filter

For medium interference．Furnished in an attractive compact rectangular brown plast ic case to match any surroundings．either offending a plug into wall socket，then plug either offending appliance or the affected receiver into receptacle provided．Size： 11 ¡ $\times 1,0 \times 1^{\prime \prime}$ ．Rated at 5 amperes on 110 volts，AC or DC
C12509
Your Cost

## （BCONDENSERS <br> Relianse <br> ＂Mites＂Ultra Compact Dry Electrolytic Condensers



| Stock | Cap． | Wkg | Size | Your |
| :---: | :---: | :---: | :---: | :---: |
| No． |  | IIts． |  |  |
| C757 | 10 | 25 |  | 26 c |
| C758 | 25 | 25 | $58.11^{-8}$ | 31c |
| C3275 | 5 | 50 |  | 28 c |
| C3276 | 10 | 50 | ${ }_{116}{ }_{16} \times 1{ }^{\text {7 }}$ | 30 c |
| C759 | 25 | 50 | ${ }^{11}{ }_{\text {H }} \times 11^{7} 8$ | 35 c |
| C3277 | 50 | 50 | ${ }_{11}{ }_{10} 178$ | 43 c |
| C760 | 4 | 150 | ${ }_{11}{ }_{10} \times 1{ }^{7}{ }^{7} \times$ | 25 c |
| C761 | 8 | 150 | $110 \times 1{ }^{7}$ | 28c |
| C762 | 12 | 150 | ${ }_{111} \times 1{ }^{17}{ }^{1}$ | 30 c |
| C763 | 16 | 150 |  | 35 c |
| C764 | 20 | 1.00 | ${ }^{11}{ }_{18} \times 1{ }^{1} 8$ | 37 c |
| C3278 | 30 | 150 | ${ }^{13} 10 \times 15$ | 41 c |
| C765 | 40 | 150 | ${ }^{7} \times 1{ }^{178}$ | 41c |
| C3279 | 4 | 2.50 | ${ }_{19}^{9} \times 1{ }^{178}$ | 28c |
| C3280 | 8 | 2.50 | $5_{8} \times 1{ }^{1 / 8}$ | 31c |
| C3281 | 12 | 2.0 | 约碞。 | 41 c |
| C3282 | 16 | 2.50 | ${ }_{7}^{3} \times 1{ }^{\text {i }}$ ，${ }^{\text {a }}$ | 47 c |
| C3283 | 20 | 250 | $7 \times 22^{1}$ | 51 c |
| C3284 | 40 | 250 | ${ }^{7}$ い23 ${ }^{\text {a }}$ | 59c |

## Relíance ${ }_{P}^{\text {Midgei }}$ Cartridge Condensers <br> 

Ideal for A．C．－D．C．sets or wherever space is a factor．High－ est quality at lowest prices．Finest metal foil and linen paper．Her－ metically sealed and inmpregnated． Supplied in a wide variety of cappacities and working voltages capacities and working voltages
to meet mact ically every service to meet wraclically every service
requirement．All provided with requarement All provided with
long timed wire leads；units can be made self－supporting．

| Stock No． | Cap． Míd | W ork． Volts | Your Cost |
| :---: | :---: | :---: | :---: |
| C3179 | 01 | （1） |  |
| C3180 | 02 | 400 | 9 C |
| C3181 | 05 | 400 |  |
| C3122 | ． 1 | 400 | 12c |
| C3183 | ． 25 | 400 | 14 c |
| C3174 | ． 5 | 400 | 20 c |
| C3172 | 1.0 | 400 | 28c |
| C3184 | 001 | 600 |  |
| C3185 | 002 | 600 |  |
| C3186 | ． 006 | 600 |  |
| C3187 | 01 | （60） |  |
| C3188 | ． 02 | 600 |  |
| C3199 | ． 05 | 600 | 12c |
| C3190 | 1 | 600 | 14 c |
| C3191 | 25 | 600 | 20 c |
| C3169 | 5 | （600 | 28c |

Ulra compact units that can be used in a large percentage of radio repair requirements．Especially well suited or use in a．c．－d．c．midrets，and wher－ ever space is limited．Self－supporting vire leads are permanently attached o the end plates．All have cardboard outer sleeves．Conservatively rated．

| ork | Cap． | Wkg | Size | Y |
| :---: | :---: | :---: | :---: | :---: |
| No． | Mfd． | Itis． | In． |  |
| C766 | 4 | 450 | 11 10， $1^{7} 8$ | 34 c |
| C7C7 | 8 | 450 | 18 16x 178 | 37 c |
| C768 | 12 | 450 | ${ }^{13} 16 \mathrm{x}$ | 47c |
| C788 | 16 | 450 | $7 / 8 \times 2$ | 56 c |
| C789 | 20 | 450 | ${ }^{15}, \mathrm{c}, 2$ \％ | 2 c |
| C790 | 10－10 | 50 | $8 / 8 \times 2{ }^{3}$ | 50c |
| C3285＊ | 88 | 150 | ${ }^{11}$ 1f x 2 | 51 c |
| C3287 | 20－20 | 150 | 15 ix ${ }^{1}$ | 45 |
| C792＊ | 8－16 | 200 | 18，1；x2 | 2c |
| C793＊ | 16－16 | 200 | $7 / 8 \times 2{ }^{3}$ | 64c |
| C794＊ | 88 | 450 | $1 \times 2{ }^{3}$ | 62 |
| C3289＊ | 8－16 | 450 | $1 \mathrm{x}^{3}$ |  |
| C3290 | 20－20 | 150 | x | 35c |
| C3296 $\dagger$ | 88 | 450 | $11 / 6$ | 85 |
| －3 leu | －$\dagger$ | 4 lead |  |  |
| Bity | Q | tity | and |  |
| In Lots | of | ass | ted a | － |
| dition | I $10 \%$ | dis | ount | nay |
| be ded | ucte |  |  |  |

## Midget Molded Micas

| $10$ |  | iny ensers akelit rovi |  | con－ <br> olded <br> sings． <br> with |
| :---: | :---: | :---: | :---: | :---: |
|  | ire lea | Siz | thro | ough |
|  | are |  |  |  |
|  |  |  |  |  |
|  | c．tes | 00 | c | kg． |
| Slock | aj．Your | stock | ap． | r |
|  | Mfd．Cost | No． | Mfd． | Cost |
| 3348 | ． 000018 c | C3411 | ． 0005 | 5 9c |
| 3439 | ．000125 8c | C3402 | ． 0006 | 6 |
| C3403 | ． 000058 c | C3416＊ | ． 001 | 11c |
| 3405 | ． 00018 c | C3400＊ | ． 0015 | 511 |
| 3440 | ． 000158 c | C3418 | 002 | 14 |
| C3407 | ．0002 8c | C3404＊ | ． 003 | 18 |
| C3408 | ． 0100258 | C3446 | ．004 | 21 |
| C3409 | ． 01003 9c | C3406 | ． 005 | 23 |
| C3441 | ． 0004 9c | C3401 | ． 006 | 28 |
| 3 | quare；ot | ， |  |  |
|  | Elec | Con | ens |  |
|  |  |  |  |  |
|  | ， | pe |  |  |
|  | ical scre | base | m |  |
|  | with $6^{\prime \prime}$ | iexible | su | ted |
|  | Painut fo | mount |  |  |
| um | protectio | aga | h |  |
| ity． | or upright | ount |  |  |
| Stoe |  |  |  |  |
| No | Mifd． | D．－I |  | Each |
| C810 | 16 4；0 |  |  | 95 |
| C811 | $20 \quad 430$ |  |  | 89 |
| C812 | $30 \quad 450$ |  |  | 1.15 |
| C813 | $40 \quad 450$ | $1{ }^{3} 8 \times 3$ | 1 \％ | 1.32 |

## ICA＂FILTERVOLTS＂

All－Wave Model－Contains heavyduty R．F．chokes， arge lilter capacitors and has＂Pl＂filter unit．Elimi－ nates nosses caused by electric healing pids，irons， oasters，vacuum cleaners，etc．Rated 250 watts，at 32. 110 and $2 \%$ volts a．c．or d．c．For use with any all－ wave or broadcast receivers． 11 letal case $5 \times 1 \mathrm{lbs}$ ．\＄ C12508－Each


## Intermediate Model

Eliminates extremely noisy radio reception due to power line disturbances caused by lights，electrical ppliances，etc．Can be institlled at set or at source of interierence．Metal case has receptacle，cord， plug，and groun C12507－Each．
$\$ 2.65$

# /SOLAR AEROVOX 



TYPE "DY"

## SOLAR Dry Electrolytic CONDENSERS

The "MINICAP" Dry Electrolytics are small hermetically sealed metal cased units with cardhoard insulating tube. Single units have axial bare wire leads. Dual units have negative common, three bare wire leads and metal mounting strap. Ideal for under chassis mounting. Type D is of highest quality, metal cased. Insulated can unit with flexible leads. Provides excellent protection against humidity. Mounts
Type "DY Twist Prong" is a standard metal cased unit. I Iermetically
ealed base assures long life, proper venting and great rixidity. Ideal for many types of service. Light in weight. compact. and provided with one bakelite and one metal mounting plate. They save assembly space and time. Terminal codes clearly stamped on case.
Type DS-B are single, dual and triple section condensers in impregnated, wax coated cardboard tubes with sturdy center mountiny straps. Mounts to chassis with only one screw. $5^{\prime}$ long color-coded leads.

## "MINICAP" Dry Electrolytics

| Stock |  | W. |  |  | Stock |  | W. |  |  | Stock |  | W. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }_{\text {No. }}$ | Mid. | Volts | ${ }_{17}$ Size | Each | No. | Med. | Yolts | Size | Each | No. | Mfd. | Voits |  | Each | No. |  |  |  |  |
| $\mathrm{C}^{\mathrm{C} 2850}$ | 10 | 25 | 1785 ${ }^{19} 9$ |  | C2860 | 24 | 150 | $5 / 8 \times 196$ | \$0.56 | C2870 | 10 | 450 |  | \$0.62 | C2880 | $\begin{aligned} & \text { Mid. } \\ & 50-30 \end{aligned}$ | $\begin{aligned} & \text { Volts } \\ & 150 \end{aligned}$ |  | $\begin{aligned} & \text { Each } \\ & \$ 1.00 \end{aligned}$ |
| ${ }^{\text {C2851 }}$ | 25 | 25 | 17\%x19 in | . 50 | C2861 | 30 | 150 | $3{ }^{4} \times 19$ | . 59 | C2871 | 16 | 450 | Y $8 \times 9$ ? 16 | . 79 | C2881 | 50-50) | 150 |  | . 09 |
| C2853 | 10 | 50 | $\mathrm{I}_{2} \mathrm{x}^{8 \times 19}$ | . 47 | C2863 | $\begin{array}{r}40 \\ 8 \\ \hline\end{array}$ | 150 250 | $5{ }^{3}$ | . 65 | ${ }_{\text {C2872 }}$ | 30 | 450 | $1 \times 2$ | . 88 | C2882 | 80-40 | 150 | 11, $6 \times 219$ | 1.1 |
| C2854 | 25 | 50 | ${ }_{17} \times 1{ }^{19} 10$ | . 53 | C2864 | 16 | 250 |  | . 65 | C2874 | 40 | 450 | 1/16 $\times 2^{13}{ }_{16}^{3}$ | 1.18 | C2883 | 8-8 | 450 |  | 1.0 |
| C 2855 C 2856 | 100 8 | 50 150 150 |  | . 88 | C2865 C2866 | 10 | 350 | ${ }_{15}^{15} 16 \times 1116$ | . 59 | C2875 | 8 | 525 | 7/8x ${ }^{3} 16$ | . 76 | Type | D | Dry | Elect |  |
| C2857 | 12 | 150 | 8 8/819 ${ }^{\text {a }}$ | . 50 | ${ }^{\text {C2866 }}$ | 40 | 350 350 | $15.15 \times 11$ | .76 | C2876 | $\stackrel{16}{16}$ | 525 | $1 \times 212$ | 1.18 |  |  |  | Lect |  |
| C2858 | 16 | 150 | 58919 | .53 | C2868 | 4 | 450 |  | . 53 | C2877 | 20-20 | 150 | ${ }_{15} \times 1 \times 111^{16}$ | . 76 | C2819 | 8 | 450 | $1 \times 21 / 2$ | \$1.03 |
| C2859 | 20 | 150 | $8 / 8 \times 1 \% 10$ | . 56 | C2869 | 8 | 450 | ${ }_{3}^{3} \times 1{ }^{1} 16$ | . 56 | C2879 | 40-40 | 150 | 15/16x ${ }^{1 / 27}$ | .88 1.00 | C2809 C2820 | 12 | 4.50 4.50 | ${ }^{11} 2 \times 43 / 8$ | 1.26 |

Type DY "TWIST PRONG" Mounting


## AEROVOX Dry Electrolytic CONDENSERS

## "DANDEE"

UMra-Compact Tubular Dry Electrolytics are space saving yet full rated capacity and voltage. rdeal for midgets, AC-DC and auto radios where maximum capacity and working voltages are required in a minimum of space. Varnished paper insulating jacket over can. Dual units have two leads phus com-
mon negative. Riveted center mon negative

| Stock No. | $\begin{aligned} & \text { Cap. } \\ & \text { Mid. } \end{aligned}$ | Wkg. Volts | Size Ins. | Each |
| :---: | :---: | :---: | :---: | :---: |
| C701 | 25 | 25 | ${ }_{9}^{1 / 6} \times 1{ }^{11}$ 伯 | \$0.50 |
| C703 | 25 | 50 | $11.10 \times 1116$ | . 53 |
| C5053 | 100 | 50 |  | . 88 |
| C749 | 16 | 150 |  | . 53 |
| C751 | 30 | 150 | ${ }_{15}{ }_{16} \times 1416$ | . 59 |
| C723 | 8 | 250 | 1116x $111 / 16$ | . 47 |
| C724 | 12 | 250 | 11 in $x 111$ io | . 59 |
| C725 | 16 | 250 | ${ }_{18}^{18} 16 \times 2{ }^{3}$ | . 65 |
| C737 | 8 | 350 | ${ }^{13} 16 \times 111 / 10$ | . 53 |
| ${ }_{C} \mathbf{C 7 3 8}$ | 12 | 350 | 13,16x ${ }^{3}$ | . 65 |
| C739 | 16 | 350 | $13.16 \times 2$ 3/60 | . 73 |
| C5054 | 24 | 350 | 15/10 $\times 2$ 3/16 | . 79 |
| C753 | 4 | 450 | ${ }_{1} 1$ if $\times 111$ íf | . 53 |
| C755 | 12 | 450 |  | . 68 |
| C756 | 16 | 450 | $15118 \times 2316$ | . 79 |
| C5055 | 20 | 450 | ${ }^{15} 5 \times 2{ }^{3} 1_{6}$ | 88 |
| C704 | 10-10 | 50 | 5/9x2 ${ }^{16}$ | . 68 |
| C5057 | 8-8 | 150 | $11,18 \times 2$ | . 68 |
| C5058 | $8-16$ | 150 | 314 $\times 2$ 510 | 71 |
| C5060 | 8-8 | 200 | $3 \times 2 \times 2$ 5 | 73 |
| C5063 | 8-8 | 4501 | $\times 2$ S10 | 1.00 |

## Type PRV Universals

Cardboard electrolytics. A thor Curghiy satisfactory unit for unioughy satisfactory unit for unithe place of standard aluminum can electrolytics requiring a hole in can electrolytics requiring a hole in chassis for mounting
Stock Cap. Wkg. Size Each
No. Mid. Volts Ins. $\begin{array}{llll}\text { C4705 } & 8 & 600 & 13 / 8 \times 41 \frac{1}{2}\end{array} \$ 1.73$ $\begin{array}{lrllll}\text { C4706 } & 8 & 450 & 183 \\ \text { C4712 } & 40 & 450 & 13 & .68\end{array}$ $\begin{array}{lllll}\text { C4712 } & 40 & 450 & 13 y \times 1 & 1.29 \\ \text { C4713 } & 8-8 & 450 & 138 \times 4 & 1.35\end{array}$
Inverted Dry Electrolytics Screw nount. supplied with lockwasher nut, ${ }^{3 / 4}$ screw bushing. All have two $8^{\prime \prime}$ color-coded leads per section for terminals. Available in single and double section units. Insulated large size can.
Stock Cap. Wkg. Size Each No. Mid. Volts Ins. Each
C

Metal Can Drys
Standard size inverted units furnished in grounded can mounting type only. Aerovox type G-450. os bushing.
Stock Cap. Wkg. Size Each
No. Mfd. Volts $\begin{array}{lllll}C 4510 & 12 & 450 & 18 & 18 \times 1 / 4 \\ \mathbf{C 4 5 1 1} & \$ 1.26\end{array}$ $\begin{array}{llllll}\text { C4511 } & 16 & 450 & 138 \times 41 / 8 & 1.41\end{array}$

## Paper Tubulars

Non-inductively wound, fulty wax impregnated. All have pigtail wire leads.
Iligh quality, small size, inexpensive units. Completely sealed in wax impregnated tubes with filled ends.

## 400 Volts Working

No. Mid. Each No. Mid. Each C4731 $01 \quad 15 \mathrm{c}$ C4734 $03 \quad 18 \mathrm{c}$ $\begin{array}{llllll}\mathbf{C 4 7 3 3} & .02 & 15 c \mid C 4735 & .05 & 18 \mathrm{c}\end{array}$ $\begin{array}{llllll}\text { C4737 } & \text {-1 } & \text { 21c|c4741 } & .5 & 35 \mathrm{c} \\ \mathbf{C 4 7 3 9} & 25 & 2 \mathrm{c} & \mathbf{C 4 7 4 2} & 10 & 53 \mathrm{c}\end{array}$

600 Volts Working
C4747 .002 15c|C4752 .01 18c $\begin{array}{llllll}C 4748 & .003 & 15 c & \text { C4753 } & .015 & 18 \mathrm{c}\end{array}$ C4750 . $006 \quad 15 \mathrm{c}$

| C4754 | .02 | $18 c$ | C4758 | .1 | $26 c$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| C4755 | .03 | $21 \mathbf{c}$ | C4760 | .25 | $32 \mathbf{c}$ |
| C4756 | .05 | $24 \mathbf{c}$ | $\mathbf{C 4 7 6 2}$ | .5 | $47 \mathbf{c}$ |


_INVERTED


PAPER


PRV UNIVERSAL



## GENERAL ELECTRIC

## Industrial Capacitors

Pyranol filled high votage capacitors in hermetically sealed metal containers with pre-mounted rigid taise brackets. Porcelain insulators. Screw terminals. Sizes given are overall dimensions.

No. MID W.V. H $\times D \times W$ Each C3768 1 600 $3^{77} 7_{22} \times \mathrm{I}_{16} \times 1{ }^{13}$ 㞒 $\$ 2.60$ $\begin{array}{llllll}\text { C3769 } & 2 & 600 & 4_{3}^{3} 3 \times 11_{15} \times 15 \\ \text { C37 }\end{array}$





No. MFDW.V. H $\times \mathrm{D} \times \mathrm{W}$ Each

 C3760 $230005^{5} 2 \times 1!+13 \frac{3}{4} \quad 4.81$ C3654 4 $20000^{6} \times 131^{3} \times 33^{9} 4.66$

 C3652 $230006^{1} \times 1^{3} 1^{3} \times 3^{3}$ | C3652 | 2 | 3000 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| C3653 | 4 | 3000 | $5 \% 535$ |

## PLASTICON Capacitors

Sturdily built plastic film dielectric capacitors which are smaller, lighter and more economical. These units have been specilted by Signal Corps, Air Corps and Navy for more severe operating conditions than other oil hiled types. lxtremely wide temperature range, greater with mounting brackets as illustrated and six-months guarantee slip. These nationally advertised condensers are without comparison. If weight is a factor, specify "I'lasticons." A verage weight saving of $10 \%$ over low voltage types and as much as $90 \%$ on the higher vol tage types. $O_{p}$ perate continuously at 220 degrees 1




MALLORY

Transmitting and Television Capacitors
Type TZ capacitors are for low power transmitting, industrial and television circuits, as well as power ampliser applications. Type T. are general purpxoc units for commercial. amateur, broadeast, industrial and television applications. Both are conservatively rated and compact in size.

Type TZ-Round Can

| No. | Iff | W.V. | Size | Each | -10. | H.d. | W. 5. | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C4004 | 2 | 600 | $1^{3} \times 3$ | \$2.73 | C4008 | 4 | 1000 | $2 \times 3$ \% | \$4.26 |
| C4005 | 4 | 6011 | $1 \sim n x+3 / 4$ | 3.65 | C4009 | 5 | 1500 | 1.431 | 2.97 |
| C4006 | 1 | 1000 | $13 \times 123$ | 2.53 | C4010 | 1 | 1500 | 1.851 | 3.20 |
| C4007 | 2 | 1040 |  | 3.20 | C4036 | 2 | 1.509 | $2 \mathrm{xt}^{3}$ | 4.26 |



## SANGAMO X'mitting Micas

C For low and high fower transmitters, power supplies, power amplifiers, ctc. Fmploy the finest ruby mica dielectrir. Completely cased in mold-$13,4^{-7}$ long, $1 / 2^{4}$ thick and $1^{3} 16^{4}$ wide (varies slightly with capacitance).

|  | 600 Vo | Wkg. | 1200 V | Wkg. | 2500 Vo |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mfd | No. | Each | No. | Each | No. | Each |
| (0)055 | C3051 | 38 c | C3771 | 41c | C3085 | 53 c |
| OMO! | C3053 | 38 c | C3772 | 41c | C3077 | 53 c |
| 00015 | C3054 | 38 c | C3773 | 41 c | C3078 | 59 c |
| .00025 | C3056 | 38 c | C3775 | 41c | C3079 | 62 c |
| . 0005 | C3060 | 38 c | C3776 | 41c | C3076 | 73 c |
| . 001 | C3061 | 38 c | C3777 | 53c | C3082 | 88 c |
| . 002 | C3064 | 41 c | C3779 | 79 c | C3081 | \$1.32 |
| . 005 | C3069 | 50 c | C3782 | \$1.03 | C3763 | 1.94 |
| . 006 | C3070 | 59 c | C3783 | 1.03 | C3764 | 2.03 |
| 01 | C3073 | 82c | C3784 | 1.65 | C3765 | 2.41 |
| 02 | C3768 | \$1.09 | C3845 | 2.29 |  |  |

# (ib) Transmithing <br> CORNELI-DUBILIER Transmitting Condensers 



Type 4

"TJU" DYKANOL "A"
B) New universal mounting bracket makes these condenKANOI_ thled and impregnated Porcelain high tension terminals. Shpg. we. 1 lb .

| C2994 | 1 | 600 |  | \$3.09 |
| :---: | :---: | :---: | :---: | :---: |
| C2995 | 2 | 600 | 27 | 3.82 |
| C2996 | 4 | 600 | $3{ }^{7}{ }^{\circ}{ }^{\circ}$ | 4.85 |
| C2957 | 8 | 6(0) | $3^{13} 10^{6}$ | 7.20 |
| C2997 | 1 | 1000 | 2 | 3.3 |
| C2998 |  | 1 HO | 4 | 4.41 |
| C3004 | 4 | 1000 | $43^{\prime \prime}$ | 5.59 |
| C2958 | 8 | 1000 | $43 / 4{ }^{\text {c }}$ | 8.08 |
| C2959 | 10 | 1000 | 4,88 | 8.9 |
| C2999 | 1 | 1500 | $4 *$ | 3.9 |
| C3000 | 2 | 1500 | 41/8" | 5.5 |
| C3005 | 4 | 1.509 | $45 \%$ | 7.5 |
| C2960 | 8 | 1.00 | $43_{4}$ | 11.17 |
| C3001 |  | 2000 |  | 4.8 |
| C3003 | 2 | 2000 |  | 5.7 |
| C3021 |  | 2000 | 33/4 | 8.0 |
| C3019 | 1 | 3000 | $33 / 4$. | 10.7 |
| C3020 | 2 | Зо\%) | $41 /{ }^{\circ}$ | 13.3 |
| C3022 | 2 | 5010 |  | 28 |

Moulded in bakelite; mechanically strong; special inpregnation; high insulation resistince. No magnetic mate rial -reduces losses att all frequencies. Short, heavy termi-nals-minimum of gauged thickness. Used for grid and plate blocking purposes.

## Type 9

600 V. Wkg. 1000 V. Test

| Stock No. | Cap. NIfl. | $\underset{\text { NO. }}{\text { C.D. }}$ | Your Cost |
| :---: | :---: | :---: | :---: |
| C4200 | . 00005 | 9-14050 | \$0.50 |
| C4201 | . 0001 | 9-13010 | . 50 |
| C4202 | .0ヤ025 | 9-13035 | 50 |
| C4203 | . 0005 | 9-13050 | . 50 |
| C4204 | . 001 | 9-12010 | . 50 |
| C4205 | .0022 | 9-12020 | 53 |
| C4206 | . 01 | 9-11010 | 1.15 |
| C4207 | . 02 | 9-11020 | 1.53 |
| C4208 | . 03 | 9-11030 | 2.03 |
| C4209 | . 04 | 9-11010 | 2.65 |
| C4210. | . 05 | 9-11050 $\ddagger$ | 3.15 |
| 1200 | V. Wkg. | 2500 V | est |
| C4183 | . 0001 | 923010 | \$0.57 |
| C4184 | . 00025 | 9-23023 | . 57 |
| C4185 | . 0005 | 9-230:0 | . 57 |
| C4186 | . 001 | 9-22010 | 73 |
| C4187 | . 002 | 9-22020 | 1.12 |
| C4188 | . 005 | 9-22050 | 1.41 |
| C4189 | . 01 | 9-21010 | 2.29 |
| C4190 | . 02 | $9-21020 \pm$ | 3.20 |
| C4191 | . 03 | 9-21030 $\ddagger$ | 3.76 |
| 2500 | V. Wkg. | 5000 V. | Test |
| C4211 | .0061 | 9-5.3010 | \$0.73 |
| C4212 | . 01025 | 9-530)25 | . 88 |
| C4213 | (0)05 | 9-530.50 | 1.00 |
| C4214 | . 0101 | 9-52010 | 1.21 |
| C4215 | . 002 | 9-52020 | 1.82 |
| C4216 | 0011 | 9-520 10 | 2.56 |
| C4217 | . 005 | 9-52050 | 2.76 |
| C4218 | . 01 | 9-51010 $\ddagger$ | 3.35 |

# 1 ロ® RESISTORS 

## IRC Insulated Resistors Type BT Metallized

Newly designed compact size general purpose resistors with a metallized element sheathed in an overall covering of moisture proof phenolic compound. Meet rikid JAN-BF specifications. Non-inductive. Have pig-tail wire leads. Tolerance $\pm 10 \%$. $5 \%$ available BTS on sjecial order at slightly higher
STANDARD RMA CODE—SPECIFY RESISTANCE

| (Minus | ()hus | Ohme | Ohins | Ohms | Ohms | Megr. | Megs. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.47 | 4.7 | 47 | 470 | 4700 | 47000 | 0.47 | 4.7 |
| 0.50 | 5.6 | 56 | 560 | 5600 | 56000 | 0.50 | 5.6 |
| 0.68 | 6.8 | 68 | 680 | 6800 | 68000 | 0.68 | 6.8 |
| 0.82 | 8.2 | 82 | 820 | 8200 | 82000 | 0.82 | 8.2 |
| 1.0 | 10.0 | 100 | 1000 | 10000 | 100000 | 1.0 | 10.0 |
| 1.2 | 12.0 | 120 | 1200 | 12000 | 120000 | 1.2 | 12.0 |
| 1.5 | 15.0 | 150 | 1500 | 15000 | 150000 | 1.5 | 15.0 |
| 1.8 | 18.0 | 180 | 1800 | 18000 | 180000 | 1.8 | 18.0 |
| 3.2 | 22.0 | 220 | 2200 | 22000 | 220000 | 2.2 | 22.0 |
| 2.7 | 27.0 | 270 | 2700 | 27000 | 270000 | 2.7 |  |
| 3.3 | 33.0 | 330 | 3300 | 33000 | 330000 | 3.3 | . |
| 3.9 | 39.0 | 390 | 3900 | 39000 | 390000 | 3.9 | …..... |

Size $1 / 2$-Watt—BTS Sizec. JAN-RII RC10 or RC20. Range 4 IO hms to 22 mest C5206 8 \& Each Lots of 100 Each value 4

## Size Watt-BTA Size ${ }^{11}{ }^{11} \times 1 /$. Nleet

 Spec. JAN-R11 RC30 Range 330 ohms to 22 megohms C5207Lach of 100 of one valueEach.......

2 Watt-BT-2 Size $1^{3}{ }^{4} x^{3}{ }^{4}$. Meet Spec. JAN-R11 RC41.
Range 470 ohms to 22 megohms C5263 Each.... 100 of one value
Each

## "BW' Insulated Wire-Wound Resistors

Similar to the BT units listed above, but contain a wire wound ele ment, completely encased in molded compound. Tolerance $\pm 10 \%$ Order sizes desired from tabulated listing above. Specify Resistance.
 0.47 to $8.80^{10^{\circ}} \mathrm{ohm}$ C5298-
Each
$\stackrel{m}{9}$
Lots of 100 Of one
54


2-Watt-BW-2

Precision Resistors Wire-Wound


Scientifically designed and constructed. Dependable precision meter multiphers and shunts. inductively wound. Winding is specially impregnated, which insures constant resistance at all frequencies to 50,000 cycles. WW-$2-2^{1 /} \times x / 8^{\circ}$. Has ferrules with
hinding post terminals. WW-4 has lug type terminals.

Type WW-4
Stock Res. Your SWock Res. Your C5125 Ohms Cost No. Ohms Cost

$\begin{array}{ll}C 5124 & 500\end{array}$
C5128 2500) 696
$\begin{array}{ll}C 5129 & 5000 \\ C 5130 & 760\end{array}$

$C 513212500$
$C 513315000846$ C5134 20000
 C5102 300000 C5122 $400000 \quad 2.19$ $C 513525000$ C5123 500000 2.60 Type WW-2
C5193750,0003.441C5202 11/2 Meg. 5.73 C51941 Meg. 4.02,C5115 2 Meg. 7.64


## IRC Power Wire-Wound Variable Resistors

For all industrial and Radio uses. Dissipate heat rapidly, withstand heavy over oads, have great mechanical strength. All (except 10 watt units) are supplied with a NEW highly improved contact band that has a stainless steel spring spot-welded to it The spring carries a silver contact button on which the pressure never aries-no torn resistance wire, no corroded contacts. Band is threaded. Mounting brackets with all but the 10 watt units.

Check sizes avallable in type desired before ordering, as all types are not available in every resistance value listed below. $\begin{array}{llll}\text { Ohms } & \text { Ohms } & \text { Ohms } & \text { Ohms } \\ 5 & 250 & 2500 & 15000 \\ 10 & 500 & 3000 & 20000\end{array}$

| 5 | 250 | 2500 | 15000 |
| ---: | ---: | ---: | ---: |
| 10 | 500 | 3000 | 20000 |
| 25 | 750 | 4000 | 25000 |
| 50 | 1000 | 5000 | 40000 |
| 100 | 1250 | 6000 | 50000 |
| 150 | 1500 | 7500 | 75000 |
| 200 | 2000 | 10000 | 100000 |

## Type ABA- 10 Watts

$3 / x^{5}{ }^{5}{ }^{\circ}$. Range up to $10,000 \mathrm{ohms}$ See list above) C5262 -
Your Cost Each . . ...584
C5213-Extra slider for above.
Your Cost Each............. 8 c
Type DHA-25 Watts
$12 \times \%$ Range up to $25,000 \mathrm{oh}$
See list above). To Each
No. From $\begin{array}{cccc}\text { No. } & \text { From } & \text { To } & \text { Each } \\ \text { C5274 } & 5 & 5.000 & 73 \mathrm{c}\end{array}$ $\begin{array}{lrrr}\text { C5276 } & 20.000 & 15,000 & 84 \mathrm{c} \\ \mathbf{C 5} & 2500 & 92 \mathrm{c}\end{array}$ C5219-Extia slider (silver)..16e

Type EPA- 50 Watts 10000 Avs. See list sizes up to 100,000 ohms. See list above. Each with brackets and one slider. Each

| No. | From | To | Each |
| ---: | ---: | ---: | ---: |
| C5286 | 5 | 5,000 | $\$ 1.15$ |
| C5287 | 6,000 | 25,000 | 1.26 |
| C5288 | 40,000 | 50,000 | 1.45 |
| C5289 | 75.000 | 100,000 | 1.69 |

## IRC Wire Wound

 Power ResistorsMachine wound on non-hygroscopic cores; cement coating.
$1 / 5$ Type ESA- 80 Watts
61/2x $3 / /^{\circ}$. Available in all sizes as isted at left (except 150,1250 and and one slider Each with brackets and one slider.

| No. | From | To | Each |
| ---: | ---: | ---: | ---: |
| C5196 | 5 | 5.000 | $\$ 1.49$ |
| C5197 | 6,000 | 25,000 | 1.69 |
| C5198 | 40,000 | 50,000 | $\mathbf{1 . 9 1}$ |
| C5199 | 100,000 | $\cdots \cdots$ | 2.11 |
|  |  |  |  |

Type HAA- 100 Watts
$61 / 2 \times 11 / 8{ }^{*}$. Available in the following resistances.

| Ohms | Ohms |  |  |
| :---: | :---: | :---: | :---: |
| 100 | 2500* | 1000 |  |
| 500 | $5000 *$ | 15000 | 75000* |
| 1000 | 7500 | 25000 | (0000* |
| No | From | T |  |
| C526 | 100 | 5.0 | 1. |
| 526 | . 500 | 5,000 | 1.91 |
| 268 | 50,000 |  | . 11 |
| 5269 | 75,000 |  | . 29 |
| Type HOA-200 Watts $101 / 2 \times 113^{\circ}$. In sizes marked by asterisk in list above. |  |  |  |
|  | or | To |  |
| C5270 | 500 | 10,000 |  |
| C5271 | 25,000 | 100,000 | 2.95 |

## Extra Sliders

Silver contact type tofit sizes listed.

| Size | Silver | Each |
| :---: | :---: | :---: |
| $50-80 \mathrm{~W}$ | C5217 | $\mathbf{1 6 c}$ |
| $100-200 \mathrm{~W}$ | $\mathbf{C 5 2 1 8}$ | $\mathbf{2 0 c}$ |



Type "AB" 10-Watt Rating
$126^{\prime}$ long, ${ }^{3 / 16}$ diam. Range up to 25,000 ohms (see list).
C5210-Up to 10,000 ohms. . 34 c Above 10,000 ohms. Each. . . 38 c Type "DG" 20-Watt Rating
$2^{\prime}$ long, $9 / 0^{\prime \prime}$ diam. Range up to 50.000 ohms (see list)
Stk. No. From To Each Stk. No From
 54c C5212 $20,000 \quad 50,000$ 66c

## Type "EP" 50-Watt (Max.

$41 / 2^{\prime \prime}$ long. $2 / 6^{\prime \prime}$ diam. Range up to 100,000 ohms. Only in sizes marked with (\%) (see list). C5248. From To Each $\begin{array}{lrrrrrrr}\text { C5248 } & 5 & 5,000 & 92 \mathrm{c} & \text { C5254 } & 30,000 & 100,000 & \$ 1.22\end{array}$ $\begin{array}{llll}\mathbf{C 5 2 4 9} & 6,000 & 25,000 & \$ 1.07\end{array}$

Type "HA"' 100-Watt (Max.)
$61 / 0^{\circ}$ long, $11^{11}{ }^{\circ}$ diam. Range up to 100.000 ohms. Only in sizes marked with asterisk* (see list).

| Stk. No: From | 10 | Each | Stk. No. | Resistance | Each |  |
| :---: | :---: | ---: | ---: | :---: | :---: | ---: |
| C5260 | 100 | 5,000 | $\$ 1.26$ | C5235 | 75,000 ohms | $\$ 1.91$ |
| C5261 | 7.500 | 25,000 | 1.49 | C5236 | 100,000 ohms | $\mathbf{2 . 1 1}$ |

$\begin{array}{llll}\text { C5261 } & 7.500 & 25.000 & 1.49\end{array}$
C5236 100,000 ohms
$\$ 1.91$
Type "HO" 200-Watt (Max.)
$1012^{\prime \prime}$ long, $13 /^{\prime \prime}$ diam. Range up to 100,000 ohms. Only in sizes marked with ( + ) (see list).

 | C5237 | 100 | 10,000 | $\mathbf{\$ 2 . 1 1}$ | C5238. | 15,000 | 100,000 | $\mathbf{\$ 2 . 5 2}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |



## IRC Resisto-Cabinet

Free with any of the following resistor kits. Sturdy, 4 drawer ( 7 compartments in each) cabinets $11 \times 51 / 6 \times 51 / 2^{\circ}$. Blue \& Silver finish. Shpg. Wt. 7 lbs
Kit No. 1: 8 Type BTS 3/2 W. resistors 37 type BTA 1 W .resistors, 10-type AB 10 W fixed resistors, 4-type ABA 10W. adjustable resistors. Total 59 resistors.
C5281-List value. $\$ 15.03$. Your Cost, Complete
\$8.84
Kit No. 2: 100 1, watt Resistors-
6 Type BW-1/2, 94 type BTS.
C5280-List value, $\$ 13.12$. Your Cost, Complete
6 type BW-1, 77 type BTA.
C5282-List value. $\$ 14.11$.
C5282-List value. . 514.11 . Your Cost. Complete

## "BROWN DEVIL" <br> Fixed Resistors

Wire wound, vitreous enameled units suitable for use on all electronic and industrial equipinent. Tinned copper wire terminals. Protected against humidity and mechanical damage. Tol. $10 \%$. Wt. 3 oz .

| Ohms | Ohms | Ohms | Oh |
| :---: | :---: | :---: | :---: |
| $0.4 t$ | $125 \dagger$ | 1,850†* | 16,000 $\dagger$ |
| 0.6 * $^{*}$ | 150 | 2,000 | 17,500 $\dagger$ |
| $0.8 \ddagger^{*}$ | 200 | 2,250 $\ddagger$ | 18,000 $\dagger$ |
| 1. $\dagger$ | $225 \dagger$ | $2,400{ }^{\circ} \ddagger$ | 20,000 |
| $1.2 \dagger+$ | 250 | 2,500 | $22,500 \dagger$ |
| $1.3 \dagger$ | 300 | 2,750 $\ddagger$ | 25,000 |
| $1.5 \dagger$ | 350 | 3,000 | 30,000 |
| $2 \dagger$ | 400 | 3,500 $\ddagger$ | 35,000 |
| $3 \dagger$ | $450 \dagger$ | 4,000 | 40,000 |
| $4 \dagger \ddagger$ | 500 | 4,500 $\ddagger$ | 45,000 |
| 5 | $600 \dagger$ | 5,000 | 50,000 |
| $7.5 \dagger \ddagger$ | $650{ }^{\circ} \ddagger$ | 6,000 | 55,000** |
| 10 | $700 \ddagger$ | 7,000 $\ddagger$ | ${ }^{60,000}{ }^{\circ}$ |
| 12† | 750 | 7,500 | $65,0000^{\circ}$ |
| 15t\% | 800 | 8,1100 | $70,000^{\circ}$ |
| $20 \dagger$ | $850 *$ | 8,500† $\ddagger$ | $75,000{ }^{\circ}$ |
| 25 | $900 \dagger$ | 10.000 | $80,000{ }^{*}$ |
| $30 \dagger$ | 1,000 | 11,000 $\dagger$ | $85,000{ }^{\circ}$ |
| $35+$ | 1,100 $\dagger$ | 12,000 $\dagger$ | $90,000^{\circ}$ |
| 40 | $1,200 \ddagger$ | 12.500 | 95,000* |
| 50 | 1,250 | 13,500 $\dagger$ | 100,000* |
| 75 | 1,500 | 14,300 $\dagger$ |  |
| 00 | 1,750 | 15,000 |  |



## Vitreous Enameled Fixed Resistors <br> 

Lug type resistors, wire-wound on porcelain cores. The vitreous alloy and coating both protects and insulates the wire. The . The vitreous enameled coatine retains the uniform spacing of the turns, just as they were wound, which permits close spacing. Wire is mechanically locked and soldered to the terminal lugs. Tolerance $10 \%$.

| 25 WATT |  |  |  |
| :---: | :---: | :---: | :---: |
| 1 | 150 | 3,000 | 25.000 |
| 2 | 200 | 3,500 | 30,000 |
| 3 | 250 | 4,000 | 35,000 |
| 4 | 500 | 5,000 | 40,000 |
| 5 | 750 | 6,000 | 45,000 |
| 10 | 800 | 7,500 | 50,000 |
| 25 | 1,000 | 10,000 | 60.000 |
| 50 | 1,500 | 12,000 | 70,000 |
| 75 | 2,000 | 15,000 | 80,000 |
| 100 | 2,500 | 20,000 | 100,000 |
|  |  |  | Each |
| C7125-1 105 M . . . . . . . . . 61c |  |  |  |
| C7126-6M to 15M......69c |  |  |  |
| C7127-20M1 to 50 M . . . . . 84c |  |  |  |
| C7128-60M ohms. . . . . . .96c |  |  |  |
| C7129-70M ohms. . . . . \$1.03 |  |  |  |
| C7130-80N1 ohins. . . . . . 1.15C7131-100N ohms . . . . 1.45 |  |  |  |
|  |  |  |  |
| 100 WATT |  |  |  |
| 00 $\mid 20,000$ |  |  |  |
| 2 | 100 | 2,000 | 25,000 |
| 3 | 125 | 2,500 | 30,000 |
| 4 | 150 | 3,000 | 40,000 |
| 5 | 250 | 5,000 | 50,000 |
| 10 | 500 | 7,500 | 60,000 |
| 25 | 750 | 10,000 | 75,000 |
| 50 | 1,000 | 15,000 | 100,000 |
|  |  |  | Each |
| c7139-1 to 5M1. . . . . . $\$ 1.26$ |  |  |  |
| C7140-7,500 10 25M . . . . 1.49 |  |  |  |
| C7141-30M to 50M..... 1.69 |  |  |  |
| C7142-60M $1075 \mathrm{M} . . . . .1 .91$ |  |  |  |
| c7143-100,000 ohms. .... . 2.11 |  |  |  |

"RITEOHM" Precision Resistors


Non-inductive, pie-wound units jdeal for volimeter multipliers laboratory equipment, and other applications. Wound on a ceramic bobhin with the highest quality enameled wire. Itole through center for mounting with No. 6 screw. Tolerance 10 . Iligh dielectric strength. Sealed against moisture by vacuunl impregnation. All units above 400 Ml are 1 Watt, 100 M and below are 12 Watt. All are ${ }^{\prime} \%$ dia. Up to 200 M ohms are ${ }^{16}$ leng, 225 M
through 400 M are $5 / 8$ long, rest are 1 long

| Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: |
| 1 | 2,(x)0 | 3011 | 250 N |
| 10 | 2,500 | 40 M | $3(6) \mathrm{M}$ |
| 25 | 4,000 | 50 M | 100 M |
| 50 | 5,000 | 60N1 | 500M |
| 100 | 7,500 | 75 M | 600 M |
| 200 | 10,000 | 100 I | 750M1 |
| 250 | 12,500 | 125N1 | 900M |
| 300 | 151 | 150M1 | 1 Meg . |
| 500 | 20M | 175M1 |  |
| 1000 | 22,500 | 200M |  |
| 1500 | 2511 | 225 M |  |



Reliance
$1 / 2$ and 1 Watt Resistors
$\star$ Insulated Shells $\star$ Low Drift
IITT- - 1 ITS
丸 Meet JAN-BF Specifications
Improved RMA Color Coxled in sulated resistors. Moisture and heat resistant. Have securely anchored pig-tail wire leads. Ideal for congested wiring in compact equipment. llalf-Watt units- $235^{\circ}$ dia, by $58^{\circ}$ length. meet AN
 meet JAN RC-31 BF specifications. RMA preferred values only. Guaranteed accuracy $\pm 10$.

| Resis. Ohms | $\begin{aligned} & 1 / 2 \text { Watt } \\ & \text { Stock No. } \end{aligned}$ | $\begin{aligned} & 1 \text { Watt } \\ & \text { Stock No. } \end{aligned}$ | Resis. Ohms | $1 / 2$ Watt Stock No. | 1 Watt Stock No. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 220 | C4250 | C4300 | 56,000 | C4278 | C4328 |
| 270 | C4239 | C4354 | 68,000 | C4279 | C4329 |
| 330 | C4245 | C4348 | 82,000 | C4280 | C4330 |
| 390 | C4251 | C4301 | 100.000 | C4281 | C4331 |
| 470 | C4252 | C4302 | 120.000 | C4282 | C4332 |
| 560 | C4253 | C4303 | 150,000 | C4283 | C4333 |
| 680 | C4254 | C4304 | $180,(\mathrm{MOO}$ | C4240 | C4355 |
| 820 | C4255 | C4305 | 220,000 | C4284 | C4334 |
| 1000 | C4256 | C4306 | 270,000 | C4285 | C4335 |
| 1200 | C4257 | C4307 | 330,000 | C4286 | C4336 |
| 1500 | C4258 | C4308 | 390,000 | C4247 | C4350 |
| 1800 | C4259 | C4309 | 470.000 | C4287 | C4337 |
| 2200 | C4260 | C4310 | 560,000 | C4241 | C4356 |
| 2700 | C4261 | C4311 | 680,000 | C4242 | C4357 |
| 3300 | C4262 | C4312 | 820,000 | C4298 | C4353 |
| 3900 | C4263 | C4313 | $\overline{\text { Megohms }}$ |  |  |
| 4700 | C4264 | C4314 | 1.0 | C4288 | C4338 |
| 5600 | C4265 | C4315 | 1.2 | C4243 | C4358 |
| 6800 | C4266 | C4316 | 1.5 | C4248 | C4351 |
| 8200 | C4268 | C4318 | 1.8 | C4244 | C4359 |
| $10.010)$ | C4269 | C4319 | 2.2 | C4289 | C4339 |
| 12,000 | C4270 | C4320 | 2.7 | C4249 | C4352 |
| 15,000 | C4271 | C4321 | 3.3 | C4290 | C4340 |
| 18,000 | C4272 | C4322 | 3.9 | C4291 | C4341 |
| 22,000 | C4273 | C4323 | 4.7 | C4292 | C4342 |
| 27,000 | C4274 | C4324 | 5.6 | C4293 | C 4343 |
| 33,000 | C4275 | C4325 | 6.8 | C4294 | C4344 |
| 39,000 | C4276 | C4326 | 8.2 | C4295 | C4345 |
| 47,000 | C4277 | C4327 | 10 | C8297 | C4347 |

Your Cost
Each.
10 For
Fr....32c 100 For... $\$ 2.88$
Filament Resistors

Deperidable wire wound filament resistors, accurately rated. Have solder lug terminals and mounting fect. Available with tap at the electrical center or without any tap. Supplied in the following resistances only:
$10,20,30$ :
$10,20,30,40,50,60$ and 100 ohms . With Center Tap C3999-Specify resistance desired. 10 For $\$ 1.53 .174$ C3998-Specit Center Tap sired. 10 For 51.26 . 14 esistance
 Resistor Color Code Indicator Permits instant calculation of the value in ohms orany R.M.A color coded resistor. The can lse set in a noment-readings are accurate. Full directions are printed on the indicator.
c3847-YourCostEach.10
NOTE: Calculat or above supplied FREE with orders for 20 or more Reliance Carbon resistors.
 5\&10Watt Wire-WoundResistors Tolerance Within 5\%
These Reliance resistors are wound with genuine nichrome wire on fine ceramic tubes. Guaranteed accuracy $5^{c}$. 'Tinned copper wire leads and lugs for casy soldering.


## 10-Watt Adjustable Wire Wound



Vitreous enamel coated adjustable wire wound units. I.ug terminals. $13 / \times^{5}, 16^{\circ} \mathrm{O} . \mathrm{D}$.

|  | Ohms | Ohms | Ohns | Ohms | Ohms | Ohms |
| :---: | :---: | :--- | :---: | :---: | :---: | :---: |
| 10 | 50 | 150 | 500 | 2000 | 5000 |  |
| 25 | 100 | 200 | 1000 | 2500 | 10000 | 4 | C4445-Specify resistance.

C4446-Extra Slider for above. Each $\ldots . . .{ }^{\circ} \cdot 5$

## Reliance <br> Vitreous Resistors

Guaranteed plus or minus 10 c. All are
non-porous, dissipate hicat rapidly, have positive hald contacts and do not chance in value. Each marked for resistance.




## WIRT Resistor Cabinet

## $\star 24$ Compartments

File and Protect your resistors, condensers and parts from damage by contact with tools.
llandsome blond finish wooden cabinet designed for the systematic and safe storage of resistors, small condensers and hardware or small precision tools. Resistor or condenser leads need not be bent, as drawers measure $51^{\circ}$ deep. Six drawers with four compartments each assure ample space to file hundreds of 1 -watt resistors. F'lat top and bottom allows cabinets to be stacked when more drawer space is required. Sturdy tongue and groove construction throughout. Measures 9 high, 7 wide, 6,2 deep. Shipping wt. 5 lbs.
C 22363 Cost $\begin{array}{llr}\text { Ohms } & \text { Ohms } & \text { Ohms } \\ 500 & 2000 & 5000\end{array}$

## Your Cost



## SPRAGUE "KOOLOHM'' Resistors



31c
$\begin{array}{ll}\mathbf{4 9 c} \\ \mathbf{4 0 0} & 53 \mathrm{c}\end{array}$

## MALLORY Yard-Ohm Resistance

 KitsThe Yard-Ohm Kit provides a real solution to the odd-value resistor problem. Ideal for meter shunts. for experimental lab. etc., Contain all the necessary materials to construct flexible resistors of a wide range of values Each kit consists of 1 yard spiral wound resistance wire, 1 yard insulated braid and 24 spiral wire leads. Available in eight resistance values. Dissipation-all types; $1 / 2$ watt per inch. Instructions included No. Per In. Amps $\begin{array}{ccc}\text { No. } & \text { Per In. Amps } \\ \text { C4407 } & 1 & .707 \\ \text { C4408 } & 5 & 315\end{array}$ $\begin{array}{rrr}\text { C4407 } & 1 & .707 \\ \mathbf{C 4 4 0 8} & 5 & .315 \\ \mathbf{C 4 4 0 9} & 10 & .223\end{array}$

## CONTINENTAL "Nobleloy' X-Type Resistors 1 Watt

New resistor involving the metal film principle, having the accuracy of a wire wound unit. No carton used. Metallic resistance film is formed on the surface of a low loss ceramic tube, then hermetically sealed y a layer of vitreous enamel. Ceramic tubes are hollow and allow greater area for heat dissipation Excellent resistance stability and negligibie noise characteristics. Will withstand overloads of $200 \%$ and temperatures of 400 wingut change value upon return to room temperature, Critical tolerance within $1 \%$. Size $\%$ "xl". 1 , \% tinned copper leads
Ohms Ohms Ohms

| Ohms | Ohms | Ohms | Ohms | Ohms |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 2950 | 9950 | 85M | 500 ML |
| 10 | 3500 | 10,000 | 90NL | 600 M |
| 25 | 4000 | 13,500 | 100N | 750M |
| 50 | 4450 | 15 M | 150 M | 800 M |
| 100 | 4950 | 20M | 200M | 900M |
| 200 | 5000 | 25M | 210 M | 1.0 Meg . |
| 408 | 5500 | 30 M | 250N | 1.5 Meg. |
| $5(0)$ | 5950 | 40M | 300 M | 2.0 Meg. |
| 1000 | 7450 | 50 M | 400M1 | 2.5 Meg . |
| 1150 | 8500 | 60M | 450 M | 3.0 \leg. |
| 2000 | 8950 | 75 M | 490M |  |

## OHMITE Model Train Control Rheostats

## MT-16 for "Ho" Gauge

Ideal for providing realistic single knob starting stopping, speed and reversal. Will control one 110 gauge locomotive pulling, normal load. Single hole mounting, 2,16 dia. $x 17 / 8$ deep
cass-rour cost
MT-14 for ©O"Gauge
Will control one " $O$ " gauge locomotive pulling normal load. AI position for operating sequence reversers. $2^{5}{ }_{19} \times 1^{3} \times$ deep
C8389 Your Cost


New Tropicalized fixed resistors Insulation has high di-electric strength, withstands red heat and is impervious to moisture. Units are encased in tubular ceramic shells which permit mounting in contact with nietal parts without shorting $21 / 2$ tinned copper wire leads. Neet high-voltape circuits. Nepligible ro sistance drift. Insulated or 1000 sistance drift. Accuracy suaranteed $+5 \%$ volts. Accuracy guaranteed $\pm 5 \%$ ductance up to 0 inc and dero in ductance up to 0 mc. and distrib
uted capacitance is only 2 mmfd

## Standaxd Adjustable

Type10AD-10 Watt. $13 / 4 x^{13} 3^{2}$ With adjustable clip

| Ohm | Ohms | Ohms | Ohns |
| :---: | :---: | :---: | :---: |
| 10 | 200 | 750 |  |
| 5 | 300 | 1500 |  |
| 100 | 400 | 2000 |  |
|  | 500 | 2500 |  |
| C7534 | ny |  |  |

Non-Inductive Fixed Type 10NIT-10 Watt. $13 x^{18} / 5_{2}^{\prime}$

| Ohms | Ohms | $s$ Ohms | Ohms |
| :---: | :---: | :---: | :---: |
| 10 | 70 | 500 | 2500 |
| 20 | 80 | 750 | 300 |
| 30 | 90 | 1000 | 350 |
| 40 | 100 | 1250 | 400 |
| 50 | 250 | 1500 | 500 |
| 60 | 400 | 2000 | 750 |
| Stock | No. | Ohms | Eac |
| C7528 |  | 10 to 1000 | 4 |
| C7529 |  | 250 to 2000 |  |
| C7530 |  | 500 to 4000 |  |
| C7531 |  | 5000 |  |
| C7532 |  | 7500 |  |
| C7533 |  | 10,000 |  |

\$3.67

CENTRALAB Power Rheostats
Ideal for use as motor speed controls, charging rate regulators, ete. 111 metal frame; core insulated with treated asbestos. Wire wound. All for single-hole mounting; knob supplied. Diameter $2^{\prime \prime}$ : bushings ${ }^{3} x^{2}{ }^{2}$. long. Depth behind panel: 2.5 -walt units $34^{4 /}$; minals for easy connections. Shipping wt. 1 lb .


IRC All Metal Rheostats
All-metal units with die-cast aluminum case. Heat is uniformly distributed throughout the element regardless of percentage of element actually used. Flat clockspring (Silent Spiral Connector gives positive contact between rotor arm and center connector, 25 -Watt units Irl dia., s/ wehind panel; 50 -Watt units $23^{\prime} 3^{\prime \prime}$ dia., $138^{\circ}$ behind panel. Shpg. wt. 2 lbs .

| 25-Watt RheostatsNo Ohms Amps. Each |  |  |  | 50-Watt Rheostats |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Ohms | Amps. | Each | No. | Ohms | Amps. | Each |
| C9150 |  | 2.04 |  | C7746 |  | 2.88 |  |
| C9151 | 10 | 1.58 |  | C7747 |  | 1.77 |  |
| C9152 | 25 | 1.00 |  | C7748 | 50 | 1.00 |  |
| C9153 | 50 | . 709 |  | C7749 | 125 | . 630 |  |
| C9154 | 75 | . 575 |  | C7750 | 225 | . 470 |  |
| C9155 | 100 | . 500 |  | C7751 | 300 | . 407 |  |
| C9156 | 250 | 315 |  | C7752 | 500 | . 315 |  |
| C9157 | 350 | 267 |  |  |  |  |  |
| C9158 <br> C9159 | 500 | . 173 |  | C7753 | 1000 |  |  |
| C9160 | 1000 | . 155 |  | C7754 | 2500 | 140 |  |
| C9161 | 1500 | . 129 |  |  |  |  |  |
| C9162 | 2500 | . 100 |  | C7755 | 5000 |  |  |
| C9163 | 5000 | . 070 | \$3.64 | C7756 | 10000 | . 070 ) |  |

## OHMITE Power Rheostats



Designed to produce pernanently smooth, close control. Ceramic and metal construction. Provided with insulated shafts with provision to keep the rheostat from turning on che panel. celain core. Each turn is locked arainst shifting by vitreous enamel which aiso covers the core and base. Requires $3 / 夕^{\prime} 1$ Iole. Wt 1 lb .

| Model "H"-25W (1916" dia.) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock | Total | Max. |  | No. | Ohms | Amps. | Each |
| No. | Ohms | Amps. | Each | C7200 | 0.5 | 10.000 |  |
| C8350 | 1 | 5.000 | \$3.44 | C7201 | 1 | 7.070 | \$3.82 |
| C8362 | 2 | 3.540 |  | C7202 | 2 | 5.000 |  |
| C8351 | 3 | 2.880 |  | C7203 | 4 | 3.530 |  |
| C8363 | 6 | 2.040 |  | C7204 | 8 | 2.500 |  |
| C8352 | 8 | 1.770 |  | C7205 | 12 | 2.040 |  |
| C8364 | 10 | 1.580 |  | C7206 | 16 | 1.760 |  |
| C8365 | 15 | 1.290 |  | C7207 | 22 | 1.500 |  |
| C8366 | 25 | 1.000 |  | $\overline{C 7208}$ | 35 | 1.190 |  |
| C8353 | 35 | 845 |  | C7209 | 50 | 1.000 | - |
| C8367 | 50 | . 707 | 3.06 | C7210 | 80 | . 790 |  |
| C8390 | 75 | . 575 |  | C7211 | 125 | 630 |  |
| C8368 | 100 | . 500 |  | C7212 | 150 | 575 |  |
| C8369 | 125 | . 445 |  | C7213 | 225 | 470 |  |
| C8370 | 175 | . 375 |  | C7214 | 300 | . 408 |  |
| C8371 | 250 | . 316 |  | C7215 | 500 | 316 |  |
| C8391 | 350 | . 267 |  | $\overline{C 7216}$ | 800 | 250 |  |
| C8372 | 500 | . 222 |  | C7217 | 1,0)0 | 224 |  |
| C8392 | 750 | . 182 |  | C7218 | 1.600 | . 176 | 3.0 |
| C8373 | 1,000 | . 155 |  | C7219 | 2.500 | . 141 |  |
| C8374 | 1,500 | 129 | \$3.44 | $\overline{C 7220}$ | 3,500 | . 119 |  |
| C8375 | 2.500 | 100 |  | C7221 | 5,000 | 100 | \$382 |
| C8376 | 3.500 | . 084 |  | C7222 | 8,000 | . 079 | 3.02 |
| C8377 | 5,000 | . 070 | \$3.64 | C7223 | 10,000 | . 070 |  |

MODEL "K"- 100 WATT ( $31 / 8$ " DIA.)

| No. | Ohms | Amps. | Each | No. | Ohms | Amps. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{C 8378}$ | 10 | 3.160 | \$5.35 | C8383 | 500 | . 447 | \$5.35 |
| C8379 | 25 | 2.000 |  | C8384 | 1,000 | .316 | \$5.73 |
| C8380 | 50 | 1.410 |  | C8385 | 2,500 | . 200 | 56.12 |
| C8381 | 100 | 1.000 |  | C8386 | 5,000 | 141 | $\$ 6.12$ $\$ 6.88$ |
| C8382 | 300 | 575 |  | C8387 | 10.0 | 100 | \$6.88 |

# MALLORY bumb Cowrand 

## Standard Universal Tapped Controls

Standard 11 ' $^{\prime}$ diameter controls with tap for washer, ground terminal and linob adapter No provision for use with switch; if switch is desired use TRP624. thas slotted shaft for auto sets tspecial taper for fader service Others are taper 1. Less switches. Shpg. wt. 5 oz.

| Stock | Mfrs. | İes. | Tapped | Stock | Mfrs. | Res. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | Ohims | At Ohms | No. | No. | Ohms | it Ohm |
| C6543 | TPP601 | 40000 | 8000 | C6588 | TRJ'615 | 3 Mer. | 90000 |
| C6544 | TRP602 | 60000 | 4000 | C6589 | TRP616 | 500000 | fink |
| C6545 | TRP603 | 250000 | 110000 | C6590 | TRP617 | 60000 | 20 |
| C6546 | TRPCO4 | 350000 | 20000 | C6591 | TRI'618 | 2 M | 250 |
| C6547 | TRP605 | 350000 | 70100 | C6592 | TR1't19 | 500000 | 11 (h)OM |
| C6577 | TRP606 | 5001 NO | 100000 |  |  |  | \{2500 |
| C6578 | TRI ${ }^{3} 607$ | 501000 | 225000 | C6593 | TRP620 | 2 Meg. | 90000 |
| C6579 | TR13608 | 1 Meg. | $20 \mathrm{O} \times 100$ | C6594* | TRI'621 | $2^{1}{ }_{4} \mathrm{Meg}$ | \{ 2500 |
| C6580 | TRP609 $\ddagger$ | 1 Meg . | 5006100 |  | -1. |  | 50000 |
| C6581 | TRP610 | 1 Meg. | 30000 | C6595 | TRP622 | 44000 | -00 |
| C6583 | TRI'612 | 2 Meg. | 15000 |  |  |  | 1400 |
| $\begin{aligned} & \text { C6586 } \\ & \text { C6587 } \end{aligned}$ | TRP ${ }^{3} 613$ | 2 Meg. | 400000 | C6596 | TRP623 | 250000 | 5000 |
| C6587 | TRP614 $\dagger$ | 350000 | 70000 | C 6576 | TRP624 | $2{ }^{1} \times 1 \mathrm{c}$ | 25000 |
| Your | st Eac | Any | the |  |  |  |  |

## Standard Universal Dual Controls

Consists of two volume controls strapped together and driven by a single shaft. Units listed serice jractically all receivers.
Stock.


## Explanation Of Mallory Volume Control Tapers

No. (1) For audio or antenna shunt circuits
No. (2) For series circuits such as cathode viltage controls
No. (3) For antenna shunt and "C" bias circuits
No. (4a) Linear taper; for voltage divider circuits
No. (7) Wire wound element. For antenna and

## COMPACT RHEOSTATS \& POTENTIOMETERS



Wire Wound. Controls ideal for use where space is limited. Contact arm is grounded to the shaft. Diam.


| RHEOSTATS |  |  |
| :---: | :---: | :---: |
| No. | Ohms No. | Ohms |
| C6197 | 6 C6201 | 30 |
| C6198 | 10 C6202 | 40 |
| C6199 | 15 C6203 | 50 |
| C6200 | 20 C6204 | 100 |
| Your Cost Each, |  |  |
| Any $T$ |  |  |

POTENTIOMETERS


UNIVERSAL VOLUME CONTROLS


The Mallory-Yaxley Volume Controls listed on these pages can be used to service over $90 \%$ of all the radio receivers now in use. With comparatively few units. the serviceman is enabled to meet practically all service requirements. Mallory-Yaxey Controls feature: minimum bias adjustment on all bias controls; $3^{\circ}$ shafts that can be shortened by notching and breaking off; complete shielding; all furnished with knob adapter, and mounting hardware. Approved switch (listed below) can be added to any control

UNIVERSAL REPLACEMENT CONTROLS
All with two mounting nuts, washer, ground terminal and knob adapter. Wire wound units have adjustable bias feature (exclusive MalloryYaxley); carbon element utits with adjustable bias resistor where required.

| No. Part | Type | Ohms | Taper | No. Part | Type Ohms | Taje |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C6660 ? | W'W | 2 | 4 | C6675 H ${ }^{*}$ | WW 150010 |  |
| C6661 R | WW | 6 | 4 | C6713 H7* | ITT 15000 |  |
| C6662 S | WT | 10 | 4 | C6714 H12* | Car. 15010 |  |
| C6663 T | W7\% | 20 | 4 | C6741 120 MP * | W W 20000 |  |
| C6664 U | WW | 30 | 4 | C6715 1* | Car. 20000 |  |
| c6665 ${ }^{\text {V }}$ | WW | 60 | 4 | C6742 25 MP | Car. 25000 |  |
| C666E W | WW | 100 | 4 | C6676 J* | Сar. 25000 |  |
| C6667 X | WW | 200 | 4 | C6743 150MP | Car. 50000 |  |
| C6732 A400P | WW | 400 | 4 | C6677 K* | Car. 50000 |  |
| C6668 1 | WW | 500 | ! | C6716 K12 | Car. 514000 |  |
| C6733 A550P | W7\% | 550 | 4 | C6717 \%* | Car. 75040 |  |
| C6734 A1MP | WW | 1000 | 4 | C6718 Z 12 | Car. $\quad 50000$ |  |
| C6669 B | TW | 1000 | 1 | C6744 1100MP | Car. 100000 |  |
| C6719 [C500 | WW | 1000 | 2 | C6729 ['C510* | Car. 100000 |  |
| C6735 A2MI* | IIW | 2000 | 4 | C6721 1-502 | Car. 150000 |  |
| C6670 ${ }^{*}$ | WW | 2000 | 2 | C6745 Y200MP | Car. 200000 |  |
| C6704 C12* | WW | 20030 | 1 | C6746 1250 MP | Car. 2 atmyo |  |
| C6736 13M1** | WII | 3000 | 4 | C6679 M | Car. 2500t0 |  |
| C6671 $\mathrm{D}^{*}$ | ITW | 3000 | 2 | C6730 ['C511+ | Car 25 (n) 0 |  |
| C6705 D7* | WW | 3000 | 7 | C6728 [C5 ${ }^{\text {c }}$ | Car. 2500\% |  |
| C6706 D12* | WW | 3000 | 1 | C6747 1500MP | Car. 500100 |  |
| C6737 A5MP* | ITW | 5000 | 4 | C6630 N | Cir. j00n50 |  |
| C6738 15MP | Car. | 5010 | 4 | C6731 $\mathrm{I}^{\circ} \mathrm{C} 512 \dagger$ | Car. 50wnk |  |
| C6672 E* | WW | 5000 | 2 | C6793 IC513 | Car. 5000'0 |  |
| C6707 $\mathrm{E}_{6} \mathrm{i}^{*}$ | WW | 5000 | 7 | C6722 [C503 | Car. 751 mol |  |
| C6708 [12* | Car. | 5000 | 1 | C6748 11000 MP | Car. 1 Me. |  |
| C6673 5* | W7\% | 7500 | 2 | C6681 0 | Car. 1 Meg. |  |
| C6709 F\%* | WW | 7500 | 7 | C6794 [C514 $\dagger$ | Car, I Mey. |  |
| C6710 j 12 \% | Car. | 7500 | 1 | C6682 P | Car. 2 Me\%. |  |
| C6739 110MP* | WW | 10000 | 4 | C6723 [C504 | Car 3 Mes. |  |
| C6740 l10MP | Car. | 10000 | 4 | C6724 I'C505 | Car. 4 Mg. |  |
| C6674 $\mathrm{C}^{*}$ | WW | 10000 | 2 | C6725 I'C506 | Car. 5 Mrg. |  |
| C6711 $\mathrm{Cl}^{\text {\% }}$ | WW | 10000 | 7 | C6726 L'C507 | Car. 5 Meg . |  |
| C6712 ${ }^{\text {C1 }} 12^{\text {k }}$ | Car. | 10000 | 1 | C6727 U'C508 | Cur. 9 Meg. |  |
| C6720 L'C501 | Car. | 10000 | 2 |  |  |  |

Car-Carbon element. WW-Wire wound. *-Ifas adjustable bias feature. Wire wound units have adjustable plate; carbon element controls have exiernal adjusiabie resistor. t-Has slotied shaft for auto sets. Supplied Less Switch.
Your Cost Each, Any of the above Controls

Control Switches


Attachable switches to fit all universal, topped, and dual controls listed on this page. Stock Part
No. No. Type
$\ldots$ Each
12853 S PD T
C6289 7 1)PST
C6290 13 3-j.S.T
449

## Extension Shafts



Type A-l.ength $4^{\circ}$
C6561-1/4 diam.. 1 " flat.
C6562-1 ${ }^{\circ}$ diam., $3_{33^{\circ}}$ flat. C6563- ${ }^{3}{ }^{\prime \prime \prime}$ "diam., $1 / 16^{\circ}$ flat.
Your Cost Each.......244
Type B-2" long, $3 / 6^{\circ}$ diameter with 3,2 slot. Enclosed in tight
fitting tube.

Mounting Brackets


For use where control riounts ofif chassis. Plated metal. Adjustiable mounting centers.
C6297-Type RB-948-Nounting centers $11 / 2^{\circ}$ to $238^{\circ}$ C6298-Type RB-249-Mounting centers $23 /{ }^{\circ}$ " to 278 Your Cost Each, Either Type

## $15^{\circ}$

## Control Hex Nuts

 $\begin{array}{lr}\text { For }{ }^{*} 8^{\circ} \text { bushings. } & \\ \text { No. For Panels } & \text { Each } \\ \text { C6384 } & 18 \\ \text { C6386 } & 12 \\ \text { C6385 } & 12 \mathrm{c} \\ & 15 \mathrm{c} \\ & \end{array}$

## Volume Control Wrench



For standard volume control nuts. C6387-Nu. 178

Your Cost Each
$15^{\text { }}$

MALLORY "UM" and "TM"

## Junior Controls

Ultra-compact controls featuring noiseless composition elements; attachable switches; plug-in type shafts. Both UM and TM types have slotted shafts which will take any one of the 28 different types of special shafts listed below. The TM types are similar to the UM but are provided with a tap as shown. 'Ml type designed for use in tone compensating circuits. All are $1 / 2^{\circ}$ thick, $11 / 66^{\circ}$ diameter. Complete with SSI shaft.
MALLORY "UM"' Type Junior Controls

| Stock No. | Type No. | Ohims \& Tisper | Stock No. | Type <br> No. | Ohms \& Taper | Stock No. | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Ohms \& Taper |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{C 6926}$ | TM114 | 5M(4A) | C6935 | CM133 | 50M(1) | C6944 | [\$147 | $25011(1)$ |
| C6927 | [M118 | $10 \mathrm{M}(1)$ | C6936 | U'M134 | 50M(2) | C6945 | M149 | 250M1 4 ) |
| C6928 | UM119 | 10.1(2) | C6937 | UM135 | 50M14 | C6946 | - 1151 | 350M(1) |
| C6929 | UM1120 | 10.1. 4 ) | C6938 | VM137 | 75M(1) | C6947 | \$1154 | $500 \mathrm{M}(1)$ |
| C6930 | CM121 | 15.1(1) | C6939 | [ M138 | 75M(2) | C6948 | M156 | $500 \mathrm{M}(4)$ |
| C6931 | [M122 | 15. ${ }^{\text {(2) }}$ | C6940 | UM140 | 100M (1) | C6949 | ${ }^{+} \mathrm{M} 158$ | $750 \mathrm{M}(1)$ |
| C6932 | UM 124 | 20.1 (1) | C6941 | CM141 | 100M(2) | C6950 | $1 \mathrm{M161}$ | 1 Meg. (1) |
| C6933 | 19 128 | 25.1(2) | C6942 | [M142 | 160M 4) | C6951 | ( M163 | 2 Meg (1) |
| C6934 | UM129 | 25. L (4) | C6943 | CM144 | 150M(1) | C6952 | [M165 | 3 Meg (1) |
| Type UM Controls. complete with SSI shaft. Your Cost, Any Size |  |  |  |  |  |  |  |  |

MALLORY "TM" Type Tapped Controls

| No. | Tave | Ohms | Tapped | No. | Tyue | Ohms | Tiapped |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C6953 | 7M23) | 25.11 | 50 M | C6959 | TM240 | 1 Ners. | $2(0) \mathrm{M}$ |
| C6954 | 7 M221 | 25031 | 110 M | C7006* | TM241 | 1 Meg. | 200 M |
| C7013* | TM222 | 250) M | 110M | C7007* | T'M242 | 1 Meg. | 450 M |
| C7014* | TM223 | 500. 11 | 60 M | C6960 | T 71243 | 1 Meg. | 450 M |
| C7015* | TM224 | 500 M | 100 ML | C7008 | TM244 | 11: Meg. | 200M |
| C6955 | 'TM225 | 3.50 M | 70M | C6961 | TM245 | 2 Meg . | 5M |
| c7016 | TA1226 | 500 M | 15M | C6962 | TM246 | 2 Meg. | 15M |
| C7017 | TM227 | 500.11 | 100M | C6963 | TM24 ${ }^{\text {\% }}$ | 2 Mes. | 60 M |
| C6956 | T 1228 | 510 M | 5M | C6964 | TM248 | 2 Meg. | 250 M |
| C6957 | TM230 | $5 \mathrm{~K}) \mathrm{M}$ | 150M | C6965 | TM249 | 2 Meg . | 600 M |
| C6958 | T 1231 | 500M | 225.11 | C7009 | TM250 | 2 Mes. | 125M |
| C7018* | TM232 | 500 NI | 225 M | C6966 | TM25 | 2 Meg . | 900 M |
| C7019 |  | 500 M | 60 M | c7010 | TM252 | 2 Meg . | 900 M |
| C7020 | TM234 | 1 Mer. | 65M | C7011 | TM2. 4 | 2 Meq. | 400M |
| C7021 | TM236 | 1 Meg. | 125 M | C6967 | TM1257 | 3 Mcg . | 900 M |
| C7022 | TM238 | 1 Meg. | 300 M | c7012 | TML259 | 2 Meg. | 900 M |
| C6864* | TM1239 | 1 Mck . | 300 M | *Clutch | Tyme Con | trols. |  |

Type TM Controls, complete with SSI shaft.
Any Type Above, Your Cost Each

| MALLORY Plug-In Shafts | $\square$ |
| :---: | :---: |
| Fit all UM and TM junior co |  |
| trols. Adapt for use with most |  |
| uto and home racios. | C6973-SS1. Replaces any 1/4* |
| ted "Insacup" shaft to6" long.38c | round slaft or $1 / 3{ }^{\text {or }}{ }^{3} 2^{\prime \prime}$ flattened |
| C6992 SS18. For l3elmont . 18c | shaft up to $4^{*}$ long. Each . . . 18 c |
| C6993 SS19. Each . . . . . . 38c | C6974-SS2. Each . . . . . . .18c |
| C6994-SS20. Each . . . . . 38c | C6975-SS3. Replaces any |
| C6995-SS21. Motorola model | slotted shaft up to $2^{\prime \prime}$ long... . 26 c |
| 17D. Each. . . . . . . . . . 26c | C6976-SS 1. Each |
| C6996 SS22. Each . . . . . . 18 c | C6977-SS5. Each . . . . . . . . 18c |
| C6997-S523. Each . . . . . . $18 \mathrm{18c}$ | C6978-SS6. RCA, Hudson |
| C6998-SS24. Each . . . . .18c | H6 |
|  | C6982-SS10. Each . . . . . 18c |
| Each . ................ 18c | C6983-SS11. Replaces any ${ }^{\circ}$ |
| C6809 SS26. Zenith sets. . . 18c | slotted shaft 2 to $4^{\prime \prime}$ long . . . . 26c |
| C6810-SS27. Philco sets. . . 18c | C6984-SS12. Each ....... 18c |
| C6820-SS28. Motorola sets 38c | C6986-SS14. Replaces any $13^{\circ}$ |
| C6821-SS29. Motorola sets. 18c | slotied shaft to $2^{\prime \prime}$ long |
| C6822 SS30. Motorola sets 18 c | C6987-SS15. Replaces any |
| C6826-SS31. Philco sets... 18c | slotied shaft 4 to $6^{\circ}$ long. . . . 26 cc |
| C6827-5S32. Philco sets.. 18c | C6988-SS16 .........18c |

## MALLORY "T" \& "L" Pads



For controlling level of low imp audio circuits, mikes or phono,

| "L" Pads |  | Pad |
| :---: | :---: | :---: |
| No. | Ohms Imp. | No |
| C6356 | 6 | $\begin{gathered} C 6362 \\ \text { C6363 } \end{gathered}$ |
| C6357 | 15 | C6364 |
| C6358 | 50 | C636 |
| C6359 | 200 | C636 |
| C6381 | 250 | C638 |
| C6360 | 500 | C636 |
| C6361 | 2000 | C636 |
| "L' Pad |  |  |
| Any Type | Above |  |
| "T" Pads |  |  |
| Any Type | Above |  |

## CTAROSTAT 10-Watt Output Attenuators

Type CIB: Compact constant impedance attenuators that will dissipate 10 watts in any position. Ideal for individual speaker controls. linear attenuation in 3 db steps to 30 db final step 10 infinity. Units are 2 dia.. $2^{3 / 4}$ " long. Mount in single hole. Bu ${ }^{\text {and- }}$ ing ${ }^{3}{ }^{\prime \prime} 8^{*}$, shaft $1^{\circ}$. long. Supplie knob. Shpg. wt. 1 lb .
No. Ohms No. Ohns No. Ohms Any Type, Each $\begin{array}{lccccccc}\text { C7837 } & 8 & c 7839 & 50 & c 7841 & 250 & \$ 6 & 57\end{array}$

# MALLORV Voume Cowrinus 

MALLORY Type "MR" Junior Controls


Ultra compact controls are similar to the typrion Mi and 1 M junior controls histed at le fexcel milled they feature standard shafs. knob adapters (for spring typer hobs). N are rated conservatively at $1 / 2$ watt.

| No. | Type | Ohms |
| :---: | :---: | :---: |
| C6900 | M1214 | $5.1(4 \mathrm{~A})$ |
| C6901 | M1218 | 10M(1) |
| C6902 | M1219 | 10M(2) |
| C6903 | M1220 | 10.N(4) |
| C6904 | MR2] | 15M(1) |
| C6905 | MR22 | 15.M(2) |
| C6906 | MR2 | 20M(1) |
| C6907 | M128 | 25. 1 (2) |
| C6908 | M1229 | 25M(4) |


| No. | Typ | Ohms | No. | Tyme | Ohrit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C6909 | Miz33 | $50 \mathrm{M}(1)$ | C6918 | M1R+1 | 250.11 |
| C6910 | MR34 | 50M (2) | C6919 | MR45 | 250112 |
| C6911 | MR35 | 50M (4) | C6920 | M1248 | 3(1) 111 |
| C6912 | MR36 | 75M(1) | C6921 | MR50 | 5 (m) M 4 |
| C6913 | MR3i | 75M (2) | C6922 | MR51 | 751011 |
| C6914 | MR39 | $100 \mathrm{M}(1)$ | C6923 | M1R53 | 1 Mer. 1 |
| C6915 | MR40 | 100.12 | C6924 | MR55 | 2 Mes. 1 |
| C6916 | MR41 | 1001.2(4) | C6925 | M115 ${ }^{7}$ | 3 Meg |
| C6917 | MR12 | $150 \mathrm{M}(1)$ |  |  |  |

$73^{\text {c }}$

## Junior Controls With Fixed Knurled Shafts

Similar to type "MIR" controls above, but have 3 " universal knurle shaft for replacing original units of this type.

| Stock | Type | Ohms \& | Stock | Type |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No | Taper | No | No. | Taper |
| C6637 ${ }^{-}$ | MK400 | 250M(1) | C6639 | MK102 | 1 Mcg. |
| C6638 | MK401 | 500M(1) | C6G40 | MK 103 | 2 Mey |
| Type M | K Contro | s |  |  |  |

Type MRT Midget Controls with Single Tap


Midget controls with single tap and fixed shaft or use in home radio receiver applications. Easy ocut channel shaft and insert lits all type kiohs. Nuts, washer and ground terininal ttnished. $138^{\circ}$ dia. Switches listed below are castiv. attached.


## MALLORY Attachable Switches

Fit all "UM," "TM," "MR" \& "MRT" Junior controls listed on this
page.
C6968-Single Pole, Single Throw. Each........................ 3 .
446
C6969-Double Pole, Single Throw
C6970-Single Pole, Double Throw
C6972-Four Pole, Single Throw (Shorting Type) Each

## MALLORY-YAXLEY Encyclopedia, 5th Edition

I.atest, biggest, most valuatble issue. Contains all the essential service information on all jrewar receivers, inclucing all the makes and model isted in former NHEs plus an addiona in the number newnete accurate replacement information on at printed containing complete, accurate replacement information on a! major radio conyponents. Incorporates all references up to and Riders Volume XIV.

## CENTRATAB EADERS <br> Straight Fader



|  |  |  |
| :---: | :---: | :---: |
| Stock No. | Resistance Each | Side c.t. |
| C9004 | 500 M |  |
| C9005 | 1 Meg. | Your Cost |
|  |  | $\$ 1$ |

Likeabove but without center tap.
No. Resistance Each
$\begin{array}{ll}\text { C9000 } & 250 \mathrm{M} \\ \mathrm{C} 9001 & 500 \mathrm{M}\end{array}$
C9002 1 Mleg .
C9003 2 Meg

"Delta-T" Pad
Dual control maintaining con tant imperdance to both side Forsound amplifiers, recorders, et

No. Impedance c9006 50 ohms C9007 200 olims C9008 500 ohms
$\$ 2.06$
$\$ 1.03$

# Howewe idmus 

Clutch Type DC Controls


Practical for auto radio use and other applications. llave friction clutch drive-arm equipped with a special tixed shaft for use where either slotted or tongued type haft required. Instructions tell how to cut shaft for either appli-
cations. Switches cannot be used cations. Switches cannot be used
with friction clutch controls. Diwith friction clutch controls. Dimensions: $118 x^{17} x^{\prime}$.
Stock Type
No. No. Ohms C7757 DC13-130 250 Price
 C7761 DC11-137 1.0M1"世.

TAPPED CONTROLS stock No. Type No. Tap Ohme $\bar{C} 758 \mathrm{DCl} 8-130 \mathrm{X}, 50 \mathrm{M} \quad 250 \mathrm{M}$ C7760 DC13-133X $\dagger 125 \mathrm{M} \quad 500 \mathrm{M}$ C7762 $1 \mathrm{DCl} 3-137 \mathrm{X} \quad 250 \mathrm{M} \quad 1.0 \mathrm{Meg}$ | C7764 DC13-139X | 500 M |
| :--- | :--- |
| Any type above, 2.0 Meg |  | each

## IRC Volume

## Control Guide

136-page replacement manual. Includes mfg. part numbers, Riders schematic reference and special shaft requirements. Free with C19792 Your Cost. 254

## Dual Controls



Here is a carefully selected group of "duals" that will speed many an inportant repair job! Stand ard No. 20 serjes switches can be attached. Dirnensions: 1/4"x1/4" Stock Type Use Ohms $\begin{array}{cccc}\text { No. } & \text { No } & \text { Use Ohms } \\ \text { C. } 9138 & 35-1620 & \mathrm{C} & * 10,000\end{array}$ $\begin{array}{lllll}\text { c9139 } & 61-1623 & \mathrm{~F} & +25,000 \\ & 10,000\end{array}$ $\begin{array}{llll}\mathbf{C 9 1 4 0} & 33-2828 & \stackrel{\text { A }}{\mathrm{C}} & +50,000 \\ \text { * } & 0.1 \mathrm{Mex} .\end{array}$



 Panel Control trear Contro Your CostIRC SWITCHES
FOR USE WITH S AND DUAL CONTROLS
Stock No. Type IKC No. Irice C9133 SI'si $\frac{21}{}$ 35c C9135

1HST SIPDT

## TAP-IN SHAFTS FOR TYPE D CONTROLS

TYPE "A": SUP


No. Type Use C7799 BI'or Auto Radio Controls ${ }^{26}$ C 7737 C Kurled-For lush-on C7738.D Knobs C7800 K Knobs. . . ......... C7880 E One Piece plit Knurled C7801 F ${ }^{3} 36^{\circ}{ }^{\circ}$ Dia. Full Round $3^{\prime \prime}$ C7802 G $7 / /^{\circ}$ Long Sotud with

186

No. Type C C7803 11 Special groove to hots corner of dial plate Diaw. with $105{ }^{\text {b }}$ flat. For Zenith Kets.
Has 2 concentric holes
 C7769 N Universal, to dia.
C7768 M Flatted, with threaded ent and tambed bole.

26c

## IRC Handy Control and Parts Cabinet



A sturdy, all-metal constructed, attractive 3 color finish. IRC Volume Control Cabinet is included FREE with a special assortment of popular sizes of Type I) Controls, 5 Shafts and 6 Switches that will enable you to handle up to $80 \%$ of your Volume Control Replacements. Cabinet measures $14 \frac{1}{2}{ }^{\prime \prime} \times 7^{3} \mathrm{~s}^{\prime \times} \mathrm{A}^{1} \frac{1}{4}^{\prime}$. Accommodates 20 controls, has 3 handy drawers for switches, tap-in shafts and other small parts. Control assortment includes one type DC and 17 iype D Volume Controls. (Sizes indicated in stock lists upper right by $t$.) You pay only for Controls, Shafts and Switches-c7739-Your Cost Complete
s18.17

Centralab Volume Controls


## Standard Radiohms

 Noted for their long noiseess lite these famous conrols employ a patented nonwearing contact arrangement. A highly polished metal band is pressed into contact with the resistance strip by the rotating arm. Contact between the arm and the band is by means of an oil-treated wood button that is absoutely noiseless and perfectly smooth in operation. Control dimensions: Bushing diameter- $8 / 8^{\prime \prime}$. Flat milled shaft. Tapers follow U-Voltage Divider (uniform) | A2-Ant. Sh. \& "C" Bias 2 Tubes S-Antenna Shunt
A1-Antenna Shunt \& "C'" Bias for 1 Tube

|  | CRI, | Ohms | No. | CRL | Ohms | No. | CRI, | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C8876 | A-100 | 5006 | C8873 | A-! 12 | 15,000 A | C8880 | A-123 | 100,000 |
| C886 | A-101 | 1000 U | C8931 | A-113 | 15.000 A | C8697 | A-12 |  |
| 8859 | A-102 | 2000 U | C8877 | A-114 | 20,000A | C8878 | A-12 | 200 |
| 8866 | A-103 | 3000 U | C8869 | A-115 | 25,000U | C8694 | A-126 | ?00 |
| C8867 | A-104 | 4000 U | C9032 | A-116 | 25,000C | C8879 | -12 | 250,000]G |
| 3868 | A-105 | 50000 | C8860 | A-117 | $2 \overline{5}, 000 \mathrm{~S}$ | C8864 | A-12 | C |
| 842 | A-108 | 5000 S | C8861 | A-118 | 50,000U | C8841 | A-129 | 501 |
| 8907 | A-103 | $7500 \mathrm{C}_{4}$ | C8875 | A-119 | 50,000 T | C8863 | A-130 | 500, |
| 3872 | A-108 | 10,000 ${ }^{\text {a }}$ | C9033 | A-120 | 75.000 T | C8908 | A-13 | 750 |
| 871 | A-109 | 10.000 A 1 | C88 | A-121 | 5,000 | C8874 |  |  |
| 8843 | A-110 | 10,000d2 | C8862 | A-122 | 100,000U | C8890 |  |  |
| 8858 | A | 10,000 |  |  |  | C869 |  |  |

Any Type Each-
TAPPED RADIOHMS (For Tone Compensation)

C8891- IT-135 C8881-АТ-136 C8882- \T-137 C8909-AT-138 (Composition Element)

1 Megohm GT
Your Cost
Each.
s1.09

C8959 V-104 W C8683 V-123 RADIOHMS
C8959 V-101 $\quad$ C8683 V-123 200 C8687 $\begin{array}{lllllll}C 8961 & V-108 & 10 & C 8684 & V-126 & 400 & \mathrm{C} 8765 \\ \mathrm{C} 8681 & \mathrm{~V}-116 & 50 & \mathrm{C} 8685 & \mathrm{~V}-127 & 500 & \mathrm{C} 8804\end{array}$
 V-129 1000 C8766 V-137 Your Cost Each
Any Type Listed Above.

## Twin Replacement RADIOHMS

Most popular twin controts for general replacement.
Stock No. CRL No. Front Ohms Rear Ohms

| C8912 | C-100 | 10,000 | 25,000 |
| :--- | :--- | ---: | ---: |
| C8913 | C-101 | 10,000 | 50,000 |
| C8758 | C 102 | $100,(000$ | 100,000 |
| C8768 | C-103 | 250.000 | 250,000 |
| C8787 | C-104 | 500,000 | 500,000 |$|$

## C8665 SWITCH COVERPLATES For Standard Radiohms  *-Oiven at clockwise position

## CENTRALAB Midget Radiohms

Small diameter controls for use in auto radio sets or in midget radios. Molded bakelite cases. All potentiometer type, with insulated terminals. length. Separate switches easy to install. Same length. Separate switches easy to install. Same above. CRL type numbers given below are less switch
No. CRL Ohms No. CRL. Ohms INo. Cl2L. Ohms C8187 N106 5окиU C8281 N112 20,000A C8192 N102250,(н)め;T C8190 N107 10,0UK) C8217 N113 25,000U C8273 N118500,(000U C8188 N 10010,000 A 1 C8191 N101 25,010A C8193 N10:3500,(4) C8189 N 10810,01012 C8218 N114 $50,000 \mathrm{U}$ C8194 N 1041 Nleg. CT C8278 N109 10, (\%)S C8219 N115 50, (以 OT C8169 N1552 Meg. GT C8279 N 110 15,000 A1 $\quad \mathbf{C 8 2 2 0}$ N 116 100,000U C8166 Nif75 Meg. U C8280 N111 15,000A2 C8272 N117 100,000GT C8170 N178 10 Meg. U
Any Type Listed Above (Less Switch) Each.

Tapped Midget Radiohms
Tapped for tone compensation circuits. Less switch. c8274 CR1. Ohms C8274 NT119 250,000 C8276 NT121 1 Neg. $\qquad$ $\$ 1$
$C 8276$ N1121 Nieg.

Midget Switch Plates
 $\begin{array}{ll}\text { C8196 } & \text { S.P.D.T } \\ \text { C8197 } & \text { D.P.S. } \\ \text { C8198 } & \text { 4 Point }\end{array}$ C8199 *S.1'S.T *-With dunimy lug.

## CRL Split Knurl Midget Radiohms

For 1938-39-40-41 radios using splitknurl shafts where the knobs will not fit any other type of shaft. Shafts 2\%/ long.
No. CRL Ohms C8285 NK-139 250M C8286 NK-140 5(M)M C8287 NK-1.11 1 Meg. C8288 NK-112 2 Meg.

## E) Nationally-known Volume Controls

IRC Type "W" Wire Wound Controls
Diameler $14^{*}$. Rated 2 watts. $3^{*}$ shaft Less switch, but switch covers listed below can be easily added. Uniform taper. Ideal for use where space is limited. Shield dust cover supplied.

| Stock No. | IRC No. | Otams | Stock No. | $\begin{aligned} & \text { IRC } \\ & \text { No. } \end{aligned}$ | Ohms | Stock No. | IRC No. | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C7810 | W-6 | 6 | C7818 | W-50 | 50 | C7826 | W-750 | 750 |
| C7811 | W-8 | 8 | C7819 | W-60 | 60 | C7827 | W-1000 | 1000 |
| C7812 | W-10 | 10 | C7820 | W-75 | 75 | C7828 | W-2000 | 2000 |
| C7813 | W-15 | 15 | C7821 | W-100 | 100 | C7829 | W-30) | 3000 |
| C7814 | W-20 | 20 | C7822 | W-200 | 200 | C7830 | W-4000 | 4000 |
| C7815 | W-25 | 25 | C7823 | W-3(\%) | 300 | C7831 | W-5000 | 5000 |
| C7816 | W-30 | 30 | C7824 | W-400 | 400 | C7832 | W-7500 | 7500 |
| C7817 | W-10 | 40 | ,C7825 | W-500 | 500 | C7833 | W-10000 | 10000 |

Any Above Type
$73^{\text {¢ }}$

CLAROSTAT Wirewound Controls
Wirewound controls with alloy wire precisely wound on thin bakelite strip. Perect sliding contact. 14 shaft, $1 \%$ long. * - Rheostat I-Standard Pot. (Uniform) V V - "C" S-Standard
W-Screen Grid; Phono Control
U-Antenna \& "C"Bias (1 Tube

| No. | Ohms | No. | Ohms | No. | Ohms | No. | S |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C7048* | 1 | C7058 | 40 | C7092 | 1000S | C7080 | 7510U |
| C7049 | 2 | C7099 | 50 S | C7090 | 2000S | C7079 | $7500{ }^{\circ}$ |
| C7050 | 3 | c7060 ${ }^{\circ}$ |  | C7089 | 2000L | C7078 | 100\%hS |
| C7051* | 4 | C7061* | 75 | C7088 | 2000 V | C7075 | 10006 V |
| C7052 | 6 | C7098 | 100 S | C7087 | 30005 | C7074 | 10040W |
| C7053* | 10 | C7097 | 200S | C7086 | 3000 U | C7073 | 150m0S |
| C7054* | 15 | C7096 | 2300 S | C7047 | 4000 S | C7072 | 15010 O |
| C7055* | 20 | C7095 | 400S | C7084 | 5000 S | C7070 | 20000S |
| C7056* | 25 | C7094 | 50, ${ }^{\text {a }}$ | C7083 | 5000 U |  |  |
| C7057* | 30 | C7093 | 750S | C7082 | 5000 V |  |  |
| Any Above Type-Your |  |  |  |  |  |  |  |
| C7068 | 25000S | C7066 | 40000S | C7065 | $50000 S$ |  |  |
| C7067 | 30x) |  |  |  |  |  |  |
| Any Above Type-Your Cos |  |  |  |  |  |  |  |
| C7064 | 750005 | C7063 | 100000S | Ea |  |  | S2.06 |

## RELIANCE Volume Controls

## Guaranteed Quality at Low Prices

Full length shaft. Standard $3^{\prime \prime \prime}$ " bushing. Switches are affixed, SPST. $\begin{array}{lll}\text { Less Switch With Switch Ohms } \\ \text { C8112 } & \text { C8123 } & 25,000 \\ \text { Linear, for voltaper }\end{array}$


## Potentiometer with Switch



160 ohm 4 watt potentiometer with irsulated rotor and switch. Straight
taper. taper threaded bushshaft extending 5 . ${ }^{\circ}$ from bushing. Less mtg. nut. Molded bakelite casc. Snap-on switch plate C3142-
Your Cost. . . . . . . . . . 29 4

SPST Tone Control Switch

SPST Ro
tary tone
swit ch
grounded
to shaft.
Standard
3/8", bush
ing, less mtg, nut. $1 / 4$ " latted
shaft to accommodate standard
knob. Shaft length $11 / 4^{\prime \prime}$.
C12599-

84

# Thordarson Replacement Transformers <br>  

## Vibrator Power Transformers

| No. | T |  | S | , | t |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C2093 | T23R20 | 6.8 V DC | 250 v DC 50 ma | CAV | 53.23 |
| C2094 | T22R22 | $6-8 \mathrm{~V}$ DC | 325v DC 75 ma | CAV | 3.82 |
| C2095 | T22R24 | $6-8 \mathrm{~V} \text { DC }$ | 325v IXC 135 ma\& $63 v$ C' 475 A | GGV | 7.06 |

Audio Interstage Transformers

| Stock | Type | Mtg |  | Turns | Your |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | Type | Application | Ratio | Cost |
| C2008 | T20A16 | BAII | Sgl. pl. o osgl. or PP grids | $1: 2$ | 51.41 |
| C2009 | T20A17 | FGV | Sgl. pl. to sgl. or PP grids | 1:2 | 1.53 |
| C2010 | T20A19 | BAH | Sgl or PP pl. to sgi. or |  |  |
|  |  |  | PP grids | 1:3 | 1.53 |
| C2011 | T20A22 | BA | Sgl. pi. to sgl. or PP grids | 1:3 | 1.88 |
| C2012 | 120423 | FGV | Syl pl. 10 sgl. or ${ }^{\text {PY }}$, grids | 1:3 | 2.06 |
| C2013 | T20A24 | FGV | $\mathrm{PP}^{1}$ plates to PP grids | 1:3 | 2.41 |
| C2014 | T20A25* | RTV | Sgi or PP pl. 10 sgl . or |  | 4.41 |
| 1 P grids <br> *Fully potted; hum-bucking coil and core. |  |  |  | 1:1.41 |  |

## Universal Chokes

Newly designed Universal Chokes replace swinging or snoothing types Voltage regulation not affected. Provides more inductance in ilter throughout current range, decreasing ripple voltage.
*Toned audio circuit reactor.

| Stock | Type | Induc | ce 11y. | Cu | MA | DC | Mtg. | You |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | Rated | Max. | Rated | Max. | Ohms | Type | Cos |
| C2015 | T20C50 | 350 | 75 | 5 | 25 | 5500 | BAII | \$1.7 |
| C2016 | T20C51 | 35 | 15 | 15 | 25 | 18.50 | Bali | 1.0 |
| C2017 | T20C52 | 8 | 4 | 40 | 65 | 450 | BAH | 1.0 |
| C2018 | T20C53 | 12 | 8 | 80 | 100 | 375 | BAII | 1.4 |
| C2019 | 120C5.1 | 8 | 4 | 150 | 200 | 145 | GGV | 2.5 |
| C2020 | $720<55$ | 6 | 2 | 200 | 300 | 75 | GCV | 2.7 |
| C2024 | T20C56 | 7 | 4 | 300 | 3.5 | 60 | GGV | 4.5 |
| C2022 | T20C57 | 10 | 6 | 500 | 600 | 65 | ]'UV | 17.6 |
| C2023 | T20C58* | 75 | 5 | - | 10 | 30 |  |  |


|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stock } \\ & \text { No. } \\ & \text { C2028 } \end{aligned}$ |  | Drivex | amsform | S |  |  |
|  | $\begin{aligned} & \text { Type No. } \\ & \text { T20D:5 } \end{aligned}$ | Input Tubes | Output Tubes | Ratio | Pri. Mtg. MA Type 3 BAH | Your <br> Cost |
|  |  | 1-30, 1-49, 1-6 | 1J6, 14, 2-30, 2-4 | 2.4:1 |  | \$1.32 |
|  |  | $1 \mathrm{H4}$ (single pl.) |  |  |  |  |
| C2029 | T20D76 | $\begin{aligned} & 1-6 \mathrm{~N} \overline{2}, 6 \mathrm{~A} 6,53, \\ & 1-76(\mathrm{gll}, \mathrm{pl} .) \end{aligned}$ | $\begin{aligned} & \begin{array}{l} \text { I-6N7, 6A6, } \\ \text { (class B) } \end{array} \\ & \text { ans } \end{aligned}$ | 5.2:1 | 7 BAH | 1.47 |
| C2030 | T20D77 | 1-89, 6F6, trionle 1-6C5 (ggl. pl.) | (लlas8 B) 261.6 2-6F6 (class AB2) | 2.5:1 | 30 FGV | 2.20 |
| C2031 T20D78 |  | 2-656, Triode$2-6 A 6, S 3$ | $2 \text { 26NJ (class } \mathrm{AB} \text { ) }$ | 4:1 | 40 GGV | 2.94 |
| C2032 | T20Di9 |  | ${ }_{\mathrm{B}}^{2-6 \mathrm{~N} / \text { ( }}$ (Pl' class | 5.2:1 | 30 FGV | 2.50 |
|  | T20D8 | $2-6 \mathrm{~N} 7$ (8,5l, or PP pri.) | B grids) |  |  |  |
| C2033 |  | $\begin{aligned} & \text { PP pri.) } \\ & 2-2.3,45,6 \mathrm{~L} 6 \end{aligned}$ | 100'TH, T55 (cl. B) |  | 40 GGV | 7 |
| C2034 T20D81 |  | PP 845 , etc. (PP pri.) | PР 805,833 , etc. (PPCl. B crids) | 5:1 | 50 GGV | 4.41 |
| C2035 | T20D52 | ${ }_{\text {2-2A3, }}\left(\mathrm{PP}\right.$, 45, ${ }^{\text {a }}$ 6 6 | PP 805, 833, cte. (PPCl B adid) | 5:1,4:1 | 60 G | 41 |
|  | C2036 T20D83 <br> *1.75, 1:85, 1 |  |  |  |  |  |
|  |  |  |  | Pri. 500 ohm line | (PPCl. B grids) <br> Class B Grids | Ratio |  | 14.11 |

## Universal Replacement Power Transformers

| Replacements for amplifiers, receivers. Adjustable mounting brackets. All leaus |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock | Type | Plate |  | Reet. | Píla. | Iila. | Your |
| No. | No. | $V$ | MA | Fila. | No. 2 | No. 3 | Cost |
| C2081 | T22R00 | 250-0-250 | 40 | 5-24 | 6.31CT-2A |  | 53.09 |
| C2083 | T22R01 | 275-1-275 | 50 | $5 \mathrm{~V} \cdot 2 \mathrm{~A}$ | 6.31 C T-2.5A |  | 3.12 |
| C2084 | T22R02 | 301-0-300 | 70 | 51 -2A | 6.31-CT-3A |  | 3.97 |
| C2085 | T22R04 | 300-0-300 | 90 | 51゙-2A | $6.3 \backslash$ CT-3.5A |  | 4.41 |
| C2086 | T22R05 | 300-0-300 | 120 | 51-3A | $6.31 \mathrm{CT}-5 \mathrm{~A}$ |  | 4.70 |
| C2087 | T22R06 | 325-0-325 | 150 | 51-34 | 6.31 CT-5A |  | 5.59 |
| C2088 | T22R07 | 350-0-350 | 200 | $5 \mathrm{~V}-3 \mathrm{~A}$ | 6.3 LCT-6A |  | 6.35 |
| C2089 | T22R08 | 250-0-250 | 40 | 5)-2A | $2.51 \mathrm{CT}-4 \mathrm{~A}$ |  | 3.09 |
| C2090 | T22R08 | 275-0-275 | 50 | 5-2A | 2.51 CT-7.5A |  | 3.67 |
| C2091 | T22R10 | 325-0-325 | 85 | $5{ }^{\text {b }}-2 \mathrm{~A}$ | $2.51{ }^{\circ} \mathrm{CT}-9 \mathrm{~A}$ | $2.51{ }^{\text {CT }}$-3.5A | 4.70 |
| C2092 | T22R11 | 325-0-325 | 120 | 5-3A | 2.51 CT-12.5A | $2.51{ }^{\text {C/ }}$ - 5 A | 5.59 |
| C2096 | T22R30* | 275-1-275 | 50 | 5 $\mathrm{V}^{2} 2 \mathrm{~A}$ | 6.31'CT-2.5. ${ }^{\text {d }}$ |  | 4.26 |
| C2097 | T22R31* | 360-0-360 | 80 | 5V-2A | 6.3YCT-2.5A |  | 4.56 |
| C2098 | T22R32* | $350-0-350$ | 110 | $5 \mathrm{~V}-2 \mathrm{~A}$ | 6.31CT-3.4 | $6.31 \mathrm{CT}-3 \mathrm{~A}$ | 5.14 |
| C2099 | T22R33* | 375-0-375 | 160 | $5{ }^{\text {S }}-3 \mathrm{~A}$ | 6.31CT-5. |  | 6.17 |
| C2100 | T22R34* | 385-0-385 | 225 | 51-3A | 6.31 CT-5 A |  | 7.94 |
| C2101 | T22R35* | 400-0-400 | 340 | 5V-6A | 6.3VCT-7A |  | 8.82 |



## Dual Tone Control

An effective tone compensating network for sound systems. Trehle and bass frequencies attenuated or accentuated independently. For smooth control over wide range of audio frequencies.
T20C -4 Tone Control Choke with llum-bucking Coil and Core. DC ohms 220. Test volts 500 . Mig. Type RAV. C2027
Your Cost R1068-X Dual Tone Control Potentiometer for above circuit C2149

## Feedback Control Transformex

T20A26 is the control element in a variable audio inverse feedback system, basis of compressor-expander circuit. Variable gain is produced by automatically controlling inverse feedhack voltage. Superior to DC grid bias control, response faster, harmonic distortion does not rise. Gransformer connes with complete details of 10 Watt hi fidelity amplifier incorporating above circuit. Mtg. type RTV.
C2026
$\$ 4.4$

## Microphone Cable Transformers

Permits rapid change from low impedance to high impedance microphone or any amplifier. I' requency response tlat from 301015000 cycles. Mig. Type $Z$.

| Stock No. Type No. Primary | Sec. | Turns Ratio | Your Cost |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| C2006 | T20A 40 | $30-60$ | 50.000 | $1: 31.6$ | $\$ 11.76$ |



## Audio Input Transformers

| Stock | Type | Mtg. |  | Turns | Your |
| :---: | :---: | :---: | :---: | :---: | :---: |
| N2000 | N20A00 | Type | Application | Ratio | Cust |
| C2000 | T20A00 | BAl1 | Line or mic. to single or PP grids | 1:10 | \$1.41 |
| C2001 | T20A01 | FGV | Line or mic. to single or |  |  |
|  |  |  | PP grids | 1:20 | 2.00 |
| C2002 | T20A02 | FGV | Line or mic. to PP grids | 1:20 | 2.06 |
| C2005 | T20A05 | RTV | Line to Pl' grid mic. to single or I'P grids | 1:10 | 5.88 |
| C2004 | T20A04 | BAH | V.C. or low imp. mic. to grid | 1:80 | 1.23 |
|  |  | Tran | ceiver Transformer |  |  |
| Stock | Type | Mrg. |  | Turns | Your |
| No. | No. | Type | Application | Ratio | Cost |
| C2003 | T20A03 | BAH | Single pl. 10 grid | 3:3.25 | \$1.76 |
|  |  |  | Line or mic. to grid | 1:35 |  |

Output Transformers

| Stock | Type | Application <br> $\mathrm{Sg} / \mathrm{Pl}$ to YC |  |  | Power Ont jut | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. |  | Pri. Imp. | Soe. Imp. |  |  |
| C2103 | T22S45 |  | 1500) to 3000 | 3.2 to 4 | 3 | 50.97 |
| C2104 | T22N40 |  | 30010 to 6000 | 3.2 to 4 | 3 | 1.00 |
| C2105 | 722 S 47 |  | 6000 to 12000CT | 3.2 to 4 | 3 | 1.32 |
| C2106 | T22S48 |  | 12000 to 25000 CT | 3.2 to 4 | 3 | 1.41 |
| C2107 | T22850 | Sgi \& PP | 8000 or $100 \% \mathrm{HCT}$ |  | 8 | 1.76 |
| C2108 | T22S58 | Pl to YC | 5000 or 7010 CT | 3.2 to 4 | 8 | 1.76 |
| C2109 | T22Stio |  | 2500 or 4000CT | 6 to 8 | 8 | 2.00 |


| C2111 | cial Duty Hi-Level Output Transformers (GGV) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 53.67 |
| C2112 | T22S06 |  | 8000 CT | 3.2 to 4 | 25 | 3.67 |
| C2113 | T22S68 | Skl \& PP Il | 6500 CT | 6 to 8 - | 25 | 3.82 |
| C2114 | T22Si0 | to line \& V $V$ | 5000 CT | 15-250-500 | 25 | 4.12 |
| C2115 | T22S ${ }^{7} 2$ |  | 3010 CT |  | 25 | 4.12 |
| C2118 | T22S:8 |  | $3300 C T$ |  | 60 | 5.59 |
|  | Universal Replacement to Multiple Voice Coil (BAH) |  |  |  |  |  |
| C2116 | T22Si4 | Splor PP <br> Pl to V'C | $\begin{aligned} & 14000-1(10000-8000 \\ & 6600-5000-3000 \end{aligned}$ | 1 to 30 | 25 | \$3.09 |
| C2110 | T22S62 | Sgl $\mathrm{ll}^{\text {to }} \mathrm{V} \mathrm{C}$ | 4000-3000-2500 | 1 to 30 | 8 | 2.18 |
| C2124 |  |  | 2000-1500 |  |  |  |
| C2125 |  | Pr | $14010 \mathrm{CT}-800 \mathrm{CT}$ | . 2 to 4 | 3 | 1.62 |
|  | 12258 ¢ | PPPI to IC | 500-2(10) | 6 to 8 | 6 | 1.76 |
| C2126 | T22888 |  |  |  | 8 | 1.91 |

## Universal and Special Duty

Stock Type
No.
N21i7
C2117 T22Si6 Application (BAH) Tubes to Line

C2127 T22S90 Sgl or PP I!
C2128 (FGV)
(RTV)
Sgl or PP PM Hum-burking

$\begin{array}{ll}\text { C2120 } & \text { T22S82 } \\ \text { C2121 } & \text { T22S83 } \\ \text { C2122 } & \text { Multiple } \\ \text { Lines to }\end{array}$
C2122 T22S84

Matching Line or Lines to Voice Coil (BAH)

| Pri. Imp. | Sec. Imp. | Power Output | Your Cost |
| :---: | :---: | :---: | :---: |
| 1400) $12000-$ | 500 to 600 | 25 | \$3.23 |
| $10010-8000-$ |  |  |  |
| 5000-3000CT |  |  |  |
| $20000 C T$ | 125-200- | 3 | 2.65 |
|  | 500 to 600CT |  |  |
| 20000 CT | 125-200- |  | 5.88 |
|  | 500 to 600CT |  |  |

UNIVERSAL OUTPUT TRANSFORMERS

| No. | Type | 1 'rimary Ohms | Mtg. | Ctrs. | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1675 | A-3856 | All for Single |  |  | 1 | \$1.32 |
| C1637 | A-3823 | or P. P. plates. | Q | 25/60 | 1 | 1.41 |
| Cl671 | A-3850 | 4000, 7000, 8000, | J | 2 * | 1 | 1.50 |
| C1673 | A-3852 | 10M, 14M CT | J | $23 / 8$ | 2 | 1.82 |
| C1678 | A-3890 |  | TD | 23/8* | 2 | 2.79 | $\begin{array}{llllllll}\text { C1670 } & \text { A-3849* } & 1500,2000,4000, \\ 5000,7000,10.000 & \mathrm{Q} & 211 / 6^{*} & 1 & 1.32\end{array}$ C1666 A-3830 $\ddagger \quad 3000,5000,6600$ J ${ }^{11}$ í $^{\circ} \quad 3 \quad 2.50$ *For hattery radios. $\ddagger$ Designed for tubes with large output. LINE TO VOICE COIL

stoch
Type Impedance Mtg. Watts Size Wt. Each
 C1636 A7949 Pec. 6 Phms 2000,150

## CRYSTAL RECORDER OUTPUT TRANSFORMERS

 Type A mtg. Shpg. wi. 5 W .-1 $1 \mathrm{~b} . ; 10 \mathrm{~W}$. $-11 / 2 \mathrm{lbs}$.Stock Output $\quad$ Impedance $|$| Max. | Dimensions |
| :--- | :--- |
| Mtg. Your |  | No. Tubes Pri Sec. Watt $11 \times W \times D$





| Stoek Type |  | Lmpedance |  | Ratio | Mtg. | Mtg. | W't. | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | Pri. |  | $3 / 2$ Sec. | Tupe | Ctrs. |  |  |
| C1684 | A-1712* | 20 M | 2.2 M | $3: 1$ | A | $2^{5}$ | 1 | \$1.47 |
| C1685 | $\mathrm{A}+713$ | 10M | 2.5 M | 2:1 | A | $2^{3{ }^{\text {16 }}{ }^{\prime \prime}}$ | 1 | 1.32 |
| C1688 | A-4723 | 10 M | 1.1M | $3: 1$ | A | $2^{5160}$ | 1 | 1.32 |
| C1687 | A- 4722 | 10M | 10M | 1:1 | TD | $2^{23} 8^{\text {\% }}$ | 2 | 2.76 |
| C1682 | A -1401 | 10 M | 1.4 M | 2.71 | J | $2^{3} 8^{\prime \prime}$ | 2 | 2.03 |
|  |  |  | 1.6 M | 2.5:1 | S | $2^{3} 3^{*}$ | 2 | 1.73 |

## UNIVERSAL INTERSTAGE TRANSFORMERS

 Split secondaries. 1'rimary center tapped. May be used plate to grid, p.p. input or p.p. interstage. Primary will pas 10 milliamperes I)C. Shpg. wt. each, 2 lbs.| No. | 7 ype | Core | Mig. | II. W. D. | Centers | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1630 | A-473 | ${ }^{3} \times 1 \times 1{ }^{\prime \prime}$ | TD | $2{ }^{11} 16 \times 23 \times 23 / 10^{\circ}$ | $2^{3}{ }^{\text {\% }}$ | \$3.12 |
| C1631 | A-4734 | ${ }^{3} \times 1{ }^{\prime \prime}$ | S | $2^{1}{ }^{1} \times 2^{7}{ }^{7} \times 2^{14^{40}}$ | $2^{3} \mathrm{sm}$ | 2.06 |
| C1634 | A -1725 | $7 \times 7$. | S | $2^{7} \times 2^{1} \times \times 2^{3} 4^{*}$ | 23.4* | 2.68 | Push-Pull Inputs (1 PI. to 2 G.)


| Stock No. | $\begin{aligned} & \text { Tye } \\ & \text { No. } \end{aligned}$ | Turns Ratio | Dimensions $11 \times W \times 1)$ | $\begin{aligned} & \text { Mtg. } \\ & \text { Tyje } \end{aligned}$ | Mtg. C'trs. | Wt. Ithes. | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1651 | A-53C | 3:1 | $1^{3} 8 \times 2^{3}{ }_{8} \times 1{ }^{1} z^{\prime \prime}$ | A | 2 | 1 | \$1.26 |
| C1690 | A-63C | $3: 1$ | $2 \times 2^{3} \times{ }^{11}{ }^{\prime}$ | A | $2^{\prime \prime}$ | 1 | 1.35 |
| C1654 | A-73C | 3:1 | $2 \times 3^{3}{ }_{16} \times 15{ }^{\text {/ }}$ | A | $2^{18} 11^{\prime \prime}$ | 1 | 1.76 |
| C1691 | A-4750 | 3:1 | $2,4 \times 2{ }^{7} 8 \times 1^{5} 8^{6}$ | S | $2^{3} 8$ | 1 | 1.76 |
| C1686 | A-4, 19 | $3: 1$ | $23,8 \times 5^{5} \times 2!5$ | TD | 23/8' | 2 | 3.00 |
| C1587 | A-62C | $2: 1$ | $1^{5}{ }_{8} \times 2^{13}{ }^{6} \times 11^{1}{ }^{4}$ | A | .. | 9 | 1.35 |
| C1588 $\dagger$ | A -1745 | $2: 1$ | $2^{3} 8^{8} \times 2{ }^{5} 8_{8} 2^{1}{ }^{4}$ | TD |  | 2 | 3.23 |
| C1589* | 1-1206 | 3:1 | 3 ! $8 \times 22^{5} 8^{25} 2^{\prime \prime}$ | C | $\cdots$ | 3 | 3.73 |

*Split Secondary. $\dagger$ Has static shield.
Push-Pull Interstage ( 2 PI. to 2 G.)
C1683

$$
\text { Push-Puil Interstage (2 PI. to } 2 \text { G.) }
$$

C1681* $A-1711$
$A-1208$ $\begin{array}{cc}A-1208 & 1.4: 1\end{array}$
*ltas split secondary


STANCORReplacement Transformers

## OUTPUT TRANSFORMERS

| Stock No. | Type No. | Class Oper. | Tubes | Impedame in OhnusPrim. Sx. Mig.Wecondars |  |  |  | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| C1663 | A-3822 | A | S | $\overline{7 \mathrm{M}, 10 \mathrm{M}}$ | . 7 to 4 | 5 | (1) | \$1.12 |
| C1669 | A-3818 | A | S | 16,000 | 1, 2, 4 | 5 | 0 | 1.32 |
| C1676 | 1-3857 | A | S | 25,000 | 1. | 5 | A | 1.15 |
| C1677 | A-3865 | A | S | 1,500 | 2, 4, 6 | 5 | A | 1.21 |
| C1640 | A-3876 | A | S | 2,000 | , | 5 | A | . 88 |
| C1645 | 1-3877 | 1 | S | 5,000 | 4 | 5 | A | . 91 |
| C1646 | . $1-3878$ | A | S | 7,000 | 4 | 5 | A | . 91 |
| C1648 | 1-3879 | A | S | 10,000 | 4 | 5 | A | . 94 |
| C1619 | 1-3881 | A | S | 15,000 | 4 | 5 | A | . 94 |
| C1647 | 1-2201 | A | $S$ or PP | 8,000 | 6 | 10 | 1 | 1.59 |
| C1664 | A-3824 | 8 | S | 8,000 | 1, 2, 4 | 8 | 0 | 2,194 |
| C1665 | . $1-3825$ | A | S | 2,500 | $1,2,4$ | 8 | Q | 1.47 |
| C1667 | A-3831 | B | $S$ or PP | 10M | 2,4,8 | 5 | A | 1.38 |
| C1656 | A-3303 | $A \& B$ | s or PP, | 11 M | $1,8,15,500$ | 20 | ( | 3.50 |
| C1657 | :-330.t | $A \& B$ | S or P1 | 10M, 7M | $1,8,15,500$ | 25 | C | 3.68 |
| C1644 | A-3301 | A\& 13 | PP | 3,000 | $1,8,15,500$ | 30 | C | 3.94 |
| C1672 | A-3851* | AB1 | PP | 4,400 | $1,8,15,250$ | 30 | C | 4.56 |
| C1590 | . 1 -38-95 | A | S or PP | 7,000 | 10,2000 | 5 | TD | 2.88 |
| C1661 | .-3800 | $A \& A B$ | P] | 5,000 | 4,8, 15 | 30 | C | 4.03 |
| C1662 | 1-3401 | AB1 | PP | 6,600 | 250, 500 | 35 | C | 4.70 |



FILTER CHOKES TYPE A

A.C.-D.C. CHOKES TYPE A
$\qquad$

Send for Free Stancor Catalog

UNIVERSAL MOUNTING POWER TRANSFORMERS
$\star$ Electrostatically Shielded
$\star$ Primaries for 115 V. $50 / 60$ Cycles $\quad \star$ Hessible Mounting Positions
\&

| Stock No. | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | -No. of Tubes | Your Cost | Plate |  | Rec. Fil. |  | Fil. No. 1 |  | Fiil. No. 2 |  | Mtg <br> Area | $\begin{aligned} & \text { Wt. } \\ & \text { Lbs. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Vits. | M.A. | V. | A. | V . | A. | V. | A. |  |  |
| C1706 | P-6001 | 4-5 | \$3.06 | 650 | 40 | 5 | 2 | 2.5 |  |  |  | $\begin{aligned} & 21 \pi \\ & 21 \end{aligned}$ | 4 |
| C1712 | P-6002 | 5-6 | 3.53 | 700 | 50 | 5 | 3 |  | 71/4 |  |  | ${ }_{213}{ }^{13} \times 3{ }^{\circ}$ | 4 |
| C1713 | P-6003 | 6-7 | 4.26 | 700 | 70 | 5 | 3 | 2.5 |  |  |  | $3^{1}{ }_{9} \times 3^{3 / 4}$ | 6 |
| $C 1714$ | P-6004 | 8-9 | 4.32 | 700 550 | 90 | 5 5 | 3 <br> 3 | 2.5 | 12.5 | 2.5 | 10.5 | ${ }_{2}^{13^{16} \times 3 \times 388^{\circ}}$ | 5 |
| C1719 | ${ }^{P}$ P-6009 | $6-7$ $6-7$ | 4.41 4.35 | 550 700 | 70 | 5 5 | 3 3 | 5.0 2.5 | $9^{.5}$ | 2.5 | 10.5 |  | 6 |
| ${ }_{C 1715}^{C 1716}$ | P-6005 P 6006 | $6-7$ $11-13$ | 4.35 5.44 | 700 700 | 70 120 | 5 | 3 | 2.5 | 12.5 | 2.5 | 3.5 | 3, $8 \times 331{ }^{\circ}$ | 6 |
| C1717 | P-6007 | 10-12 | 5.32 | 800 | 110 | 5 | 3 | 2.5 | 15 | 2.5 | 3.5 | $31 / 8 \times 33^{\circ}$ | 7 |
| C1735 | P-6297 | 4-5 | 2.85 | 480 | 40 | 5 | 2 | 6.3 |  |  |  | $21 / 2 \times 3$ " | 4 |
| C1720 | P-6010 | 4-5 | 2.85 | 650 | 40 | 5 | 3 | 6.3 | 2 |  |  | $21 / 2 \times 3$ * |  |
| C1721 | P-6011 | 6-7 | 3.73 | 700 | 70 | 5 | 3 | 6.3 | 2.5 |  |  | ${ }_{213}{ }^{1 / 2} \times{ }^{16} \times 3^{3 /}$ | 4 |
| C1722 | ${ }^{3}-6012$ | 8-9 | 3.94 | 700 | 90 | 5 | 3 | 6.3 | 4.5 |  |  |  | 6 |
| C1723 | P-6013 | 11-13 | 4.38 5.53 | 700 | 120 | 5 | 3 3 | 6.3 | 5.7 |  |  | $3!8 \times 3$ \% | 6 |
| C1724 | ${ }^{\text {P }}$-6014 | - $13-15$ | 5.53 6.41 | 750 800 | 150 200 | 5 | 3 | 6.3 | 5.5 |  |  | $3{ }^{3 / 81} \times 411^{\prime \prime}$ | 7 |
| C1726 | P-6165 | 14-16 | 4.12 | 600 | $60^{-}$ |  |  | 6.3 | 2.5 | 2.5 | 7.5 | $2^{13} 16 \times 38{ }^{\circ}$ |  |
| $\begin{aligned} & \text { C1731 } \\ & \text { C1733 } \end{aligned}$ | P-6293 | $6-7$ $8-9$ | 4.12 5.23 | 600 700 | 60 90 | 5 5 | 3 3 | 6.3-2.5 | 3.5 | 2.5 | 7. | $31 / 8 \times 33 / 4^{\prime \prime}$ | 6 |
| C1734* | P-6234* | 11-13 | 6.32 | 660 | 90 | 5 | 3 | 2.5 | 12 | 6.5 | 4 | 31/8 $\times 3 \%^{\prime \prime}$ | 6 |
| C1718 | P-6008 | 14-16 | 5.97 | 750 | 180 | 5 | 3 | 6.3 | 3.3 | 2.5 | 6 | $3^{7}$ ! $/ 6 \times 41 / 8^{\circ}$ | 7 |



## SPECIAL 6.3 V. TRANSFORMERS FOR SETS USING P.M. SPEAKERS

${ }^{C 1785}$

$|$| $\mathrm{P}-6289$ |
| :---: |
| $\mathrm{P}-6.619$ |
| $\mathrm{P}-120$ |
| $\mathrm{P}-6312$ |
| $\mathrm{P}-6312$ |
| $\mathrm{P}-6313$ |
| $\mathrm{P}-6314$ |
| P |

$\$ 2.8$
C1787

| $C 1744$ |
| :--- |
|  |

c1745


| 420 | 40 |
| :---: | :---: |
| 600 | 55 |
| 630 | 70 |
| 580 | 90 |
| 580 | 125 |
| 700 | 200 | |  | 5 |
| :--- | :--- |
| 5 | 2 |
| 5 | 2 |
| 5 | 3 |
| 5 | 3 |
| 5 | 3 |
| 5 | 3 |
| 5 | 3 |




${ }_{4}^{4} \times 3$ 疗


Horizontal Mount


# iff Replacement Transformers <br>  

## VARITAP Universal Mount Transformers and Chokes

VARITAP audios represent the acme in replacoment transformer development. The double shells and universal mounting brackets are inished in high lustre black. All mouning positions incorporite long slots for maximum flexibility. All coils are well shielcled, and have tropical wetproof impregnation. Shipping weight cach, 3 lbs .

| N | Type Description | Size | Ea. |
| :---: | :---: | :---: | :---: |
| C5540 | R-23, Plate to 1 Grid. Ratio 312:1 | C | . 41 |
| C5541 | R-211 Plate to 2 Grids. Ratio 2 : | G | 2.53 |
| C5542 | R-252 Plates 102 Grids. $1.5: 1$ step up forClass Atriodes, 1.5:1 step-down for 61.6 's, 2 A 3 's, 2 A 5 's, etc | G | 2.65 |
| C5543 | Driver, 1 Pate to 2 Grids, Single $42,215,6 \mathrm{~F} 6$, 45 to AB 6L6's, 42 's, 2A5's, etc |  | 2.65 |
| C55 | R-2715-Wati Output. Allubes to $1-30 \mathrm{ohm}$ voice coils | G | 2.41 |
| C5545 | R-2835-Watt Output. Alltubes to .1-30 ohm vatee coi |  | 3.41 |
| C5546 | R 29 Single or double bution mike or lin | G | 2.53 |
| C5547 | R-31 Filter Choke. 10 Ilenrys, $80 \mathrm{ma},{ }^{250}$ ohmw | G | 2.06 |
| C5548 | R-32 Filter Choke. 10 Ily., 150 ma ., 100 ohm |  | 2.9 |

## Tropic Sealed Channel Frame Audios

An excellently designed series of channel frame TIROPICAL WETPROOF audios. In addition to good frequency response, coils are vacuum-pressure treated followe by the UTC MOULD SEAL hrave black enamel finish, and have long insulated leads. Average hhipping weight, each 2 ibs

## Audio Transformers

| No. | Type | Inescription of Unit |  |  |  |  | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C5514 | R-33 | $\overline{\mathrm{P}}$ | te to 1 | R |  |  | 13 | \$1.71 |
| C5515 | R-34 | 1 Pl | te to 2 C | s. Ra | 2:1 |  | B | 1.76 |
| C5516 R | R-35 | Mik | to 1 Grí | Ratio | $7: 1$ |  | B | 2.17 |
| C5517 1 | 12-56 | 1 P | e to 2 Ci | s. Ra | $2: 1$ |  | D | 2.17 |
| C5518 | R-57 | 1 Pl | te 102 G | s. Hi | Ficlelity, R | 2112 | F | 3.41 |
| C5519 1 | 12-36 | Driv | r 130,49, | c.) to | lass B19, 79, | Grids | B | 2.17 |
| C5520 | R-37 | $\begin{aligned} & 12 \mathrm{~F} \\ & \hline 5 \end{aligned}$ | Outiput. 0 , and 50 | ass 13 ohm | $49,79,89$ | tes to | B | 2.29 |
| C5521 R | R-58 | 5-W | tt Univer voice $\mathbf{c}$ | Out from | t. Any singl 1030 ohms | be to | A | 1.76 |
| C5522 R | R-38^ | 6-W | tt Univ. | t. Any | ubes to 110 | ohms | A | 1.76 |
| C5523 | 12-59 | 10- | att Univ. | ut. $\Lambda$ | tubes to 1 to | ohms | B | 2.06 |
| C5524 | 12-60 | 15-V | att Univ. | ut. An | tubes to 1 to | chms | D | 2.17 |
| C5525 R | R-39 |  | att Line $2,8,150$ | $\begin{aligned} & \text { atchin } \\ & \mathrm{n} \text { voic } \end{aligned}$ | $\text { : } 250.500,15$ | olhms | B | 2.23 |
| C5526 | 12-40 |  | att Line <br> 2, 8, 15 o | atchin | $250,500,15$ coil. | ohms | C | 3.23 |
|  |  |  | ilter a | A | io Chol |  |  |  |
| No. |  | Type | Henrys | Ma. | Ohms D.C. | Size |  | Each |
| C5527 |  | R-5.5 | 10 | 35 | \%10 | 1 |  | \$1.03 |
| C5528 |  | R-14 | 12 | 40 | 250 | B |  | 1.23 |
| C5529 |  | R-15 | 15 | 30 | 450 | B |  | 1.23 |
| C5530 |  | R-16 | 20 | 30 | 600 | B |  | 1.23 |
| C5531 |  | R-17 | 25 | 30 | 1000 | D |  | 1.65 |
| C5533 |  | R-18 | 10 | 75 | 250 | D |  | 1.65 |
| C5534 |  | R-19 | 15 | 100 | 450 | E |  | 2.29 |
| C5535 |  | R-20 | 8 | 160 | 100 | F |  | 2.53 |
| C5537 |  | R.21 | 5/25 | 160 | 100 | F |  | 2.53 |
| C5538 |  | R-22 | 500 | 5 | 6000 | D |  | 2.29 |

## Mounting Dimensions of Above Units

| Size A: $212^{\prime \prime}$ w., $188^{\prime \prime}$ d., | Size |
| :---: | :---: |
|  | Size F: 41 \% ${ }^{\prime \prime}$ |
|  | Size G: $2^{3}$, ${ }^{\text {" }}$ |
|  |  |

## Photo-Flash Transformers

For use with standard Amglo type or Sylvania trigger type multiple flash bulbs. Circuit detail included with transformers.
Pl-1 Primary for 115 v., $50 / 60 \mathrm{cyc}$. Secondaries for power supply delivering 2200 VDC to condenser up to 100 MFD . Compound sealed. $21 / \mathrm{an}^{2} 3 / 4 \times 21 / 2^{\prime}$. Shipping weight 3 lbs .
C5414-Your Cost.
$\$ 5.88$
PF-2 For portable use. Irimary for 4-or 6-volt battery. Secondary for delivering 2200 VDC to condenser up to 60 mfd . Same case and weight as above
C5415-Your Cost
. $\$ 5.88$
PF-3 Trigger Transformer 15K V peak.
2.65

VARITAP All-Purpose Power X'formers


Type 1 units feiture universal mounting. Leads brought out through single insulated opening, universal flanges supplied. Type 13 standard vertical shielded transformers with long insulated leads. Type C are for flush mounting and have lug terminals with windings marked. All units vacuum sealed. Black enamel finish. High voltage filament windinys centertapped. No. 1 and Fintaries 115 v . 50 / 60 cycles

Universal Mounting Transformers (type A)

| Stock No. | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Plate |  | Rect. Fil. |  | Fil. No. 1 |  | Fil. No. 2 |  | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | V. | Ma. | V. | A. | V. | A. | V. | $\Lambda$. |  |
| C5500 | R-1 | 650 | 40 | 5 | 2 | 6.3 | 2 |  |  | \$3.59 |
| C5501 | 122 | 700 | 70 | 5 | 3 | 6.5 | ${ }^{4} 2.5$ |  |  | 4.35 |
|  |  |  |  |  |  | $\{2.5$ | 8 |  |  |  |
| C5502 | 12-3 | 700 | 95 | 5 | 3 | \{6.3 | 4.5 | 2.5 | 9 | 5.29 |
| C5503 | R-4 | 750 | 120 | 5 | 4 | - 6.5 | ${ }_{5}^{4.5}$ | 2.5 | 15 | 6.29 |
| C5504 |  |  |  | 5 |  | 12.5 6 | 5 4 |  | 5 |  |
| C5sed. | R-5 | 710 | 180 | 5 | 4 | 2.5 | 6 | 6.3 | : | 7.64 |


| Vertical Shielded Transformers (type E) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C5505 | R-5-1 | 600 | 50 | 5 | 2 | j6.3 | 2 |  |  | 3.88 |
| C550E | R-11 | .00 | 75 | 5 | 3 | 6.3 | 3 | 2.5 | 8 | 5.59 |
|  |  |  |  |  |  | 2.5 | 3 |  |  |  |
| C5507 | R-12 | 750 | 100 | 5 | 3 | 16.3 | 4 | 6.3 2.5 | $\stackrel{2}{8}$ | 6.35 |
| C5508 | R-13 | 850 | 200 | 5 | 3 | 16.3 | 5 | 3.3 | 3 | 9.11 |
|  |  |  |  |  |  | 12.5 | 5 |  | 12 |  |
| Flush Mounting Transformexs (type C) |  |  |  |  |  |  |  |  |  |  |
| C5509 | R-6 | 600 | 50 | 5 | 2 | $\ 6.3$ | 2 |  |  | 3.59 |
| C5510 | R-7 | 700 | 75 | 5 | 3 | +2.5 | 5 | 2.5 | 8 | 4.59 |
|  | R-8 |  |  | 5 |  | 2.5 | 3 4 | 2.5 |  |  |
| 511 | R-8 | 1:0 | 100 | 5 | 3 | 12.3 | 4 | 2.5 | 10 | 5.59 |
| C5512 | R-9 | 800 | 125 | 5 | 3 | 16.3 | 4 | \{6.3 | 2 | 6.47 |
| C5513 | R-10 | 850 | 200 | 5 | 3 | 12.5 | 4 | 6.3 | ${ }^{10}$ | 8.23 |
|  |  |  |  |  |  | 2.5 | 5 | 2.5 | 12 |  |
| Dimensions and Shipping Weights |  |  |  |  |  |  |  |  |  |  |
| Type |  | (x) | 人11. |  |  | Type |  | W.x] x |  | Ihs |
| R-1 | 3 3 | $\times 2{ }^{1}$ | $3^{23}{ }^{\text {\% }}$ |  |  | R-8 R-9 |  | $3{ }^{3} \times 3 \times$ |  | 51 |
| R-2 |  | $\times 2$ | -3 |  | 61/2 | R-9 $\mathrm{R}-10$ |  | $41 / 2 \times 3 \times 3{ }^{3} \times 1 / 2{ }^{3} \times$ |  | 88 |
| R-4 |  | ¢3 ${ }^{3}$ | $\times{ }^{8}$ |  |  | R-11 |  | $3 \times 314$ |  | , 2 |
| R-5 |  | ${ }_{2} \times 3{ }^{3}$ | 41/20 |  | $81 / 2$ | R-12 |  | $31 / 4 \times 3 \times$ |  | 612 |
| R-6 | 3 | $\times 21 / 2$ | 21: |  | $21 / 2$ | R-13 |  | $3 \mathrm{x} 41 / 2 \mathrm{x}$ |  | 812 |
| R-i | 3 | $\times 2$ | $\times 31.6$ |  | 3 | R-54 |  | $21 / 2 \times 21 / 2 \times 3$ |  | 21/2 |



## UTC "Linear Standard" Audios

Shielded high fidelity auclio transformers. Lowest hum pick-up available. Uniform frequency response, low wave form distortion, high efficiency and thoroughly shielded. Multiple tap windings wide combination of impedance terminations. Guaranteed uniform response wit hin 1.3 db from 20 to 20,000 cycles. Threaded four-hole mounting for top or bottom mounting. All but LS- 55 and LS-6L 3 measure $31 / 8^{\circ}$ long, $2^{3} 9^{\circ}$ wide, $314^{\circ}$ high, LS-6L. 3 measure 31,8 long, ${ }^{\text {with } 6-32 \text { screw mounting. Shipping weight } 4 \text { lbs. }}$
No. Type Pri. Imp. Sec. Imp. Application Each C5401 LS-10 50,125,200,250, 60,000 in two Mike, pick-up $3: 33,500,600$ sections or multiple line C5402 LS-10X As above $\quad 50,000 \quad \$ 14.70$ C5403 LS-12 $\quad 50,125,200,250,120,(010)$ in two As ahove for 18.82
C5404 LS-12X As above $880,0 \times 10^{2}$ in two As ablyove $\quad 16.46$

| C5413 LS-21 | 15,000 | 135,000 | Single plate to |  |
| :--- | :--- | :--- | :--- | :--- |

C5405 LS-30 $50,125,200,250,50,125,200,250$, Mplit windings 14.11 $3: 33,500,600$, $333,500,600$ pick-up, or mus tiple line to mul tiple line
14.70

C5406 LS-50 15,(100
$50,125.200,250$, Single plate to $333,5(10), 600$ multiple line
Output to Line and Voice Coil
C5412 LS-55* 5,000 plate $560,333,250,1^{3}-$ p. 2A3's $\begin{array}{ll}\text { to plate } & 200,125,50,30,6 \Lambda 5(; ' s, 300 \Lambda ' s, \\ 20,15,10,75,2 \pi 5 \Lambda ' s, 6 \Lambda 3 ' s\end{array}$ $\begin{array}{lll}20,15,10,7.5,275 \lambda \\ 5,2.5,1.2 & 6 L 6 ' s\end{array} \quad 16.46$
C5398 LS-61.3
9,000 plate $30,20,15,10, \mathrm{P}^{3}$-p. 6L. 6 's self to plate $7.5,5,2.5,1.2$ bias

iln LS- 3 case $5 \frac{13, i 4}{} \times 5 x+11 / 10^{\circ}$. Shpg. wi. 17 lbs.


## Reliance Transformers - Quality Performance at Economy Prices

Reliance trimsformers are practical transformers, designed for quality performance and durability. Ansazingly low prices are achieved by modern elticiency in factory production methods and equipment plus large volume purchases of raw naterials at the most favorable market opportunities. Cool operation and perietual treedom from mechanical hum are the result of Reliance's unique system of high-vacuum wax varnish impregnation. All laminations are cushion bonded and interlamination eddy currents are practically eliminated.

Output Transformers Receiver Replacements

| Stock | Pri. | Pri. | Your |
| :---: | :---: | :---: | :---: |
| c1964 | Impedance 2000 | 60 | Cost 58c |
| C1965 | 5000 | 40 | 58 c |
| C1966 | 7000 | 30 | 58 c |
| C 2967 | $100 \times 10$ | 30 | 58 c |
| C1968 | 15000 | 10 | 58c |
| C1969 | 25000 ct . | 10 | 75 c |

## Step-Down

## Transformers (C)



## Filter Chokes-Replacement Type

(A) All insulated for 1500 volts. Inductance ratings are at 60 cycles (A) with rated current liowing per RN1A recommendations.

| Stock Inductance |  | Current | DC Res. | Mig. | I $\mathrm{immen}$. | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Henries | M. $\Lambda$. | Ohms | Cirs. | 11. W. D. | Cost |
| C1970 | 4.5 | 50 | 200 | $2^{3}$ | 1-8 $\times 2^{1}{ }_{4}, \times 11^{\prime \prime}$ | \$0.74 |
| C1971 | 8.5 | 50 | 400 | $2^{3}{ }^{\prime \prime}$ | $1^{-1} \times 2{ }^{13}{ }_{16} \times 1^{1 / 2}$ | 74 |
| C1972 | 16 | 50 | 550 | $2^{13}{ }^{16}$ | $2 \times 3!4{ }^{1}{ }^{5}$ | . 89 |
| C1973 | 15 | 75 | 400 | $31 / 8$ | $2^{1} \mathrm{i}^{1} 3^{11} \times 2^{1 / 8}$ | 1.19 |
| C1974 | 10.5 | 110 | 220 | $3^{9} 16^{\prime \prime}$ | $2916 \times 4 \times 214{ }^{\prime \prime}$ | 1.38 |


| Stock | Primary | Secondary | Secondary | Dimen. | Your |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Volts | Volts | Amperes | $\mathrm{H} \times \mathrm{W} \times \mathrm{D}$ | Cost |
| C1950 | $115,60 \mathrm{cy}$. | 6.3 ct . | 1 | $15 \% 2^{15} 5 \times 112^{\prime \prime}$ | \$0.87 |
| C1951 | $115,60 \mathrm{cy}$. | 6.3 ct . | 3 | $2 \times 314 \times 178^{\circ}$ | 1.35 |
| C1952 | $115,60 \mathrm{cy}$. | 6.3 ct . | 6 | $2{ }^{10} \times 4 \times 2{ }^{\text {c }}$ * | 2.10 |
| C1953 | 115,60 cy. | 5 ct . | 3 | $2^{5}{ }_{16} \times 21 / 4 \times 2$, | 1.33 |

Filament Transformers (A)

## Universal Output Transformers (A)

| Stock No. | Class <br> Oper. <br> Sin. | Irimary Imperdance <br>  | Sec. Imp. .17 | Max. Watts | Mtg. Cirs. | Dimen. <br> H. W. D. | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1954 | or | 8001000 | to | 4 | $2^{*}$ | $13 / 8 \times 23 / 8 \times 11 / 4{ }^{\prime \prime}$ | \$0.87 |
| C1955 | P.P | $14(\%) \mathrm{Ct}$. | 32 | 8 | 23/6" | $15 \times 22^{1}$ | . 97 |
| C1956 | * |  | a | 18 | $23 / 8$ |  | 1.30 |
| C1957 | Sin. | $\begin{aligned} & 15002000 \\ & -4000 / 5,000 \\ & 7000 / 10000 \end{aligned}$ | $\begin{aligned} & .1 \\ & \text { to } \\ & 40 \end{aligned}$ | 10 | 23\% ${ }^{\circ}$ | $15{ }^{5} \times{ }^{13} / 18^{18} \times 1 / 2^{\prime \prime}$ | 1.15 |

## Power Transformers-Receiver Replacement

(B) Primary $115 v, 60 \mathrm{cy}$. Full-wave rectification. RMA color-coded leads. One $5-v$. one $6.3-v$. center-tapped filament winding. Stock IIV. Secondary No volis DCMa. C1958 180 ct 40 . A

| No. |  | N |  | mp |  | mp |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1958 | 480 ct . | 40 | 5 | 2 | 6.3 | 2 | $2 \times 2$ 16 | \$2.05 |
| C1959 | 650 ct . | 40 | 5 | 2 | 6.3 | 2 | $2 \times 21$ | 2.10 |
| C1960 | $7(0) \mathrm{ct}$. | 70 | 5 | 3 | 6.3 | 2.5 | $2 \times 212$ | 2.6 |
| C1961 | 700 ct . | 90 | 5 | 3 | 6.3 | 3.5 | 21/4 $\times 2^{18} 166^{\prime \prime}$ | 2.90 |
| C1962 | 700 ct . | 120 | 5 | 3 | 6.3 | 4.7 | $2^{1} \times 31 / 8^{\prime \prime}$ | 3. |
| C1963 | 750 ct . | 150 | 5 | 3 | 6.3 | 5 | 21/2x31/8" | 4. |



## MERIT TRANSFORMERS-CHOKES-OUTPUT TRANSFORMERS

Embodying new developments, Merit Transformers have demonstrated dependable service under the most difficult conditions. Recognized and welcomed by thousands of satished users. Conform to the latest and most rigid specilications. Merit Transformers are now standard equipment with many leading radio and amplitier manufacturers.

## Kits of Output Transformers (B)

## Save $10 \%$ by buying in Kits.

Handy kiss of high-quality replacement transformers for practically all receivers encountered in service work, eliminate need for expensive universal output xformers. All have secondary impedances to match 3.5 ohm soice coils. Specifications of the transformers ate in tabulation helow.
Kit No. 1. 8 uransformers: 2 No. 2928, 1 each 2930, 2931, 2932, 2934. 2936, 29:
C1920-Shpg, wt. 3 lbs. Your Cost. . . . . . . . . . . . . . . ....... $\$ 6.22$ K it No. 2, 8 u it ansformers: 2 No. 2428,2 No. 2937, 1 each 2930, 2931. 2931, 2936.
C1921 -Shpg. wt. 3 lhs. Your Cost. . . . . . . . . . . . . . . . . . . . . $\$ 6.46$ Kit No 3, \& transformers: 1 each 2928, 2930, 2931, 2932, 29:33, 2934 2937, 2938.
C1922 Shpr. wt. 3 lbs. Your Cost .......................... 56.24 Kit No. 4, 8 transformers: 2 rach 2428, 2931, 2936, 2937.

*2936 is designed for PP 6AC5 in Class B or PP 6 V 6 or 7 C 5 in class $A B 1$
All others designed for class $A$ operation

The Merit line of transformers is especially designed to supply a sim plified compact group of transformers which will meet $90 \%$ of all rectuirements in receiver servicing, construction of receivers, electronic control equipment, and amplifiers. Stock up now with a liberal selection of the items listed below.

Power Transformers Receiver Replacement Type
(A) Jligh quality line of replacement-type power transformers, for ations. Each has one 5 -volt rectifier fil., and one center-tapped tube heater winding at 6.3 volts

| k | I! 1 Sec. | D.C |  |  |  |  | Mtg | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Winding | M.A. | $Y$ V. | Amps. | V | Amps. | Ctrs. | Cost |
| C1924 | 240-2:0 | 40 | 5 | 2 | 6.3 |  | $2 \times 2$ | \$2.50 |
| C1925 | 325-325 | 40 | 5 | 2 | 6.3 | 2 | $2 \times 2$. | 2.65 |
| C1926 | 350-350 | 70 | 5 | 3 | 6.3 | 2.5 | $2 \times 21$ | 3.38 |
| 927 | 350-350 | 90 | 5 | 3 | 6.3 | 3.5 | $21 / 4 \times 2{ }^{13^{2}} 16^{\prime \prime}$ | 3.67 |

## Power Transformers Fully Shielded, Upright Mounting Type (E)

| Sto | nvs | D. |  | Fil |  | Fil. | Dimen. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Wiuding | M.I. |  | Amps. |  | Amps. | HxTs ${ }^{\text {d }}$ |  |  |
| C1928 | 3351-3,30 |  | 5 |  | 6.3 |  |  |  | 12 |
| C1929 | 3.50-3.50 | \% | 5 | 3 | 6.3 | 3.5 |  | 23x | 5.14 |
| C1930 | 3.51-330 | 110 | 5 | 3 | 6.3 | 4.5 | $4^{5} 8 \times 33^{10}{ }^{6} 1$ | 3x2 | 5.14 |

## Triversal Line Transformers

To couple various line impedances to a voice coil. Four primary taps to match $500,1000,1500$ or 2000 -ohm lines to remote speakers.

| Stock | Sec. | Max. | Dimen. | F | Mtg. | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Imp. | Watts | $\mathrm{H} \times \mathrm{W} \times \mathrm{D}$ | Fig. | Cirs. | Cost |
| C1931 | 3.2 | 10 | $1{ }_{8} \times 3^{1+}{ }_{6} \times 1 /$ | (B) | $2^{3}{ }^{\text {B }}$ 。 | 51.12 |
| C1932 | 6-8 | 18 | $2^{1}{ }_{4} \times 27 / 8 \times 17 / 8$ | (D) | 23.8 | 1.91 |
| C1933 | 6-8 | 24 | 21, $3^{1{ }^{11}{ }_{10} \times 21 / 8^{\prime \prime}}$ | (C) | 31/8" | 2.06 |

# STANCOR-Thordarson TRANSMITTING TRANSFORMERS 

PLATE TRANSEORMERS

| Stock No. | $\begin{aligned} & \text { Stancor } \\ & \text { Type } \end{aligned}$ | D.C.* Voltage | MA. | Mitg. Dimen. | Mtg. | Lhs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1860 C1861 | ${ }_{\text {P8042 }}$ | 600 | 300 |  | 3 | 16 | \$12.88 |
| C1861 <br> C1862 | ${ }^{\text {P880 }} 83$ | 750 | 300 | $712 \times 61 \times 8$ | 5 | 27 | 19.32 |
| C1862 | P8026 | 1250 | 300 | $758 \times 75 \times 8$ | 5 | 36 | 27.69 |
| C1864 |  | 1500 | 300 | 7588 | 5 | 38 | 28.64 |
| C1864 | P80 | 2000 | 300 | $75,8 \times 73 \times 93$ | 5 | 45 | 36.13 |

FILAMENT TRANSFORMERS

| No. | Type | Sec. V. | Amps. | HxWxD | Mig. | Lios. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1774 | 13060 | 2.5 | 10 | $31 / 2 \times 23 / 4 \times 21 /{ }^{\prime \prime}$ | 6 | 3 | \$2.91 |
| C1790 | P4088 | 5.0 | 3 | $318 \times 21 / 2 \times 2{ }^{\circ}$ | 6 | 2 | 2.00 |
| C1779 | P5014 | 6.3 | 3 | $314 \times 21 / 2 \times 21 /$ | 6 | 2 | 2.20 |
| C1775 | P3064 | 6.3 | 6 | $31 / 8 \times 21 / 2 \times 21 /{ }^{\prime}$ | 6 | 3 | 2.70 |
| C1780 | P5015 | 7.5 | 4 | $31 / 8 \times 21 / 2 \times 21 /{ }^{\circ}$ | 6 | 3 | 2.70 |
| C1782 | P6138 | 7.5 | 8 | $37 / 8 \times 31 / 4 \times 31 / 2$ | 6 | 4 | 3.38 |
| C1781 | P5016 | 10.0 | 4 | $31 / 4 \times 3 \times 27 /{ }^{\circ}$ | 6 | 3 | 2.70 |
| C1791 | P4096 | 10.0 | 5 | $37 / 8 \times 31 / 4 \times 31 / 4$. | 6 3 | $\frac{3}{5}$ | 2.70 4.03 |

## DRIVER TRANSFORMERS

| No. | Type | From | To | Class | first. <br> Mtg | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C1692 | A4752 | $1-6 \mathrm{G6G}, 6 \mathrm{~F} 6,$ | P.P.GRIDS |  |  |  |
| C1897 | A4702 | TRIODES | 6F6, 6L6, 677 | AB | 6 | \$2.03 |
|  |  | 1-2A3. 45, 46, | 1'P 6L6, 6V6. | AB2 |  |  |
|  |  | 89, 2A5, 6F6, | 6F6, 45, PP |  |  |  |

POLY-PEDANCE MODULATION TRANSFORMERS Tapped to sive wide range impedances for correctly matching every type load. Impedance chart and instructions with each unit.


 | C1622 | $\mathrm{A}-3893$ | 60 W | 125 | 125 | 250 | $378 \times 31 / 8 \times 47 / 8$ | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| C 1627 | $\mathrm{~A}-3894.125 \mathrm{~W}$ | 150 | 150 | 300 | $4.14 \times 378 \times 51 / 2$ | 1 | 9.44 | Shpg. wis.: C1621. 6 lbs ; C1622. 8 lbs ; C1627, 14 lbs.

## STANCOR TRANSFORMERS PLATE MODULATION TRANSFORMERS



## POLY-PEDANCE DRIVER TRANSFORMERS

Tapped to give usable ratios in Class B Drivers. Cap. of C1616 and primary 120 ma . per side. All type i mig nia. Cap. C1618, 30 watts; Stock Type $\quad$ Ratio I'rimary

| $\begin{gathered} \text { Stock } \\ \text { No. } \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Ratio I'rimary to $1 / 2$ Secondary | Dimer. HxW . | Each |
| :---: | :---: | :---: | :---: | :---: |
| C1616 | A-4761 | 1.25:1, 1.4:1, 1.6:1, 1.8:1, |  |  |
|  | A-4762 | 2.1, 2.2:1, $2.4: 1,1.81$, | $31 / 8 \times 25 / 8 \times 33 / 4 *$ | \$6.56 |
|  |  | 4:1, 4.5: $1,5: 1$ | $31 / 8 \times 25 / 8 \times 31 / 4$ | 6.17 |
| C1618 | A-4763 | $\begin{aligned} & 1.25: 1,1.5: 1,1.75: 1,2: 1, \\ & 2.25: 1,3.2: 1 \end{aligned}$ | $31 / 2 \times 3 \times 4^{\circ}$ | 7.14 |

## TEORDARSON TRANSMTYITNG TRANSEORMERS



## IILAMENT TRANSFORMERS

Ratings for continuous operation at peak load. Primary 117 volt 50/60 cycles. RMS insulation voltage 1600 on all except $*$ RMS insulation voltage $7500 \dagger$ RMS Insulation voltage $10,000 * *$ tapped sec. $\ddagger$ tapped primary.

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Volts | Amps. | Mtg. | $\begin{aligned} & \text { Your } \\ & \text { Cost } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{C 2037}$ | T21.00 | 2.5 C | 5 | BAV | \$1.91 |
| C2038 | T211.01 | 2.5 CT | $10^{\circ}$ | BAV | 2.47 |
| C2039 | T21F02* | 2.5 CT | 10 | CAV | 2.94 |
| C2040 | T21F03 | 5 CT | 3 | BAV | 1.94 |
| C2139 | T21F04 | 5 CT | 7 | CAV | 3.29 |
| C2042 | T21F05 | 5 CT | 15 | CAV | 5.00 |
| C2043 | T21F06 | 5 T | 13 | CAV | 2.94 |
| C2044 | T21F07 | 5 CT | 21 | CAV | 3.23 |
| C2045 | T21F08 | 6.3 CT | 1 | CAV | 4.41 |
| C2046 | T21F10 | 6.3 CT | 3 | BAH | 1.59 |
| C2047 | T21F11 | 6.3 CT | 6 | CAV | 3.29 |
| C2048 | T21F12 | 6.3 CT | 10 | CAV | 3.23 |
| C2049 | T21F14** | 6.3-5-2.5 | 2.5 | BAII | 2.12 |
| C2050 | T21F15 | 7.5 CT | 4 | BAV | 2.35 |
| C2051 | T21F16 | 7.5 CT | 8 | CAV | 3.23 |
| C2052 | T21F17 | 7.5 CT | 12 | CAV | 3.67 |
| C2053 | T21F18 | 10 CT | 5 | CAV | 2.94 |
| C2054 | T21F19† | 10 CT | 12 | CAV | 4.41 |
|  |  | 11 CT | 11 |  |  |

## MODULATION TRANSFORMERS

For specific tube types with low and medium power

| Stock No. | $\begin{aligned} & \text { Type } \\ & \text { No. } \\ & \hline \end{aligned}$ | Primary Application | Impedance |  | Audio Pwr. | Mtg. Type | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C2055 | $\overline{\text { T21M50 }}$ | 1-19, etc. | 10000 CT | 4500 | 3 | $\overline{\text { BAH }}$ | \$1.65 |
| C2056 | T21M52 | 6N7, etc. | 10000 CT | 45003750 | 10 | FGV | 2.35 |
| C2057 | T21M54 | PP 6L6, etc. | $6600 C T$ | 3000 4000 | 25 | GGV | 3.38 |
| C2058 | T21M56 | TZ2-809, etc | 10000 CT | 6600-3750 | 75 | GGV | 5.29 |
| C2059 | T21M58 | 811-812, etc. | 15000 CT | 13250 | 100 | KTV | 13.23 |

## PLATE TRANSFORMERS

Elecirostatic shields. Current ratings are for CCS (continuous commercial service, ICAS (Interrupted Commercial Amateur Service) ratings approximately $25 \%$ higher.
$\left.\begin{array}{c|c|c|c|c|c}\hline \begin{array}{c}\text { Stock } \\ \text { No. }\end{array} & \text { Type } \\ \text { No. }\end{array} \quad \begin{array}{c}\text { Mtg. } \\ \text { Nype }\end{array}\right)$

## SPLATTER SUPPRESSOR CHOKES

Attenuates audio modulating requencies over 3000 CPS, eliminates splatter harmonics generated in speech amplifie

| Stock No. | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Application | DC Res. | $\begin{aligned} & \text { Mitg. } \\ & \text { Type } \end{aligned}$ | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{C 2024}$ | T20C60 | Induct. 2 to 1. | 30 | KTV | \$8.23 |
| C2025 | T20C61 | Induct. 2 to 1.5 I | 27 | KTV | 10.00 |

## MULTI-MATCH MODULATION TRANSFORMERS

Enables accurate matching of various tube-loads without changing transformers. For medium and high power requirements. *Line to RF load. sec. Imp. $5 \mathrm{M}, 6 \mathrm{M}, 7 \mathrm{M}, 8 \mathrm{M}, 9 \mathrm{M}, 10 \mathrm{M}$

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Pri. MA each side | Sec Series | $\mathrm{MA}$ Par. | Audio Pwr | $\begin{aligned} & \overline{\text { Mtg. }} \\ & \text { Type } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Cost } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\overline{C 2060}$ | T21M60 | 50 | 50 | 100 | 15 | KTV | \$ $7 . \overline{06}$ |
| C2061 | T21M61 | 125 | 125 | 250 | 60 | PUV | 10.58 |
| C2062 | T21M62 | 210 | 160 | 320 | 125 | PUV | 16.17 |
| C2063 | T21M64 | 250 | 250 | 500 | 300 | PUV | 27.93 |
| C2064 <br> C2065 | T21M65 | 5320 | 320 | 610 | 500 | PUV | 47.04 |
| C2065 | T21M66* | 500 ohm line | 200 |  | 50 | KTV | 11.76 |

G1 T0G4
Class A Input Transformers

| No. | Type | Application | Ratio | Case | Wt. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C5802 | S-2 | 1 plate* to 2 grids | 2:1 | C-2 | $3{ }^{1}$ 2́bs. | \$3.72 |
| C5804 | S-4 | 1 plate* to 2 grids, wide range response | 1:1 | G-3 | 4 | 5.10 |
| C5805 | S. 5 | Single or double buiton mike or line to 1 grid ; hum bucking type | 16:1 | G-2 | 31\% | 4.16 |
| C5806 | S-6 | Single or double button mike or line to 1 grid, compact type | 16:1 | G-1 | 3 | 3.04 |

*Will thatch tubes like $6 \mathrm{C} 5,56,6 c i$ triude, $\bar{T}$ triode, etc. Can be used with high mu triodes with loss in low frequencies.
Universal Output To Line and Voice Coil
All secondaries designed to match 2.8 and 15 ohm voice coils and 500


| No. | Type | Primary Ohms | Watis | Case | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C5814 | S-14 | 2500, 4000. 7000 | 10 | G-2 | \$4.41 |
| ${ }_{6816}$ | S-16 | $3000,60000-(4 \times 1) 0,10.000$ | 30 | G-4 | 4.08 |

## Universal Modulation Transformers

Designed to match any modulator tubes to any RF load Secondary will carry 1 C current of a Class $C$ © stage.

| No. | Type | Watis | Case | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C5818 | S-18 | 12 | G-3 |  | 54.90 |
| C5519 | S19 | 30 55 | G-4 | ${ }_{6}{ }^{1}$ | 7.35 10.78 |
| C5820 $\mathbf{C 5 8 2 2}$ | S.20 | 110 |  | ${ }_{11}^{61 / 2}$ | 10.78 15.19 |
| C5822 | S-22 | 250 | G-9 | ${ }_{23}$ | ${ }_{23.52}^{15.19}$ |

## Matching Transformer

| Stock | $\begin{aligned} & \text { Type } \\ & \text { No. } \end{aligned}$ | Application | $\begin{aligned} & \text { Pri } \\ & \text { Ohms } \end{aligned}$ | Sec. | Case | $\begin{aligned} & \text { Your } \\ & \text { Cost } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C5811 | S-11 | Single 5x), 6C6 triode, BC 5 or similar tuhe 10 line | 10,000 | $200$ | G-2 | \$4.16 |


| Universal Driver Transformer |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Application | Case | Lbs. | Each |
| C5809 | S-9 | P.1? I I)river plates to grids of Class B tube: up to 100 watts out put | Ci-3 | 4 | \$5.10 |

Multiple Secondary Filament Windings Primaries tapped 105.115 volts. 5. 0 , (i) cycies AC . All secondaries center tapped. Shipg. w1., eacli, $61_{2}$ lbs.

| Stock No. | Type <br> No. | Fil. No. $1 \mid$ Fil. No. 2 Volts Ampss. olts Amps. |  |  |  | Volts | Amps. | Case | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C5865 | 5 | 2.5 | 5 | 5 | 4 | 6.3 | 3 | G | \$5.39 |
| C5868 | S-68 | 5 | 3 | 6.3 | 4 | 7.5 | 5 | G-5 | 5.88 |
| C5870 | S. 70 | 6.3 | 5 | 6.3 | 5 |  |  | G-5 | 5.38 |

All $3(0)(x)$ volt insulation.

## Filter, Swinging and Audio Chokes

| No. | Type | Service | Hy. | Ma. | Ohms | Case | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C5823 | $\triangle \mathrm{S}-23$ | Audio | 500 | 5 | ti000 | G-2 | \$3.33 |
| ${ }^{\text {C5827 }}$ | *S. 27 | Filter | 30 | 75 | 350 | G-4 | 3.72 |
| C5828 | *S-28 | 1 -ilter | 20 | 100 | 350 |  | 3.72 |
| C5829 $\mathbf{C 5 8 3 0}$ | - ${ }_{\text {*S }} \mathbf{S} \mathbf{2 9}$ | Filter Swing. | $\begin{array}{r}10 \\ 5 / 25 \\ \hline\end{array}$ | 175 175 | 95 95 | $\mathrm{C}_{\mathrm{G}-4}$ | 3.72 3.72 |
| C5830 |  |  |  |  |  |  | 3.72 |
| C5831 | *S-31 | Filter | 20 | 225 | 120 | G-5 | 4.90 |
| C5832 | +5-32 | Swing. | 5,25 | 225 300 | 120 |  | 4.90 6.86 |
| C5833 | +5.33 | Filter |  | 300 300 | 90 | G-7 | 6.86 <br> 6.86 <br> 1029 |
| C55334 $\mathbf{C 5 3 3 1}$ | +5-31 +5.36 | Swing. Suing. Sut | $5 / 25$ $5 / 25$ | 300 400 | 90 <br> 85 <br> 8 | G-7 $\mathrm{C}-8$ | 6.86 10.29 |
| C5837 | \$S-37 | Filter | 20 | 550 | (6) | C. 8 | 13.72 |

## Case Dimensions

| Type | Height | Width | Depth | Type | Height | Width | Depth |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| G1 | ${ }^{17}{ }^{3} 8^{\circ}$ | ${ }^{2} 3^{13} 16^{10}$ | 134. | G8 | 45, ${ }^{4} 5{ }^{\circ}$ | $5^{3,3}{ }^{3} 8^{\circ}$ | ${ }^{53}{ }^{3} 3^{3}$ |
| 93 | $2_{21}{ }^{16}$. | $3{ }^{3,}$ | $2{ }^{5}$ | G10 | $5 \%$ | 618. | $6{ }^{\circ}$ |
| G4 |  |  | $2{ }^{5} 1{ }^{\text {\% }}$ | G11 | 5\% | $6^{12}$ | 73, ${ }^{\circ}$ |
| G5 | $3{ }^{3 / 4}{ }^{\text {a }}$ | $318^{\circ}$ | $4^{412}{ }^{\text {a }}$ | 612 | $10 \%$ | $738^{\circ}$ | 91/4* |

# UTCTransmitting Transformers 

## Plate Transformers

Primaries for 115 v.. 5060 cycles a.c. For duplex rectifiers, the high and low voltage output of any of the units listed below can be used simultaneously. The rated dic. current can be divided as required besimultaneously The rated d
tween both voltage outputs.

| No. | Type | High Voltage | Ma. | Case | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { C5844 } \\ & \mathbf{C 5 8 4 5} \end{aligned}$ | $\begin{aligned} & \mathrm{S}-44 \\ & \mathrm{~S}-45 \end{aligned}$ | $\begin{aligned} & 575-525-0-525-575 \\ & 900-750-0-750-900 \end{aligned}$ | $\begin{aligned} & 500 \\ & 200 \end{aligned}$ | $\begin{gathered} \mathrm{G} 9 \\ \mathrm{G}-8 \end{gathered}$ | $\begin{aligned} & 23 \\ & 15 \end{aligned}$ | $\begin{array}{r} 515.19 \\ 11.76 \end{array}$ |
| C5846 | S-46 | 1000-750-0-750-1000 | 300 | G-9 | 23 | 14.70 |
| C5847 | S-4 | $\begin{aligned} & \text { 1:00) } 12[0] \cdot 10000-1000-1 \\ & 1250-1500 \end{aligned}$ | 300 | G-10 | 27 | 18.62 |
| C5848 | S 48 | 1500 1250-1000-0-1000- |  |  |  |  |
| C5850 | S.50 | $301(x)-2500(1-2500-3000$ | 300 | G-12 | 55 | 27.46 36.26 |

## Plate and Filament Transformers

All primaries for 115 volts. 50 f0 cycles a.c
Iligh volt. $490-400-0-400-490$ at 175 ma.; 5 v . at 3 a . (rect.); 2.5 v . C5839-S-39. Your Cost.
\$10.29 High volt 525-425-0-425-525 at 250 ma.; 5 v at 3 a. (r \$10. 29 C5840-S-40. Your Cost
6.3 v . at 3 a ; 6.3 v . c.l at 2 a . $\mathrm{G}-7$. Wit. 11 lbs . Iligh volt. 600-525-0-525-600 at 300 ma $\qquad$ 1apped at 6.3 v.at 3 a.: 6.13
C5842-S-f2. Your Cost
\$12-25

## Single Secondary Filament Transformers

Primaries tapped 105,115 volts, 5060 cycles a.c.

| No. | Type | Sec . Volts | Amps. | Insul. | Case | Lbs. | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C5853 | S-53 | 2.5 c.t. | 10 | 1500 v . | G-3 | 4 | \$3.14 |
| C5854 | S-51 | 5 c.t. | 4 | 2500 v . | C-3 | 4 | 3.14 |
| C5855 | S-55 | 6.3 c.t. | 3 | 1500 v . | G-3 | 4 | 3.14 |
| C5857 | S-5 5 | 2.5 c.t. | 10 | 10000 v | C-5 | $6{ }_{6}{ }^{2}$ | 4.41 |
| C5858 | S 58 | 2.5 c.t. | 20 | 16000 v | G-5 | $61 \frac{2}{3}$ | 5.39 |
| C5359 | S-59 | 5 to 5.25 c.t | 13 | 5000 v | G. 5 | 613 | 4.41 |
| C5861 | S-61 | 7.5 tapped, 6.3 c.t. 10 c.t. |  | 3000 | G-5 | $\begin{aligned} & 6^{1 / 3} \\ & 6 \frac{1}{2} \end{aligned}$ | 4.41 |
| C5862 | S-62 |  |  | 5000 v |  |  | 5.39 |
| C5863 | S-63 | 14 v c.c.t. tapped at |  | 5000 v . | G-7 | 11 | 9.80 |

## Ultra-Compact Line Matching <br> Compact high fidelity units having a frequency range from

 30 to $20,000 \mathrm{c} . \mathrm{p} . \mathrm{s}$. (Jnly $1 \times 1 \times 1^{*}$; threaded inserts for mounting. Match $50.125,200,250,500$ ohm lines. Net wt. 6 oz .; shpe. wt. each 1 indC5394-A-10. line 101 grid .50 .000 ohms.
C5397-A-24. 1 Triode plate 8000/15000 ohms to line. Your Cost Each,
Either Above Type
Multiple Alloy Shield Type: Frequency range from 50 to 10.000 c.p.s. and has multiple alloy shield for extremely low hum pickup. Matches 20,200 or 500 ohms to 1 or 2 grids
\$8.82


Universal modulation transformers with tapped primary and secondary windings for matching all popular types of modulator tubes to plate modulated (lass C amplilier stage. Secondaries are designed to carry the plate current of the Class $\mathbb{C}$ stage.

| Stock |  | Max Audio | Watts <br> C"lass C |  | Size |  |  | Shpg. | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Watts | Stage | L. | W. | I. | Case | $\mathrm{W}^{1}$. | Cost |
| C5359 | VM-0 | 12 | 10-20 | 21/" | $3{ }^{\prime \prime}$ | 3 | A | 3 | \$5.00 |
| C5360 | VM-1 | 30 | 20-60 | 31 | $4^{1}{ }^{1}{ }^{\prime \prime}$ | 41\% | A | 6 | 8.23 |
| C5361 | VM-2 | 60 | 40-120 | 358 | $4 \%$ | $41 /$ | B | 12 | 12.05 |
| C5362 | VM-3 | 125 | 100250 | 6 | 49. | 6 | C | 20 | 17.64 |
| C5363 | VMI-4 | 3(4) | 200600 | $78 /{ }^{\circ}$ | $9{ }^{\circ}$ | 512 | D | 31 | 29.40 |
| C5364 | VMI5 | 600 | 150-1600 | $11{ }^{\circ}$ | 11* | $9^{\prime \prime}$ | E | 89 | 67.62 |




## Above-Chassis Sockets

(A) For mounting above the level (a) of the chassis surface. Bakelite socket with various prong arrangements as below, in meta shell. Height ${ }^{13 / 16}{ }^{\circ}$ above subpanel or chassis surface. Has 4 ing flange.

| N13100 | Prongs | No. |
| :---: | :---: | :---: |
| C13103 | Prongs |  | $C 13101$ C13102

Any Type Above,
Your Cost Each.
C13105-7L. \&S. Ci3io6-Oct Either Type Above, $17 \boldsymbol{C}$

## AMPHENOL "MIP"

(B) Molded from high-dielectric black bakelite, with molded-in plate for $11 /{ }^{\circ}$ mounting centers. Cannot come loose or rattle. Strong, dependable.
Stock No. Prongs

Midget "M1P/T Octal Smaller, more compact than above. Has $1 \% 0^{\circ} \mathrm{mtg}$. centers. Octal, 8 prongs, only. ${ }^{\text {c }} 13225$ - 8 . C13243-"MIP" Loktal Type.
Your Cost. Your Cost,
Each

## AMPHENOL <br> Steatite Socket

(C)Withstand higher temperaContares, do not absorb moisture. Contacts are phosphor bronze, all silver-plated for low resistance connections with the tube prongs. Prongs Stock No. Each

| Prongs | Stock No. | Each |
| :---: | :---: | :---: |
| 4 | C13194 | $28 \mathbf{c}$ |
| 5 | C13195 | $28 \mathbf{c}$ |
| 6 | C13196 | $28 \mathbf{c}$ |
| $7 S$ | C13197 | 28 c |
| 7 L | C13198 | 36 c |
| 8 octal | C13199 | 28 c |

## AMPHENOL

## Standard Tube Sockets

Type "D" is designed for general replacement work and has a stee! adapter plate to fit mounting centers from 1/,2" to 11/8". Type "E" is for new work and requires only a single $13 / 16^{\circ}$ hole, being held in place with a retainer ring, unusually easy to mount. Both types available in Bakelite. 9 and 11 prong sockets are for Amphenol connectors. 7C sockets fit small and large base tubes.

| No. | (E) | (D) |  |
| :---: | :---: | :---: | :---: |
| Prongs |  | Stock No. |  |
| 4 | C13207 | C13057 | 8 c |
| 5 | C13208 | C13058 | 8 c |
| 6 | C13209 | C13059 | 8 c |
| 75 | C13210 | C13061 | 8 c |
| 7 L | C13211 | C13060 | 8 c |
| 7C | C13237 | C13056 | 10c |
| 8 octal | C13212 | C13050 | 10c |
| 8 loktal | C13045 | C13040 | 13c |
|  | C13213 | C13041 | 12c |
| 11 | C13214 | C13042 | 17c |



National Isolantite "CIR" Locking Ring Sockets
(F)

Low loss isolantite sockets Ideal for be locked in metal flange. Ideal for h.f. receivers and x'mitNo.

| No. | Prongs | No. Prongs |
| :---: | :---: | :---: | | C14534 | 4 | C14537 | 7 small |
| :--- | :--- | :--- | :--- | :--- |
| C14535 | 5 | C14538 | 7 large | C14536 6 C14539 8 octal Any Type, Your Cost...... 27c

## MILLEN Sockets



Much higher Steatite body insulation. Barriers separate all contacts, permitting use of higher than ordinarily used voltages. Stk. No. Mfrs. No. Prongs. Each C8045 33004 | $C 8045$ |  |
| :--- | :--- |
| $C 8046$ | 33004 | C8047 33005 C8049


$\stackrel{+}{+}$


## Steatite UHF Socket

## (A) Johnson No. 122-101. A 7 -

 pin steatite wafer socket incornorating a base shield, retainer springs and provision for mounting button mica capacitors directly to socket thus kecping leads short. Designed for UIIF use with tubes such as the 826, 829. and 832Contacts and spring silver plated and recessed to prevent movement. Grid terminals designed so connecting wires may be isolated and permit small grid coils to be mounted on terminal ends for tank-circuit use. Four mounting poles $2.312^{\prime \prime}$ between centers. C14159

## Your Cost

\$1.78

## JOHNSON 237 Socket

For 813 and HK25t tubes. Low loss steatite socket excellent for use at high and ultra high frequencies. Cadmium plated conquencies. Cadmium plated reinforced with recessed cadmium plated steel springs. cadmium $25 / 8^{\circ}$ square, $178^{\circ}$ matching Size $25 / 8$ square, 178 matching
centers. C14158-Your Cost

## JOHNSON Sockets

(B) Low-absorption ceramic base 1 leavy phosphor bronze con tacts, cadnium-plated, with dou bie filament springs. Heayy nick led brass shells
C14160 - UX base Ea C14161-50 Watt base. 4 Your Cost


C14157-Giant 5-prong socket for RCA 803, RK 28, etc.

## Your Cost

$\$ 1.47$

## JOHNSON 275 Socket

(C) For Eimac type 4-125A and Tion Contacts cadmium plasulation. Contacts cadmum plated reinforced with cadmium plated steel springs. Metal parts counter sunk and mtg. holes bossed for panel mtg. 5 prong $2^{27 / 50}$ square, with $/ 8$ mtg. loles on $24^{\prime \prime}$ centers.

JOHNSON 247 Socket
7 pin Steatite wafer socket for 829,826 , etc. with aluminum base shield.
C13187-Your Cost
734

AMPHENOL 83 Series UHF Connectors


This line of UHF low-loss single contact connectors and adapters for use with RG type cables serves all practical applications and they are made in both small and large sizes for coax and twinax cable. Very ruggedly constructed of die cast zinc and machined brass shells, silver plated. Easy assembly and positive connection.
C11550-83-1SP 2 piece straight C11555-83-1F Feed thru conplug with molded low-loss mica Your Cost.
C11551-83-1R Recentable chas sis or box type. Low-loss mica Your Cost
$\$ 1.22$
C11552 - 83-1AP adapter. Polystyrene and socket.
$\$ 1.46$
C11553-83-1T "T" connector. for
Cost 1155 A- $83-1 \mathrm{~J}$ Junction for use
 nector, similar in appearance to and equipped with two hex-nuts. Sour

C11556-83-111 Hood for RG, cables $8, \mathrm{U}, 10 / \mathrm{U}, 11, \mathrm{U}, 22 \mathrm{U}$. $63 \mathrm{U}, 65 \mathrm{l}$
$14{ }^{\text {c }}$
C11557-83-168 Adapter for smal] cable, RG59, U use with connector.
$21^{\text {c }}$
C11558-83-185 Adapter for small cable, RG-58 U, use with 83-1SP Connector.
$21^{\text {f }}$ AMPHENOL Receptacles and Plugs


Molded black bakelite insulation 2 -pole receptacles have one elongated hole and can be used with both the standard type of plug and the polaruse with 3 pole plags. Underwriters ratings: $15 \mathrm{~A}-125 \mathrm{~V}$ or $10 \mathrm{~A}-250 \mathrm{~V}$. Dimensions: (A) hole- $1.172^{\prime \prime}$, (B) Mig. cirs.- 11,2 to 17 , (C) hole-
 PLAIN (A)
No. Poles Type C11502 ${ }^{2}$ Receptacle 10 C11503 - Standard Plug C11624--2 ''olarized Plug C11625-3 Receptacle. C11626-3 Polarizedl'lug WITH PLATE (B) $\left.\begin{array}{l}\text { C11500 } \\ \text { C11501-2 } \\ \text { StandardI'lug } \\ \text { C11627 }\end{array}\right\}$ ? 2 ? SHIELDED


JONES Termunal Strips (A) No. 140 - $7 / \mathbf{R}^{\prime \prime}$ wide by ${ }^{18}$ on ${ }^{2} \%^{\circ}$ centers. 1,4 metal to metal spacing over bakelite.
No. $141-118^{\prime}$ wide by ${ }^{\prime}{ }^{\prime \prime}$ high. Terminals mounted on ${ }^{7} 10^{\prime \prime}$ centers. ${ }^{3} \varepsilon^{\prime \prime}$ metal to metal spacing over bakelite

Mo. 140
No. Ea. Term. No. 141 Ea. C12527-13c $\quad 2$ c12539-17c $\mathrm{C} 12528-18 \mathrm{c}$ ( 3 c12540-23c $\begin{array}{lllll}C 12529 & 23 c & 4 & \text { C12541 } & 28 \text { c }\end{array}$
 $\begin{array}{lll}C 12530-27 c & 5 & C 12542-34 c \\ C 12531-31 c & 6 & C 12543-40 c\end{array}$ C12531-31c 6 C12543-40c C12532-36c $\quad 7$ C12544-47c $\mathrm{C} 12533-41 \mathrm{c} \quad 8 \quad \mathrm{C} 12545-53 \mathrm{c}$ $\begin{array}{rrr}C 12534-46 c & 9 & C 12546-59 c \\ C 12535-51 c & 10 & C 12547-66 c\end{array}$ $\mathrm{C} 12536-55 \mathrm{c} \quad 11 \quad \mathrm{C} 12548-72 \mathrm{c}$ C12537-60c 12 C12549-77c

## Terminal Strips

(B) Hi-quality bake
strips, ${ }^{1}{ }^{1}$ thick
No. Terminals
No. Terminals Ea. 10 For C13145 C13123 C13123 C13113

## Heavy Bakelite Strips

(C) Screve and collar terminals
(C) bakelite strips, 7 wide.
 C13140 C13141 ${ }^{C} 13142$ ${ }^{C} 13143$ C13134
C13230 $C 13231$

$C 13232$ | $\mathbf{C 1 3 2 3 3}$ | 10 | 35 c | $\mathbf{3} 815$ |
| :--- | :--- | :--- | :--- | Bakelite Mounting Strip (D) For mounting parts on Ctock No. Lugs Each 10 For

C13124
14c
 $\begin{array}{llll}c 13133 & 3 & 3 c & 19 c \\ c 13134 & 4 & 4 c & 31 c \\ C 13135 & 6 & 5 c & 45 c\end{array}$ Standard Speaker Plugs (E) $\begin{aligned} & 1 \text {-piece molded bakelite. } \\ & \text { speaker cables easily wired. }\end{aligned}$ speaker cables easily wired. ${ }^{\text {N10 }} 124$ Type prong c115i4 6 prong ${ }^{\text {C11512 }} 4{ }^{4}$ prong C11514 6 prong


# PLUGS and connectobs 

JONES PLUGS AND SOCKETS
Multiple contact pluks and sockets in both "400" series heavy duty ( $25 \mathrm{am}-$ standard duty ( 5 anmere) standard duty ( 5 ampere) sizes. Cable type plugs and sockets have cable clamps. Chassis type have
brackets - heavy duty brackets-heavy duty
type at ends-standard duty type at sides.

## TYPE A PLUGS

Standard Duty Heavy Duty Stoch Your Con Stock Your No. Cost tacts No. Cost C12460 28c 2 C12400 48c C 12461 33c 4 C12401 $\begin{array}{llll}C 12462 & 36 c & 6 & C 12402 \\ c 12463 & 40 c & 8 & C 12403\end{array}$ $\begin{array}{lllll}C 12463 & 40 \mathrm{c} & 8 & \mathrm{C} 12403 & 77 \mathrm{c} \\ \mathbf{C 1 2 4 6 4} & 45 \mathrm{c} & 10 & \mathrm{C} 12404 & 87 \mathrm{c}\end{array}$ $\begin{array}{lllll}\text { C12464 } & 45 c & 10 & \text { C12404 } & 87 c \\ \text { C12465 } & \text { 49c } & 12 & \text { C12405 } & 98 c\end{array}$
Chassis Type Plug (C) $\begin{array}{lllll}C 12472 & 13 \mathrm{c} & 2 & \mathbf{C 1 2 4 2 6} & \text { 30c } \\ \mathrm{ClO}_{12473} & 17 \mathrm{c} & 4 & \mathrm{C} 12427 & 37 \mathrm{c}\end{array}$ $\begin{array}{lllll}\text { C12474 } & 21 c & 6 & \text { C12428 } & 44 \mathrm{c} \\ \text { C12475 } & 24 \mathrm{c} & 8 & \text { C12429 } & 51 \mathrm{c}\end{array}$ $\begin{array}{lllll}C 12476 & 27 c & 10 & \text { C12430 } & 58 \mathrm{c}\end{array}$ $\begin{array}{lllll}\text { c12477 } & 31 c & 12 & \text { C12431 } & 64 c\end{array}$


TYPE B SOCKETS
Standard Duty Heavy Duty Stock YourCon-Stock Your No. Costtacts No. Cost $\mathrm{C} 12466 \quad 28 \mathrm{c} \quad 2 \mathrm{C} 12412$ 51c $\mathbf{C 1 2 4 6 7} 33 \mathrm{c} \quad 4 \mathrm{C} 12413 \mathrm{65c}$ C12468 38c 6 C12414 78c $\begin{array}{lllll}C 12469 & 44 c & 8 & C 12415 & 92 c\end{array}$ $\begin{array}{lllll}C 12470 & 50 c & 10 & C 12416 & \$ 1.05\end{array}$

Chassis Type Socket (D) $\begin{array}{lllll}C 12478 & 14 c & 2 & C 12406 & 34 c\end{array}$ $\begin{array}{lllll}C 12479 & 19 c & 4 & C 12407 & 44 c\end{array}$ $\begin{array}{lllll}\text { C12480 } & 23 c & 6 & \text { C12408 } & \text { 54c } \\ \text { C12481 } & 27 c & 8 & \text { C12409 } & 64 c\end{array}$ $\begin{array}{lllll}\mathbf{C 1 2 4 8 2} & 33 \mathrm{c} & 10 & \mathrm{C} 12410 & 74 \mathrm{c}\end{array}$

## CONNECTORS-SOCKETS-PLUGS



## Cable Connectors

Tube-base connectors with shield caps. Rubber -grommet cable opening at end for protection against abrasion.
Female Male Cortacts Each


| C11476 | C11472 | 5 | 18 sc |
| :--- | :--- | :--- | :--- |
| C11477 | C11473 | 6 | 18 c |


$\begin{array}{llrr}\mathbf{C 1 1 5 0 8} & \mathbf{C 1 1 5 0 6} & 9 & 23 \mathrm{c} \\ \mathbf{C 1 1 5 0 9} & \mathbf{C 1 1 5 0 7} & 11 & \text { 28c }\end{array}$

\section*{Side Opening}Same as above but with side Female Male Contacts Each C11586 C11579 $\quad 18 \mathrm{c}$ | C11587 | C11580 | 5 | 18 c |
| :--- | :--- | :--- | :--- |
|  |  |  |  | | $C 11588$ | $C 11581$ | 6 | 18 c |
| :--- | :--- | :--- | :--- |
| $\mathrm{C11589}$ | $\mathrm{C11582}$ | 7 S | ${ }_{18 \mathrm{c}}$ |

 $\begin{array}{llll}\mathbf{C 1 1 5 9 1} & \mathbf{C 1 1 5 8 4} & 9 & \\ \mathbf{C 1 1 5 9 2} & \mathbf{C 1 1 5 8 5} & 11 & 28 \mathrm{c}\end{array}$

## Clamp Type

(c)same as (A), but has posi live gripping cable clamp. or cabless up to ${ }^{6}$ in diameter Takes up cable pull and relieves soldered connections of strain. Female Male Contacts Each $\begin{array}{llll}C 11684 & \text { C11692 } & 4 & \text { 22c } \\ C 11685 & \text { C11693 } & 5 & 22 \mathrm{c} \\ & & \end{array}$
 $\begin{array}{llll}\text { C11687 } & \text { C11695 } & 7 S & 22 \mathrm{c} \\ \text { C11688 } & \text { C11696 } & 71 & 22 c\end{array}$

 | $\mathbf{C 1 1 6 9 1}$ | C11699 |
| :--- | :--- | :--- | :--- |
| 11 | ${ }_{31} 6 \mathrm{C}$ |

## Locking Covers

(D) For above connectors. $1 \frac{1}{2} \mathrm{x}$ C11479-Per Pair.

Miniature Connectors
(E) Molded bakelite connectors (C) in cadmium plated brass shells. Anly ameter. Makelite clement held in mace with shielded cable, shield can be soldered to shell. Accommodates cables up to $1 / 4$ :

| Male | Fenaale | Cont. | Each |
| :---: | :---: | :---: | :---: |
| C13335 | C13337 | 3 | 21c |
| C13336 | C13339 | 4 | $24 \mathbf{c}$ |
| C13333 | C1334 | 5 | $26 \mathbf{c}$ |
| $\mathbf{C 1 3 3 3 8}$ | $\mathbf{C 1 3 3 4 0}$ | 6 | $\mathbf{2 6 c}$ |

## Miniature Sockets and Plugs

(G) These are interchangeable above The connectors listed with push-on mounting rings and can be used with above listed male pluys as well as the plain plug tisted here. Similarly the plugs listed below can be used with the female connectors listed above.
Sockets Plugs Contacts Each $\begin{array}{lllr}\mathbf{C 1 1 5 9 9} & \mathbf{C 1 2 7 0 8} & 3 & 9 \mathrm{c} \\ \mathbf{C 1 2 7 0 1} & \mathbf{C 1 2 7 0 9} & 4 & 9 \mathbf{c} \\ \mathbf{C 1 2 7 0 2} & \mathbf{C 1 2 7 0} & 5 & 12 \mathrm{c} \\ \mathbf{C 1 1 5 4 2} & \mathbf{C 1 2 7 1 1} & 6 & 12 \mathrm{c}\end{array}$ $\begin{array}{llll}C 11542 & \text { C1271. } & 6 & 12 \mathrm{c}\end{array}$

## Shielded Sockets

(F) Similar to sockets listed as above but with shielid. When used with shielded male connector listed above, a completely shielded
connection is oblained. Easily mounted.
No. Type Your Cost C12704-3-contact...........21c 21 c
C12705-4-contact
c12707-6-contact
$21 c$
C12707-6-contact. . . . . . . . . 24c

# Malow ㄷ.Catabb EsWITCHES 



MALLORY Gang Switches
Contact members are heavily silver plated, and given a smooth hard finish. Contact shoe, of the self-cleaning type, is of silver alloy. Ali switches are provided with one nermanent stop and one
adjustable stop. Bushings af and exadjustable stop. Bushings $8^{\circ}$ and extend $3 / 8$. Pointer type, Bakelite knob supplied

## SINGLE GANG SWITCHES

| Shorting |  | SII | Lting | Total No. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock No. | Type | Stock N | Typo | Cireuits |  | Points Y |  |
| C6247 | 12161 | C6263 | 1316L | 1 Cireuit |  | 6 points | \$0.76 |
| C6248 | 1211L | C6264 | 1311L | 1 Circuit | 1 to | 11 points | 91 |
| C6249 | 121.5L | C6265 | 1315 L | 2 Circuit | 1 to | 5 moints each | - 97 |
| C6250 | 1213L | C6266 | 1313L | 3 Circuit | 1 to | 3 points carh | 1.06 |
| C6251 | 1212L | C6267 | 1312L | 4 Circuit | 1 to | 2 points each | 1.12 |
| TWO GANG SWITCHES |  |  |  |  |  |  |  |
| C6252 | 12261, | C6268 | 1326 L | 2 Cireuit | 1 to | 6 points each | 1.26 |
| C6253 | 12?1L | C6269 | 1321L | 2 Circuit | 1 to 1 | 11 points each | 1.35 |
| C6254 | 122.51, | C6270 | 1325L | 4 Circuit | 1 to | 5 points each | 1.53 |
| C6255 | 1923L | C6271 | 1323L | 6 Circuit | 1 to | 3 points each | 1.65 |
| C6256 | 1222L | 6272 | 1322L | 8 Circuit | 1 to | 2 yoints each | 1.73 |
| THREE GANG SWITCHES |  |  |  |  |  |  |  |
| C6257 | 1236L | C6273 | 13361, | 3 Circuit | 1 to | 6 joints each | 1.71 |
| C6258 | 1231L | C6274 | 13311. | 3 Circuit | 1 to | 11 points each | 1.82 |
| C6259 | 1235 L | C6275 | 1335L | 6 Circuit | 1 to | 5 points each | 1.94 |
| FOUR GANG SWITCHES |  |  |  |  |  |  |  |
| C6260 | 1246L | C6276 | 1346I, | 4 Cireuit | 1 to | 6 points each | - 2.12 |
| C6261 | 12411. | C6277 | 1341L | 4 Circuit | 1 to | 11 points each | - 2.32 |
| C6262 | 1245 L | C6278 | 1345 L | 8 Circuit | 1 to | 5 points each | - 2.70 |
| SIX GANG SWITCHES |  |  |  |  |  |  |  |
| C6281 | 1261 L | C6283 | 1361L | 6 ('ireuit | 1 to | 11 moints each | 3.41 |
| C6286 | 1266L | C6287 | 1366L | 12 Cireuit | 1 to | 6 points rach | H 4.35 |



Low loss ceramic insulation. wide contact spacing, improved heavy silver plated contacis. I*or transmitters with power upio 100 wat ts. 4 contacts per circ. With knob.

## MALLORY

## Ceramic Switches

No. C6642 161 c
 $\begin{array}{llll}\text { C6645 IGIC } & 4 & 4 & 2.94 \\ \text { C6646 16: } & 5 & 5 & 3.67\end{array}$ C6647-Special dial plate for above Numbered from 1 to 1 . Each
"3100"'Series Single-Gang Tap and Circuit Selector Switches


Suitable, tor use in many tyyes of test circuits. $2^{\prime \prime}$ notched shafts, ${ }^{*}$ " diam. With black bar knob and mounting nut. " ${ }^{5}$ "
bushings. Same features as gang switches
(listed above). *-Have adjustable stop.

| Shorting | - |  |  |  | Have adju |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Non-Shorting |  | No. of | Contacts Per | Base | Your |
|  | T以过 | stoch No. | Trpe | Circuits | Cirenit | Diatr. | Cost |
| C6878 | 3115 J | C6888 | 3215 J | One | 5 | 114" | \$0.68 |
| C6879 | 31112J | C6889 | 32112 J | One | 12 |  | . 68 |
| C6990 | 3122.1 | C6890 | 3222 J | Two | 2 | 14. | . 68 |
| C6991 | 3123.5 | C6891 | 3223 J | Two | 3 | $11 / 4$ | . 68 |
| C6880 | 3126.1 | C6892 | 3226.J | Two | 6 | 1\% | . 68 |
| C6881 | 3134, 5 | C6893 | 3234 J | Three | 4 | 11. | .71 |
| C6882 | $3142 . \mathrm{J}$ | C6894 | $32+2 \mathrm{~J}$ | Four | 2 | $1{ }^{\circ}$ | . 71 |
| C6883 | 3143.5 | C6895 | 324:3 | Four | 3 | $11 /{ }^{\prime \prime}$ | . 71 |
| C6884 | 3111 JJ | C6896* | 3211 \% | One | 17 | 1115 | 1.06 |
| C6885** | 3129.5 | C6897* | $3229 . \mathrm{J}$ | Two | 9 | $1^{1111^{\prime \prime}}$ | 1.06 |
| C6886* | 3134.3 | C6898* | 32365 | Three | 6 | $1{ }^{111609}$ | 1.15 |
| C6887 | 316.3J | C6899* | 3263.J | Six | 3 | $1{ }^{11 / 9}$ | 1.15 |

## Special Switches



No. $1400 \mathrm{~L}-12$ positions; opens one lime at a time while maintain ing circuit through others. $13.1 x$ 21/2" wide. ${ }^{8} 8{ }^{\circ}$ bushing. ${ }^{2}$
c6370-Your cost $\$ 5$.

## 24 Point Tap Switch



Special single-circuit 21 -p sint non-shorting switch. $3^{\prime \prime}$ bushing, dial prooved shaft. Complete with C6371
Your Cost
\$2.06
CONCORD can furnish Mallory or Centralab switches to fit any specifcation or application
Write us your requirements.

MALLORY Push Button Switches Jon-lock ingTypes Furnished withblack Mounts in $7 / 16^{*}$ hole, panels up to $1 / 4$

| Stock |  |  | Your |
| :--- | :--- | :--- | ---: |
| No. | Type | Contacts | Cost |
| C6460 | 2001 | Sl'S'l no | $\$ 0.76$ |
| C6461 | 2002 | SPST ne | .76 |
| C6462 | 2003 | SPI)T | .82 |
| C6457 | 2004 | DPST no | .94 |
| C6463 | 2006 | DPDT | 1.15 |

## Midget Jack Switches

Same general con
struction as Junior ${ }_{7}^{\text {types. Mole. Mount in }}$ black knob and bointer. C6446-No. 10.
 S.P.S.T Your
Cost $\ldots \ldots . . . . . . . . .$.
No. $11-S . P . D . T$.
C6447-Your Cost....


## CENTRALAB <br> Momentary Push

 Switches

For many light duty applications such as meter insertion, test equipment, etc. Rated 1 amp. at 110 v a.c. Silvered contacts. Insulated /8 bushing. /8 long. Button exends $1 / 2$ from end of bushing Available with contacts normally closed or open
C12867 Normally open
C12862 - Normally closed
Either Type,
our Cost, Each


MALLORY
Etched Plates Hard aluminum with numbers white. Fit in ${ }^{\circ}$ white. Fit Plates with on-off posi-
tion for use
 with switches. $30^{\circ}$ spacing for all switch types 1200 L . 1300 L and $11 / 4^{\prime \prime}$ base $3100 . J$ and $3200 \mathrm{~J}^{2} 20^{\circ}$ spacing for all type 3100J, 3200J switches with $111.16^{\circ}$ base.

| Marking | Stk. No. | Stk. No. |
| :---: | :---: | :---: |
| 1 to 2 | C6224 |  |
| 1 to 3 | C6225 | C6303 |
| 1 to 4 | C6226 | C6304 |
| 1 to 5 | C6227 | C6305 |
| 1 to 6 | C6228 | C6306 |
| 1 to 7 | C6229 | C6307 |
| 1 to 8 | C6230 | C6308 |
| 1 to 9 | C6231 | C6309 |
| 1 to 10 | C6232 | C6310 |
| 1 to 11 | C6233 | C6311 |
| 1 to 12 | C6234 | C6312 |
| 1 to 15 |  | C6243 |
| Volume | C6244 |  |
| Offll to 3 | C6235 | C6313 |
| Off-1 to 4 | C6236 | C6314 |
| Off-1 to 5 | C6237 | C6315 |
| Off-1 to 6 | C6238 | C6316 |
| Off-1 107 | C6239 | C6317 |
| Off-1 to 8 | C6240 | C6318 |
| Off-1 to 9 | C6241 | C6319 |
| Off-1 to 10 | C6242 | C6320 |
| Any Type- |  |  |
| Your Cost |  |  |
| C6223 Marked | '0-100'. | h 15c |

MALLORY Hamswitch


Provides means of using a single meter to measure currents or olts lin ow. high insulation factor and tive rating of 10000 volts RMS AC or 1500 volts I)C. Two gang with 21/4" spacing between sections. $2^{\prime \prime}$ grooved shaft, bushing.
C6372-Your Cost \$1. 52 C6374-Dial markings.

## CENTRALAB

## "Positive" \& "Spring Return" Switches

Lever Action Each switch sup-
plied with plied with hnob.
l'ates available for Pates available for mounting singly or
horting Type grouns uptio Shorting Type Non-Shorting Type

No. Poles Pos. Actiun | No. Poles Pos. Action No. |
| :--- |
| C12825 2 |
| $\mathbf{C 1 2 8 2}$ |
| 12799 | $\begin{array}{lllll}\text { C12825 } & 2 & 3 & \text { Positive } & \text { C12799 } \\ \text { C12826 } & 2 & 3 & \text { Spring } & \text { C12800 }\end{array}$ C12801 422 Spring C12802 $\begin{array}{lllll}\text { C12804 } & 4 & 2 & \text { Pusitive } & \text { C12803 } \\ \text { C12805 } & 2 & 3 & \text { Pos. \& Spr. C12806 }\end{array}$ Any Type Above,



Black Mounting Plates
No. Gangs Dimen. Each

| No. | Gangs | Iimen. | , |
| :---: | :---: | :---: | :---: |
| C12794 | 1 | $25 / 8 \times 3 / 4$ | 21c |
| C12795 | 2 | $11 / 2 \times$ | 24c |
| C12796 | 3 | $21 / 6112$ | 29c |
| C12797 | 4 | $3 \times 21 / 4$ | 35 c |
| C12798 | 5 | $3^{3} 4_{4} \times 3^{\text {\% }}$ | 44c |

Universal Fiat Switches Compact. inex-
 used in varicty of ways ranging rom single pole 4 pole double throw, Bakelite insulation, non-shorting teeth. Requires ${ }^{\text {R }}$ depth for mounting. C12764- shat and har knob.
Your Cost
C12773-With spring return.


CUTLER－HAMMER SWITCHES
Approved type with nickel plated metal parts．New design．Fast action． Excellent for appliances，radio receivers，etc．Approved by Under－ writers．Buy in quamity and save．

| Stock No． | Fig． | Poles | $\left\lvert\, \begin{gathered} \text { Stem } \\ \text { Lengih } \end{gathered}\right.$ | Power |  |  | 2－9 10－20 21－40 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Amp． | Volt | Each | Each | Eachl | Each |
| C12836 | A | SI＇ST | 15\％\％ | 3 | 250 | \＄0．39 | \＄0．27 | \＄0．24 | \＄0．22 |
| C13834 | A | SIDT | 15. | 3 | 125 | ． 49 | ． 34 | ． 29 | ． 27 |
| C12833 | A | 1）10 | 15\％3＂ | 3 | 250 | ． 93 | ． 66 | ． 56 | ． 51 |
| C12817 | A | IPST | ${ }^{13 / 509}$ | 3 | 250 | ． 88 | ． 62 | ． 53 | ． 49 |
| C12813 | B | S1PST | 1589 | 6 | 250 | ． 98 | ． 69 | ． 59 | ． 57 |
| C12814 | B | 1）IST | 15，20 | 5 | 250 | 1.03 | ． 72 | ． 62 | ． 57 |
| C12815 | 8 | SIST | ${ }^{15} 9$ | 10 | 250 | 1.57 | 1.10 | ． 94 | .86 |
| C12816 | 8 | DIST | 15， | 10 | 250 | 1.71 | 1.20 | 1.03 | ． 97 |
| C12837 | C | SPST | 11 运。 | 3 | 125＊ | ． 49 | ． 31 | ． 79 | ． 27 |
| C12832 | D | ${ }_{\text {SPIPT }}{ }^{\text {Spl }}$ | 115： |  |  | － 47 | ${ }^{3} \mathbf{3 1}$ | ${ }^{1.06}$ | ． 24 |
| C12831 | D | SP3T ${ }^{\text {SPST }}$ | ${ }^{15 / 22}$ | 6 | 125 | 1.71 .78 | 1.20 | 1.03 .47 | ． 94 |

＊Rated $\Lambda C$ ．$\dagger$ With dead center position．
F）On－Off switch plates for toggle switches．With locating projection Marked＂on＂and＂off．＂
C12818－Your Cost．
10 For


H and H SWITCHES
（A）All have nickel metal parts，black finish．

| Stock No． | Stem <br> Length | Poles | Power |  | Each | $\begin{gathered} \text { Lols } \\ 10 \text { Ea. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Amp． | Volts |  |  |
| C12754 | ${ }^{13}{ }^{3}{ }^{\circ}$ | St＇ST | 6 | 125 | 25 c | \＄2．25 |
| C12755 | 19 | SPDT | 3 | 125 | 30c | 2.70 |
| C12756 | 13 \％ | DI＇ST | 5 | 125 | 48 c | 4.32 |
| C12757 | 13 ＇ | DPDT | 3 | 125 | 50 c | 4.50 |

## H．\＆H．Rotary Panel Switches

（8）Rated 3 amps．， 125 volis．Approved type．With locknuts．Shaft extends $1^{\circ}$ ．Bushing in fiameter．With ug ternind
No Type Each 10 For No．Type Each 10 For
 12781 D एC T $47 \mathrm{c} \quad 4.23$
＊Bushing extends $1^{*}$ ．Others，$\frac{3.8^{\circ}}{}$ ．$\dagger 3 \mathrm{amp}, 250$ volt．

## H \＆F Two Circuit Push Switches

In normal prosition，with plunger out，one circuit is＂on，＂and the other＂of＂．When plunger is depressed，circuits are reversed．Slow make，quick break momentary contacts．Rated 1 amp．at 125 v．a．c． Bushing ${ }^{1} / 32^{\prime}$ dia．， $5^{\circ}$ long．

METAL PLUNGER（C）
Used on Supreme instruments and other popular makes．
C12774－Your Cost
BAKELITE TIP（C）
$\left.\begin{array}{l}\text { C12777－Red } \\ \text { C12778－13lack．}\end{array}\right\}$ Each
C12778－13lack．Each BAKXLITE BUTTON（D）
C12776－RIack．$\}$ Each

$55^{\text {c }}{ }^{10,595}$ 50 \＆ $\begin{array}{r}10 \text { For } \\ \$ 4.50\end{array}$


FEDERAL Anti－Capacity Switches
（A）Springs are phosphor bronze silverplated，actuated by a cam roller．
 C12851 D．P．D．T．$\}$ \＄1－ 0

Canopy Switch
（B）Rotary type，composition top．Very shallow．Wire leads．Rated 3 B）amp．at 125 volts．

## Slide Switches

（C）Compact slide silver plated switches in cadmium plated steel housings．All rates at 125 V ．AC－DC． 188 mtg ctrs． No．Type Amp．Term．Ea．No．Type Amp．Term．Ea． $\begin{array}{lllllllll}\text { C12482 } & \text { SIST } & .75 & 2 & \text { 16c } & \text { C12844 } & \text { DPST } & .50 & 4 \\ \text { 22c } \\ \text { C12483 } & \text { SI＇DT } & .75 & 3 & 19 c & \text { C12840 } & \text { DI＇DT } & .50 & 6 \\ \mathbf{2 8 c}\end{array}$


Standard MU－Switch
（A）Light pressure．quick action precision unil．Requre oniy 4 oz．pressure and $001^{\circ}$ of move－
ment to operate．Underwriters approved．kated 15 amps．at 125 volts a．c．； $1_{2}$ H．P．inductive loads at $125-460$ y a．c．Bakelite case $1^{13}{ }_{10} \mathbf{X}^{14}{ }_{15} \mathbf{X}^{13}{ }^{10}{ }^{6}$ high．Scren termi－ nals with lugs．Used for sorters， counters，float controls．etc
No．Iype Normal Each c12725 S．l．S．T．Closed
C12726 SPS
S． C12727 S．P．D．T．


## Thermostat－Type

 MU－Switch（B）
For automatic control of （b）temperature in electrically heated brooders and incutators． or wherever an automatic electric heat control is desired．Naximum efficiency bee ween $80^{\circ}$ and $120^{\circ} \mathrm{F}$ ． llas double ether－hlled wafer and adjusting screw．Rated 15 amps ． 12：）$v^{2} ;$ ．amps， 250 v．A．C．only． Non－inductive loads． ${ }^{\text {C12 }}$
$\$ 1.35$


（A）


Midget Knife Switches （A）Panel mounting，Have blach pirts．Sing！e pole types $11^{\circ}$ long，
 $1^{\circ}$ wide．With mitg．nuts．

Your Cost
${ }_{\mathrm{C}}^{\mathrm{NO}}{ }^{\mathrm{NO}}$
C16843 S．P．D．T． 32 C $\begin{array}{lll}\text { C16845 } & \text { D．P．S．T．} & \text { 38c } \\ \text { C16844 } & \text { D．P．D．T } & \text { 40c }\end{array}$

Bakelite Knife Switches
（B）Heavily plated metal parto解 types $12^{2}$ long；double pole $2{ }^{2}$ C16830

| Type | Your Cost |
| :--- | ---: |
| S．P．S．T． | 50 c |
| S．P．D．T． | 59 c |
| D．P．S．T． | 68 c |
| B．P．D．T． | 79 c |
| 3－P．S．T． | $\$ 1.09$ |
| 3－P．D．T． | 1.18 |
| 4－P．S．T． | 1.47 |
| 4－P．D．T． | 1.76 |

## Porcelain Base Knife

 SwitchesEspecially suitable for aerial and ground．Copper contacts and blades．
Stock No．Type Your Cost
C16820
C16821
C16822
$C 16822$
$C 16823$
C16825

## UNIMAX Design Kit

（C）For the designer and model makər．Design kit enables quick sele：tren of precision switch types necessary to suit a particu－ ar requirement．Fills many needs in the drafting room．model shop and maintenance depariment by making avaliable diversifed witch types for quick determina． ion of size．shape．mounting and meiliod of actuating，best suited for a particular application．Kit complete with two MX－1 SPI）T base switches，one MX T－1 base switch with direct acting hinge arm．Adaptaplates，one style sping plunger with threaded bushing for one－hole panel mount－ ing，one style＂$W$＂leaf spring with steel roller，two style＂L＂ standard leaf sprinks，one style ＂$T$＂direct acting with leaf，one style＂T＂direct acting with roll－ er，roller assembly to fit styles ＂L＂and＂T＂adaptaplates． Screws and rivets for attaching adaptaplates． C12758－
Your Cost
$\$ 2.75$

©
（D）

（E）

CLAROSTAT Rotary Switches
D）Compact，positive contact Underwriters＇Approved witches．Barelite noired con－ volis． 3 amps 125 volis 13 ＂ diam．${ }^{9}{ }^{15}$ ．hody depth；bushings diam．${ }^{16}$ diam．． 1 shaft．
Stock ${ }^{8}$ Your Cost

| tock |  | our Cost |
| :---: | :---: | :---: |
| No． | Description | n Each |
| C12845 | Sp－ST | $35 c$ |

C12845 $\quad$ S．P．－S．＇T．
$\begin{array}{ll}\text { C12847 } & \text { S．P．－D．T．} \\ \text { C12848 } & \text { 4－Wire，S．T．}\end{array}$
Rotary Switch Plate
©．＇Off－On＇switchplate． Siced aluminum and black． Y 9857 10 for $65 \mathrm{c}, 7 \%$ Your Cost Each

Switch Plate＇Off－On＂＇switchplate． Etched
C9859 10 for 65 c
74

## Bias Cells

（G） 1 and 114 volt types．For biasing high－gain amplifiers． C6419 1 volt．
C6424－11／4 volt
Holders Only for Above
C6420－For 1 Cell．．．．．．．． $9 c$
C6421－For 2 Cells
C6422－For 3 Cells
C6423－For 4 Cells


## CROFLEXTunersandCalibrations

Choose for size alone because llexibility of these new tuners adapts them to any normal chassis. Con denser may be clockwise or comnter-clockwise and may he located in various positions relative to the tuner. Fach tuner permits choice of 5 different knob locations. Stock calibrations listed below permit horizontal ons. Stock mounting of the tuner dimension" edgelighted glass dial have attractive 3 antiqued bronze escutcheons dial scales and genuine antiqued bronze escutcheons. The smallest size has one lamp socket; the ot her three models furnish two sockets Ilubs are all 3 " with $1 / 4$ adapters. All supplied with 55 to 170 and short-wave calibrations, broarlcast-band 55 to 170 and short-wave 6 to 18 , with low numbers at left, but the largest model, No. 234, has a third scale reading reverse, arbitrary 0 to 100. Dial scales are brown background to harınonize with any cabinet

|  | Escutcheon | Panel | Pointer | Stock |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Model | Overall | Cutout | Travel | No. |  |
| (A) 231 | $21 / 4 \times 43 / 4$ | $178 \times 4^{3}$ | $3^{13}$ | C9818 | \$2. |
| (B) 232 |  | $11{ }^{10} \times 5{ }^{3}$ | 411 | C9819 | 2.6 |
| (C) 233 | 35, $\times 6$ 5/8 | $2^{1} \frac{1}{4} \times 6^{\prime \prime}$ | 51 | C9820 | 2.79 |
| (D) 234 | $3{ }_{10} \times 8^{7}{ }_{16}$ | $23_{14} \times 7{ }^{9} 1{ }^{4}$ | $6^{3}{ }^{2}$ | C9821 | 2.9 |

Stock Calibrations: The glass dial scales may be renoved and replacements put in easily


+ All IIorizontals supplied with respective dials.
Stock calibrations is above.
Your Cost Each
44 4


## Permeability Tuners and Dials

Cominlete assembly, includes dial, coils, knob shaft. cable, slug carriage, two ligh $Q$ slugs, and clear plastic dial cover Tunes and Oscillator coils by moving the slugs in and out of the cores as the knoh shaft is turned. Highly etlicient superheterodyne circuit component, carefully pre-tracked at the factory, ready to install and operate. Fool proof, retains alignment. Complete with wiring diagram and instructions. Use as the basis for ultra-compact receivers, no tuning gang capacitor neederd. Smooth dial drive; handsome gold buff and brown finished dial scale. Covers 540 to 16001 kc

Your Cost

$\$ 4.05$
$\$ 2.85$
$\$ 2.85$

## CRO-BAND Dial

Escutcheon opening measures $17 / 8 \times 71 /$ n $^{\prime \prime}$ with Croglas crystal and antique bronze finish. For use with 88 or 4. shafts. Pilot light sockets furnished. For counter-clock C9815 Your Cost$\$ 3.53$

## Slide Rule Dials

(H)In both ${ }^{1} 4$ and $3 /{ }^{\prime \prime}$ shafts. For close right or close left condensers. P'anel opening required: $19 / 6 \times 518^{\circ}$. Universal scale for broadcast and short-wave C9812 Counter clock wise. C9811 Clackwise Either Type
\$2.06
Similar to alnve but smaller. C9817-Counter clockwise.
c9816 Clockwise
s.71


## Midget Condensers

(1)
For communications receivers and transmitters. Compact, rugged and highly efficient. Ceramic insulation, sturdy lug terminals, single hole mounting feature, etc. shaft plated to resist corrosion. With mounting nut. Shpg. wt. 1 lb .
C9728-Capacity 3.5 to 25 mmfd. \& plates. Each
C9731-Capacity 61080 mmfd . 11 plates. Each C9727-Capacity 6 to 100 mmfd . I : plates. Each

## Midget Single Garg Condensers

(K)
With all the features and characteristics of larger units. Ideal for limiled space apparatus. Rotor and stator plates, birmly staked (oosition. low-loss bakelite insulation. Improved ball bearing Counter-clockwise rotation for all types. $4^{*}$ shafts. $13 / 4 \times 1^{3} \frac{1}{4}^{1} 1^{3} 16^{6}$ deep. No. Mmid. Each No. Mmfd. Each No. Mmfd. Each
 C10192* 50
*-Double spaced

## NEW! Gang Condensers for FM and FM-AM

Four new Defiance morlels for modern sets. Each section has a trimmer. Aluminum plates, ball bearings, low-loss insulation, $1 / 4$ shafts
(L) FM-AM 5-Section: Ranges shown are in inmf. FM front section, (b) 19.1-1.4. FM center section, 18.5-1.2. FM rear section, 18.5-1.3. AM RF section, 421-31.6 AM oscillator section, 161.6-21.1 C9792
$\$ 1.95$
FM-AM 4-Section: Ranges shown are in mmf. Two FM sections, each 18.5-1.2. AM RF section, 420 maximum. AM oscillator section, 162 maximum.
C9793
Your Cost



## defiance Gang Condensers

(N) All feature aluminum plates, ball bearing rotors and low-loss insulation. Two and three gang units supplied with irimmers on for 632 screws. $11111^{4}$. hia. $11^{*}$. long. Three mounting holes tapped for 6.32 screws. . $1111^{5} 8^{\circ}$ high, $1^{15^{\prime \prime}} 10^{\circ}$ wide. Shyg. wt. 1 lb . All 365 mmfd . per section except cut sections on 456 Kc Super types

| No. | Each |  | Le | Rotation | $456 \mathrm{Kc}$ <br> No. | Super <br> Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C9780 | \$0.59 | 1 | Lengt |  |  |  |
| C9781 | 1.19 | 2 | $2^{\text {* }} 16$ | counter-clock | C9798 | 1.19 |
| C9782 | 1.65 | 3 | $3{ }^{3 / 15}$ | counter-clock | C9799 | 1.65 |
| C9783 | . 59 |  | $11_{16}{ }^{\circ}$ | clock wise | C979 | 1.65 |
| C9784 | 1.19 | 2 | $2^{3{ }^{15}{ }^{16} \text { 。 }}$ | clockwise | c9796 |  |
| C9785 | 1.65 | 3 | $3^{3}{ }_{16}{ }^{\circ}$ | clockwise | C9797 | 1.65 |

420-160 mmfd Defiance Gang Condensers
Two gang, 420 , and 160 mmfd . condensers for use with 156 KC IF superhets. Counter-clockwise rotation. with trimmers huilt onto frame. Total length $2^{3}{ }^{16}$. Shpg. wt. 1 lb .
C9775-1 wo (rang. 420 and 160 mmfd
C9776-1hree Ciang. Two 420 and one 160 mmfd

## Shaft Couplings and Bushings

## Panel Bearing Assembly

| (P) Well-made |  | ushing | (R) Use with rigid or flexible |
| :---: | :---: | :---: | :---: |
| 1 (Coupler |  |  | up to ${ }^{\text {a }}$ / panels |
|  | tock No. |  |  |
| Inches No. | Insul. | Bras | C9563-3' long ${ }^{\text {N }}$ Shaft |
| $14 \times 1 / 4$ | C15014 | C15000 | C9562 $6^{\prime}$ long. $1 / 4$ - Shaft . . . 28c |
| ${ }^{3} \mathrm{~m}^{3} 8^{\circ}{ }^{\circ}$, 1 | C15006 | C15001 | c9564-Bearing only . . . . . . 5c |
| $1 \times 3 / 4$ | C15008 | C15002 |  |
| $14 \times 14$ | C15017 | C15004 | rass and Fibre |
| 3 3 8 年 | C15018 | C15005 |  |
| 118\% ${ }^{2}$ | C15009 | C15003 | Shaftings |
| Your Cost, Any Type..... $\mathbf{S 1}^{12 \mathrm{c}}$ Fine for extensions. $1 / 4^{\circ}$ 10 For. . . . . . . . . . . . . . . . . $\$ 1.08$ C15010- $6^{\circ}$ Brass |  |  |  |
|  |  |  |  |  |
|  |  |  | C15011 $6^{\circ}$ Fibre. |
| Split Bushing <br> Type 3. For increasing shaft dia from 14 to $3 / 8^{\circ}$. Brass, $7^{\circ} 10^{\circ}$ long. C9730-Your Cost Each. . . 6 c 10 For. |  |  | Your Cost . . . . . . . . . $\mathbf{Z 4}^{4}$ |
|  |  |  | C15012 ${ }^{12} 2^{\prime \prime}$ Brass. |
|  |  |  | C15013-12" Fibre. Your Cost. |
|  |  |  |  |

(R) Use with rigid or flexible coupling when mounting. For ip to ${ }^{5}{ }_{16}$ panels

## Brass and Fibre Shaftings

Fine for extensions. $1 / 4^{\circ}$ dia C15010-6 Brass C15011 $\mathrm{b}^{\circ}$ Fibre.
Your Cost
C15013-12" Fibre. Your Cost



Drive Rubbers
Kit contains eight different types of friction drive rubbers for replacement in popular reeeivers including: Atwater Kent. RCA, and Stewart Kent. catece. Your Cost 24
pien

## Linen Dial Cable

All four types of dial cable of black woven linen. To be used as exact eplacement in most receivers. All have high tensile strength for long rouble-free service. Special thin $.025^{\prime \prime}$ dia. Standard $.031^{\circ}$ dia. Medium $.042^{\circ}$ dia. Ileavy $.062^{\circ}$ dia.

WALSCO Thrifty Cord RackContains 100 ft . each of medium, spe cial thin, and standard aluminum base.
C9887-Your Cost
55.22

## Dial Drive Spring Assortment

Each (J) Ilandy kit for servicemen. Box contains $\$ 0.24$ six different sizes of hard to get tension springs. Total of 25 springs in all. Offered C 9892 - -54 Your

## Phosphor Bronze

 Dial Cable(D) 16 strand closely braidseven 6 strand cables over linen core.

12
16
Isth. Strand Each Strand Each Env** C9925 \$0.24 C9926 \$0.24 25 ft C $9934 \quad .76 \mathrm{C9937} \quad .55$ $100 \mathrm{ft}^{2} \mathrm{C} 9872 \quad 2.73 \mathrm{C} 9881 \quad 2.03$ * 42 strand $8 \frac{1}{2 \prime}, 16$ strand $11 \frac{1}{2}$.

## (ㄷ) Rub-R-Shim

 Strips of shockproof live sponge ruober. One side ad No W.xT. Ea. 10 For
 C14863 $3_{8}^{3} \mathrm{x}^{7}$, 16 52c $\quad 5.60$
( $\mathcal{A}$ Friction Tape fandy $\left.{ }^{3}\right)^{\circ}$ wide rolls. Packed in individual boxes, C14829-2 Oz. Each.. 11 c C14842-4 Oz. Each... 20 c C14843-8 Oz. Each...36c

## WALSCO Unibelt

(K)
K) Replacement for any dial belt. Cut to size-join ends with simple zipper -like connector. Breaking strength over 60 lbs 5 ft . spool with 10 connectors. $\$ \mathbf{C} 9888$ Your Cost.......

## Dial Cable Thrift Spool

(L) Economical and practical assortmen (L) of dial cables. 3 section spool contains 15 ft . each of phosphor bronze cable, niedium linen 1 lb .
$\$ 1.1$

## Dial Drive Springs

(M) High grade steel wire rust-proof springs. Five sizes take care of all requirements.
C9890-Kit of 10 Asst.
C9891-Kit of 10 small sizes
246 244

Transparent Scotch Tape
Ea. 6 for
C15046-1/2"x792", ............. 50c $\quad \$ 2.70$
C15047-3/4* $\times 792^{\circ}$.
Dispensers
C15033-Plastic hand dispenser. $1 / 2^{\circ}$ tape. Your Cost . . . . . . . . . . . . . . . . . . 29 C C15034 Plastic hand dispenser. $9 / 4{ }^{\circ}$ tape. C15035 Desk dispenser. Takes both sizes. C15035 Cost................................ $\mathbf{\$ 1 . 3 9}$

## Black Scotch Tape

 (G) For insulating or bindadhesive quality. Very flexible, easy to remove. "६" wide. Roll is 360 inches long. Black color.Your Cost. . . . . 254

## 

## Radio and Auto Fuses

(R) Type 3-AG: Rated $250 \mathrm{~V}, 1 \frac{1}{4} \mathrm{x}$ for quantity price. C13189-Specify Amperage.

"Jumbo" Fuse Retainer
(S) Replacement for Philco and with bushings, springs. $2{ }^{2}$ " long by C8349
Your Cost 12 for

## 17 4

. $\$ 1.84$

## Extractor Fuse Posts <br> (T) For use with 1 ' instrument type fuse only. Diameter Bush-  <br> C12326 <br> Your Cost

LITTELFUSE Auto Fuses
(1) Type 3-AG. Ratings are at (U) 25 V. $14 \times 1 / 4^{\circ}$. E. Lot 100

 | C12321 | $10 \mathrm{amps} \ldots .$. | 3c | 1.96 |
| :--- | :--- | :--- | :--- |
| C12322-15 amps. | 3c | 1.96 |  |

## Fuse Retainer

(5) Two piece connector made of inside insulation. Powerful spring contacts insure good connections. Length $232^{\circ}$. Lenyth $232^{\circ}$.
Your Cost.
94

## 2 for

## Bakelite Fuse Mounts

 (W) Sub-Pane! Type. Molded (W) bakelite. $1^{\prime}$ 6-32 studs. For in strument fuses onlyC12382-Each
124 As above, but for $11_{4} \times 1 / 4$ fues
(type 3AG). C12327-Each... 12c

## Panel Type

Molded hakelite. $11 / 8 x^{5 / 8} \times 3 / 8^{\circ}$. For $1^{\prime \prime}$ instrument type fuses only. Plated fuse clips.
C12383-Your Cost 96 Same as above, but for $11 / \times 1 / 1$,
fuses (type 31 i ).
C12324-Each

LITTELFUSES For Radio
$0 \rightarrow(\mathbb{B}$ Sets and Amplifiers


Plug Fuses
(Y) For use in 110 volt house cir-C13200- 6 amp . C13203-20 amp. C13201-10 amp. C13204-30 amp. C13202-15 amp. St Your Cost Each

## NITE-T-IITE

(2) Soft neon glow ideal for all
rooms in the house, stairways. allways. Not intended for illumination. Provides ample light for mination. on the dark fits all orientation in the dark. Operates standard plug-in outlets. Operates on AC or DC. up to 20 volts. Uses less than $1 / 10$ watt. Neon bulb, sealed in clear molded plastic.
Underwriters Listed
C12330-Your Cost. . . C12330-Your Cost . . . . . 24.



## Radio Beginners Crystal Detector Kit

(A) A ready to assemble e it especially designed for beginners in radio

All radio parts necessary for assembly are included. No soldering or involved wiring techniques are required. Fahnstock clips are provided for fastening wires to terminal points. Merely mount parts and clip wires to the points indicated by the large full size instructions that ac company each kit. Size when assembled is $7^{\prime} \times 7^{1} 2^{\prime \prime} \times 2^{1} y^{\prime \prime}$ high. Shpg wt. 4 lbs. Includes all parts, wire, and extra sensitive silicon detector unit. C13871-Yourr Cost
\$2.45

## SUPERTONE Crystal Set

(B) This Supertone Crystal Set is a big seller and there is plenty of goor reason for its popularity. Remarkable results have been obtained and its scientific construction gives lowd, clear. distortion free reception A Supersensitive crystal is utilized which is mounted in a glass dust
proof enclosure. Shpg. wt. 1 lb . Croof en
1.12 LITTLE WONDE゙R: bike above, but detector is not enclosed 76 housing. Shpg. wt. 1 lb.

## SUPERTONE Radio Kit

8 An interesting, educational, ready-to-assemble radio kit that is ideal for beginners. Includes molded bakelite base with contact slider, single headphone, and Super-Sensitive crystal as shown above Complete directions for assembly and operation, as well as instructions for putting up the most effective antenna.
Your Cost
$\$ 1.95$

## TEE-NEE RADIO

* No Batteries
$\star$ No Tubes $\quad \star$ No Current C None of the fuss of batteries, tubes, or pligging into power lines meeds only an aerial and ground. Moused in a beautifully finished mahogany crackle finished stelel case. Supplied complete with single headptrone with head band, but less aerial and ground wires Size $54_{4} \times 1=4 \times 3$. Shpg. wt 11 lbs.
Your Cost
$\$ 3.92$


## TEE-NEE PLASTIC CASE RADIO



Beautiful mahogany colored plast ic case. Just like the big sets. Ear case and hold close to the ear for in use. Remove the earphone from the earphone, but less aerial and ground wire. Size $4^{\circ} \times 2^{\prime} 2^{\circ} \times 11^{5}{ }^{\circ}$ Shpl wt. 12 lb .
C13881-Model 100 Crystal Set. Your Cost
\$2.36


Glass-Enclosed Crystal Detector
(E)

Dust-proof. An easily adjusted crystal unit equipped with a super-sensitive minera. and a cats whisker. $\qquad$

## Crystal Detector

(F) Includes ball and socket and swivel arm, crystal holder and mtg, hardware. Completely mounted as illustrated but less crystal. Crystal, base and clips not supplied. $12 \boldsymbol{1}$ Mounted crystal for above C13900-Each.


Fixed Crystal Detector (G) Supersensitive point found neny meters and fixed perma nently In Bakelite case with
screw connections. screw conneciums.

## Cat Whisker

(H) Finest wire-correct tension C13921Envelope of 3. Your Cost 21 Super-Sensitive Crystal (J) Gets more stations and gets hem louder. Each crvstal is C13901.
Each.
124 $\$ 1.08$


## Marvel Phones

(K) Here is a new utility telephone system which provides an inexpensive method of establishing intercommunication in homes, offices, factories, farms, etc. Consists of two pressed metal cradle type telephones connected by a single conductor cable to feet long. Kerfuires two dry cells at each phone. The sel will operate over much greater two dry cells at each phone. The set will operate over much greater
distances depending upon the number of batteries used (not turnished). distances depending upon the number of batteries used (not turnished).
Operated by merely pushing the "push-to-buzz" button and then lifting the hand pirone to listen. Complete instructions and guarantee are included with each set. Wit. 3 lbs .
C14004
Your Cost
\$7.95
Lots of 3, Your Cost each
$\$ 7.46$
C19858 Batueries for above. Each

## Wireless Microphone

(L)
Talk through your radio with no connecting wires! Tunes in like a regular broadcast station. With 1 wo unils, radios may be used as intercommunicalion sets between various parts of the house 75 ft . effective range. Tunes $1(0)(1)$ to $17(0) \mathrm{KC}$ by means bi knob at side, assures a clear channel. Entirely self contained with power supplied by one flash light cell and a "Minimax" "B" battery. Extremely snali drain, clue to use of single 11.1 tube. Neasures $63^{\circ}$ high, $5^{*}{ }^{*}$ deep, $5^{\circ}$ base. Microphone silver-gray, base brown with protective rubber rim. With batteries and tube.

## C22548.

\$6.63

## Model 500 Microphone

(M) Permanent magnet ype mike equipped with 18 feet of cable. Bullet shape clesign .anished in black and nickel. Has exceptional capabilities for amplifying sound with minimum distortion and maxiC13380
Your Cost
\$2.21


## Phonograph Model 1000

(N) A newly engineered Carron phonograph with a mechanical reproducer. Eliminates the necessity for using radio tubes, and ss of an motor the with a greater range and volume. las a constant sped in size. The balanced tone arm keeps excessive weight off the records and permits smoother playing longer record life. Incorprates a tone chamber that amplites and rounds out the sound. Motor is enclosed in a metat case linished in lraked enamel with a decorative decal. An ideal gift for children. Size $133^{3} 9 x 3^{\circ}$. Shipg wt. 9 liss.
C22655-
Your Cost
$\$ 7.85$

## 1CA 3-in-1 Radio Tuner

(0) Antenna tuner, wave trap, aerial eliminator all in this one instrument, depending on the manner of its connections to the radio set; greatly enhancing radio performance. Operates on any make or model radio set. Can be installed by anyone in a few minutes

## C12678-

Your Cost
59
10 for
55.31

## Headphone Kit

(P) When installed, the user can enjoy choice of headphone reception only, speaker reception only, or both together. Complete out lit conterminal jacks on an insulated adapter with three-way switch and cord and complete installation instructions. Shpg, wt. 3 ibs. C13944
Your Cost


## "Western Union"

 Telegraph Set
## *1t Buzzes! Flashes, Clicks

 (A) Consists, of two "WESTERN UNION" telegraph signal units. Easy to connect and operate. You can learn how to send and receive telegraph code messages. Space is provided for two standard flashlight batteries in each case (batteries not supplied).Y Y 14007 Cost (Less Batteries) 654 C20622-Battery. Each......61/2c

## Hand Microphone

(B) A real hand microphone. Works B with any set using a loudspeaker. Does not interfere with reception. Push-button switch permits reception or use of mike at will. Handsomely


## 3-Way Telegraph Set

(C)Ideal educational toy. Two-station set with 100 ft . connecting wire. International Morse Code engraved in top of each set. Key with professional "feel." Switch selects choice of light blinker, buzzer, or railroad-type clacker Buzzer is built in. Headsets may be attached if desired. Blinker-light for line-of-sight transmission is self con${ }^{\text {tained. }} \mathbf{C 1 4 0 0}$. Your Cost
$\$ 4.80$ - "MIKE" Jr.
(D) A real radio microphone easily attached to any radio. Great for tical uses for voice students, etc. In brown finished metal case with attachment cord. Has a push switch to cut out radio whenever desired. Shpg. wt out radio whenever
$1113379 —$ Your Cost, only. . 594

hardware for wall C14002-Per Set
Your Cost
Batteries for above
C19858-Each, Your Cost

(D)

## MEISSNER RADIO KITS

## $\star$ Ideal for Elementary Radio Training!

## $\star$ Easy to Construct-Simple to Operate!

## $\star$ Enjoy Building, Learning, Using!

(A) Easy-to-build Regenerative sets designed for Radio Students. (A) With complete instructions and plug-in coil for Broadcast band ( 180 to 550 Meters)
Two Tube AC-DC Receiver. Uses one 76 tube as a detector and one 76 tube as a rectifier. Operates from any 110 volt AC or DC sujply. Supplied less tubes and headplones. C10441-Your Cost
$\$ 5.25$
Three Tube AC-DC Receiver. Uses one 76 tube as a detector, one 76 tube as audio, and one 76 tube as rectifier. Operates from any 110 volt AC or DC supply. Supplied less tubes and headphones C10442-
\$6.03

## Your Cost

Accessories
C10422-17 1035 Meter Plug-in Coil
C10421- 35 to 70 Meter Plug-in Coil C10420 70 to 200 Meter Plug-in Coil
$\square$
.) Each
$\square$

## 6-Tube Two-Band Superhet Kit

(B)
Dial calibrated to cover broadcast band of from 550 to 1600 kilocycles and shortwave band fiom 6 to 18 megacycles. Tuning control, Band switch, and volume control, with built-in On-Off switch conveniently grouped beneath square illuminated dial. Untuned stage of RF amplification on both bands, l'eaking circuit for added sensitivity on short wave. Filter choke for hum free operation at maximun output. Ilas 12SK7 RF amplifier, 12SA7 converter, 12SK7 IF amplitier, 12SQ7 Detector, AVC, 1st Audio, 351.6c'T Power Amplilier and 3,ZSC:T Rectilier. Kit includes all parts needed for completion of the receiver. Detailed step-by-step instructions are included to facilitate construction. 6 -Tube 2 -Band Kit , complete with tubes and speaker.
C24499-Your Cost.
\$24.70

## 5-Tube AC-DC Superhet

Frequency range 540 to 1600 KC . All parts necessary to complete set and including tubes and speaker. Factory wound loop, 2 gang tuning condensers, 2 double tuned IF transformers, and attractive accurately calibrated dial. 12SA7 mixer-osciliator, 12SK $1 F, 12 S Q 7 \mathrm{GI}$ fier. 110 VAC -LC operation. Insiructions included. $\$ 2020$ C24498 Your Cost
## 6- and 8-Tube AC-DC Superhet Kits

## Long Wave-Broadcast Band-Short Wave

(D) Highly sensitive sets with RF stage for all bands in all models. D) Easy to assemble. Instructions are complete with both pictorial and schematic diagrams. Chassis is punched, formed, and cadmium plated. No holes to drill No dial to mark. Only screwdriver, pliers and soldering iron needed. Coils pretuned and impregnated. All tubes and components are standard brand name parts. All models are for AC or $\mathrm{DC}, 105-125$ volts
6 -Tule Kit, Two lands, $550-1600 \mathrm{kc}$ and $5.5-18.0 \mathrm{mc}$ C24451
Your Cost
\$24.75
6 'Tube Kit, Two Bands, $140-425 \mathrm{kc}$ and $550-1600 \mathrm{kc}$. C24432 Your Cost
\$24.75
Both 8-Tube kits below include Tone Control and push-pull output: 8 -Tube Kit, Two Bands, $550-1600 \mathrm{kc}$ and $5.5-18.0 \mathrm{mc}$ C24453-
Your Cost
$\$ 41.59$
8-Tube Kit, Two Bands, $140-425 \mathrm{kc}$ and $5.5-18.0 \mathrm{mc}$. C24454-


## Electric Motor Kit and Book for Youngsters

(F) Combination motor kit and large book that every youngster will treasure. The fascinating story of electricity told pictorially in 6 beautifully lithographed hrilliant colors. 32 pages of the drama, history, and principles of electricity in easy-to-uncletstand language. Permanent metal binding and hard covers. 33 precision-made parts and wire to assemble an electric motor that really runs. Safe. Operates C24455-Your Cost
$\$ 2.95$
C20622-Batteries (2 required). Each

# popular mechanics EKITS 



## Beginners Crystal Set

(A) Simple design but outstandcrystal detector of highest sensitivity in conjunction with a coilcondenser circuit. Shpg. wt. 7 Ibs. Popular Mechanics R311. Less Baseboard.
C24503-
$\$ 3.30$

## Radio Beginners

## Crystal Detector Kit

## (B)

Somet hing new in crystal defor radio bets is this kit designed quired. Fahnestock clips provided to clip wires from one point to the other. Includes all -parts as well as an extra-sensitive siticon crystal detector unit. Shpg, wt. 6 lbs.
C24519 -
Your Cost
\$2.45


## Beginners "Spec" 1 and 2 Tube Kits

## (C

These kits are extremely simeration in consiruction and op decector Both enploy a 105 C T another tube. The two tuber has which bonsts 1 aucio amplifier ard or short twave stations Com plete broadcast and short-wave reception. Either set may be reception. Enther set may be
operated frombatteries or a combination of batterics and B -batbination of batterics and B-bat tery eliminator Les tubes, earShpg. wt. 1-1ulue kit approx. 3 lbs. 2-tube kit 1 lbs.

## C24500-1-Tube K it

## Yopur Cost <br> ${ }^{5} 3.30$

C24501-2-Tube Kit
Popular Mlec. R-307 $\$ 7.59$

## ELECTRONIC

## Photo-Print Timer

Accurately controlled timing enables the busy photographer to make uniform prints. This is especially important when making large numbers of duplicate prints, such as personalized holiday cards, etc. The time range is from 1 to (o) seconds and the unit will control any electric appliance or lamp that does not draw more than $2: 50$ wat ts. The relay coil is in series with the plate circuit of he rriode-connected portion of a 17 LF -GT ducts through the relay coil and Aher a warm-upperion, the tube conis grid control of the tube by the mathematically certain time it take for a capacitor to discharge through a resistor 'The dark-room ". are lite" is on all the time except during the exposure time period. In enlarged blueprint of all layout and wiring diagrame complete in every detail is furnished with the kit. Popular Mechanics No. R-339. Less tube. Shpg. wt. 6 lb
Your Cost
\$7. 57

## 25 Popular Mechanics Blue Prints

Blue
Print Popular
No Mech
C20300* R305 Beginners "Spec" 1 tube battery kit
C20306 R306 Inter-room Communicator System
C20301* R30' Beginners "Spec" 2-tule hit
C20302* R310 Four Watt AC-DC Amplifier
C20303* R311 Two Modern Crystal Receivers for Beginners
C20304 R313 Safety Code-Practice Oscillator and Short-Wave Receiver for Student
C20305 R317 Emergency "B" Power Unit
C20307 ${ }^{\text {* }}$ R323 Portable Phono and Mystery Player
C20308 R327 Dual Phono Unit and Amplifier
C20309 R328 Desk Lamp "DX"'"ER" for Boys Room
C20310* R331 High Quality Ten Watt Ampljifier
C20311 R342 1946 "Litule Giant" AC-DC Super
C20312 R335 Two Low Cost Receivers for
C20313* R337 Two Tube l'ockette Portable
C20314 R3.38 Three Tube 8 Watt Cake 1'an Amplifier
C20315* R339 Electronic 1’hoto-l'rint Timer
C20316 R341 Three Tube Short-Wave Superhet
C20321* R353 19:7 Little (Biant AC-I)C Super
C20317 R354 Beginners Low Cost Progressive Receiver Set No.
C20318 R355 Beginners Four-Tube Progressive Receiver Set No.
C20320 R358 Di-Q 50 5-band Phone and CW Transmitter
C20320 R3.58 Hi-Q 50 -hand Phone and CW Transmitter
*Indicates Kit is described on this page
Your Cost Each

All POPULAR MECHANICS
KITS on this page are available for immediate delivery. These are especially well suited for home, classroom and demonstration purposes. Only the highest quality parts are used, thus adapting them to repeated tearing down and rebuilding as is done in training and experimental work.

All kits include large, clearly defined blueprints, complete instruction sheets, all necessary hardware and hook-up wire.

Blueprints may be ordered sepa-rately-see list below. Parts list free of charge to those desiring additional information on any kits shown below. Specify project you are interested in.

Portable Phono and "Mystery" Player Kit


May be coupled directly to any radio or may be used as a wireless oscillator type phonograph, thus eliminating the necessity of wiring it to your radio. It is merely necessary to plug into any nearby electric outlet. Oscillator consists of a GAT and one type 6 C 6 rectilier. Shpg. wt. 19 lbs. Popular Nechanics R323.

## C24509-Less Tubes and Carry-

 ing Case.Your Cost
$\$ 1419$


## 1947 "Little Giant" AC-DC Super



Readers of l'opular Merhanics have always found sumething practical and difierent in the "Little Giant" receivers described in March issues. This latest model is an excellent performer in the broadcast band, gets police calls, includes $A V C$, and is casy to build. Uses a standard commercial "Air-Com" permeability tuner and a $5^{\circ}$ slide-rule tuning dial. Enlarged blucprint of all layout and wiring diagrams furnished with kit Isis 12STi $7 \mathrm{CT}, 12 \mathrm{SO} \mathrm{F}, 501.6 \mathrm{OT}$ and 35Z5G'T tules. Popular Mechan ics R-353. Less tubes and cabinet. ics $R-353$. 1 ,ess tu
Shpu. wt. 9 lbs. Chpus25- 9 lbs.
Your Cost
s15.51

## Four-Watt AC-DC Phono Amplifier

No power transformer required to build this simple music maker. It is an excellent performer and requires very few parts to build. Pleasing tone quality and ample player make it an ideal amplifier for rumpus-room dancing and record保 matis which is mer atis. Which is more than enough for sinall groups. AC-I (C circuit eliminates the need for a power transformer, keeping the unit light in weight and allowing its use on alternating or direct current. Springdriven phonograph turmables can be converted for electrical amplification hy the use of crystal or magnetic pickup arm and this amplifier. Tulies used are 6c "50, T, two $25 \mathrm{L6GT}$ "s and a 2575 GT tecs tubses, "peaker, and wooden parts. Shpg. wt. 8 lbs. Popular Mechancs No. R-310.
C24502
Your Cost

## High Quality Ten-Watt Amplifier



Wherever a good ten watt audio amplifier with negligible distortion is desired this conservatively rated unit "fills the bill." An exceptional bass reproduction method is employed which eliminates the booming unnatural tones so often heard in audio amplifiers. The output stage is re sistance coupled with a pair of 6A:3 type tubes in push pull loring used Crcuit includes a phase inverter and a simple form of feed-back that prevents distortion and reduces hum level to an absolute minimum value Tubs employed: © 5 5, 6 N 7 , two $6.13,5 \mathrm{U4G}$. Kit complete less 10 inch l'M speaker and tubes. Shpg. wt. 21 lbs . I'opular Mechanics R:331 C24512
Your Cost
$\$ 19.95$


## Two-Tube "POCKET" Portable

Operates on flashlight cells. Slips into your coat pocket with just enough extending out the top to tune. Built-in antenna, self-contained batteries. Very goon volume on local stations. Covers the broadcist band with additional range on each side of the dial. Uses two 154 ininiature tubes in a standard regen erative-detector circuit transformer coupled to $\mathrm{Al}^{-}$ output stage. Case is easily made from cigar box Popular Mechanics No. R-337, less tubes, batteries, headset. Shpg. wt. 5 lbs
C24516Your Cost

## TRANSVISION Television Kits

SAVINGS - When assembled, either of the kits shown below becomes modern television receiver worth more than twice its cost. The quality of performance lias been acclaimed as superior by over 10,000 satisustomers
COMPLETE-With sight and sound high fidelity reproduction. Nothing more to buy. No technical knowledge required for assembly. No test equipment needed, instuction sheet gives all the information to complete and put either receiver "on the air.
BEAUTIFUL CABINETS-Exclusively designed for the kits shown below. Made of selected grain wood with attractive hand rubbed walnut finish. An accessory kit is included for use in mounting the assembled kit

Standard $\mathbf{1 2}^{\prime \prime}$ Television Kit Sensational new 12' television kit. Engineered for easy, rapid assembly. An outstanding television receiver for use in the home, in taverns and schools, at a saving of hundreds of dollars Complete with all tubes, parts, wire. and solder including magnetic defection type $12^{\prime \prime}$ picture tube, and specially designed folded dipole antenna with 60 ft . of lead-in cable. F"inest quality parts are used throughout. Complete with easy to-follow instructions and schematics
1 'icture size 75 square inches. ( 11 . 2 times larger than with a to tube. R. Unit, 3 stages of picture tory wor 7 channels all television channels have mand width of 4 me. for full picture definition 90 on wolt second anode potential for brightness 9000 volt second anode potential for brigheness and contrast. 1 ligh signal sensitivity only 50 microvolts required for picture circuit. 22 tubes and 12 inch picture tube $17^{\circ}$ high $\times 18^{\circ}$ dcep.

## C24492 -

Your Cost (Less Cabinet) $4<0 \% 10$ Deluxe Morlel with buitt-in FM Radio. Same as above plus continuous tuning from so 10216 me. Covering entire $1^{\circ} \mathrm{M}$ band and all 13 tete vision channels. Cutoff used tubes when used C24493
Your Cost (Less Cabinet)
$\$ 359.50$
Cabinet for $12^{\prime \prime}$ kit. In beautiful hand-rubbed Kood finish. Fully drilled, ready
of recciver.
C24494-Your Cost

## 7" Television Kit

It's easy, quick, anyone can do it. No knowledge Television or Radio required. Everything is supplied, all tubes (including pict ure tube), all parts wire and solder. Conmpete easy to follow directions, and schematics All intricate parts are pre-assembled A boon 10 hose who derive are pre-assembled. A boon to those who derive pleasure from creative activity, yet want to keep costs downing in television. For experiguire basic training in television, for experi menters, amateurs, and schools. Opens a new and intriguing field of television to servicemen and repairmen who wish to build and sell this receiver as a complete unit.
Brilliant clear seven-inch pict ure tube, large six inch speaker with heavy weight Alnico magnet, provide excellent voice and sound periormance R.F. unit aligned, wired and preluned to 3 channels before shipment, eliminating need for costly test instruments.
Eighieen-tube set with 3.5 mc . hand width picture circuit. Newly designed sweep and synchronizing circuils. 3000 volts second anode voltage. ligh signat sensitivity only 100 microvoltage. High signat sensitivity, only volts required for picture circuit. Measures antenna and tubes 59 lbs. C24497
Your Cost.
\$169.00 Deluxe node
 Cabinet for $7^{\circ}$ kit. llandsome table model cabinet with all holes and fittings drilled. In smooth
hand-rubbed wood finish.
C24496-Y Your Cost........


## CONCORD Tested Kits for Radio TRAINING


(B) Ideal for use in elementary intector operation, regenera ion and simple alignment pro cedure. Both kits use a fiJ5GT regenerative detector and the regenerative detector, and the slaye in addition. Identical chasstage in addition. Identical chassis and panels are used in both kits. wo that the one tube kit may be easily converted to a two-tube with an RF stage with a mini-
mum of additional parts. Fremum of additional parts. Frequency range 5.0 to 1700 KC . Operates from either CRC-201 or CIRC-3OR power supplies. Chassis and panel completely formed and punched. Panel size, Complete but less tubes, head phones and power supply. Shpg wt. 3 lhs
C24523 One tube

|  |
| :---: |
|  |  |
|  |  | Cl2C-1013R $\$ 5.83$

## (C) $\Lambda$ high gain two-stage resist-

 ance coupled amplifier, utilizing a 6S.J7 input stage, and 61\%6 output stage. 1las sufficient gain to operate with high imperdance microphones or phonograph pickups. Because of its excellent response characteristics and simplicity it is ideal for use in schools for plotting response curves and in teaching basic audio theory. Fully shielded output transformer with $48-16-500$ ohm output insedances. Can be used to amplify the ClRC-10R one tube or CRC1013 l two tube kits. One ClRC 20R supply will insure very good quality. Complete with input and output connections and all othes necessary parts. May be used with any good PM speaker. (Not supplied.) Chassis: $5 \times 9!\underline{2} x 1!2$ " Slupg. wt. 8 lbs.C24528 Less Lubes. $\$ 7$
Your Cost........

## Power Supply Kits

Companion units to operate CONCORD kits requiring external power source. Tapped variable voltage divider provides intermediate voltages which, with both filament and high voltages, are ler ninated at a standard 7 -prong socket. Three-section litter uses two heavy duty chokes. In addition to their use as power source for the CoNply for kits described, these units may also be used as a hum-iree supply for other receivers, amplifiers, and small transmitters. Complete with al parts except 80 type rectifier tube. Ready to assemble and wire C24526 350 V . at 70 Ma and 6.3 V . at 3 A . Shpg. wt. $\$ 10.89$ 12 lbs. Your Cost c24527 350 V . at 140 Nia and 6.3 V . at 3 A . Shpg. wt. $\$ 14.30$ 15 lbs. Your Cost.
$\begin{array}{ll}\star \text { Simple operation } & \star \text { Positive Starting Arc } \\ \star \text { No Wearing Parts } & \star \text { Magnetic Blow } \\ \star \text { Compact and } & \text { Eliminated } \\ \text { Portable } & \star \text { Flexible Arc Control }\end{array}$
Welders for industrial naintenance work, garages, farm machinery repairs, machine shops and al! other places where reliable and simple operation is necessary. Can be operated by anyone following directions supplied. Further technical data and information supplied on request.

## Model 75A

B) Portable. Operate from any properly wired 110 volt line welds iron, steel, brass and other metals, from 20 gauge to 18 thick on a single pass, much thicker work by repeating passes. landles ${ }^{16}$ to $3,{ }^{3}$ welding rods. 9 heat stages from 20 to 60 amps, Complete, ready to operate, with headshield. electrode holder, 2 welding cables, clamp, welding rods and detailed instructions. $10 \times 13 \times 10^{\prime \prime}$. Shpg. wt. 40 lbs. C25625-For 110 Volts, 60 cycles. Your Cost
$\$ 38.71$
C25626-For 220 Volts, 60 cycles.
$\$ 41.65$
C25627-For 110/220 Volts, 60 cycles.
47.53

Unique design allows rod to be held in several positions Strons conductivity bronze jows high this holder extremely durable. Shpg. wt. 2 lbs.
C25640-150 Amps. 4416
C25641-300 Amps. Each. . $\$ 4.90$


## AUDEL'S Welders' Guide

 422 pages of fundamental welding operations, as well as specialized techniques of hand and machine welding. Handy reference index gives you immediate solation to all welding problems. Size: $5 \times 6{ }^{5} 8^{\circ}$. C20296 -Postpaid.Your Cest

## TRINDL SPEEDWELD Mild Steel Welding Rods

A high grade, deep penetrating, mild steel general purpose shielded arc welding electrode. For use with AC transformer-type machines

C25651
C25636

| 20 | Max. Amps. | Your Cost |
| :---: | :---: | ---: |
| 20 | 60 | $\mathbf{5 2 . 8 4}$ |
| 30 | 80 | $\mathbf{2 . 1 9}$ |

## KATO Gas-Electric Plants

Filtered, shicided, compact and lightweight as the best engineering can provide consistent with rugged durability and power output Both models illustrated provide 115 volts 60 cycles $A C$ at the rated wattages for continuous duly, and the first model shown also provides 150 watts at 6 volts DC for charging batteries. Both use air-cooled gasoline engines for simple operation with minimum maintenance.

> (D)

Portable units. 500 watt unit has 1 unit h.p. single-cylinder enpine. GOO watt unit has 1.4 h.p. single-cylinder engine. gasoline. Both units have start and stop push buttons, with cutout, ind ammeter, charging control resistor, and battery cables. One 6 -volt storage battery required for starting (not supplied). C19819-Model No. 23HAB4 500 watts, weighs 1701 bs $\$ 1$ Cost....... 580 C19820-Model No. 14HAB4, 600
 watts, weighs 220 (bs................... \$1 10
(E) Heavy duty unit. 1000 watts continuous duty output. Single-cylinder, 4 -cycle, 2.4 h.p. engine. Runs $4!/ 2$ hours on 1 gallon of gasoline. Manual starting. Weighs 265 lbs. Shpg. wt. 295 lbs.
C19821-Model 26HAB4.
Your Cost.
$\$ 257.25$
or on straight polarity with DC welders. Light tan flux coating. Furnished in 5-lb. packages, at package costs as below

| $\begin{aligned} & \text { Stock No. } \\ & \text { C25637 } \end{aligned}$ | $\begin{aligned} & \text { Size } \\ & 3 / 8 \times 14= \end{aligned}$ | Min. Amps. $70$ | $\begin{aligned} & \text { Max. Amps. } \\ & 120 \end{aligned}$ | Your Cost $\mathbf{\$ 0 . 8 6}$ |
| :---: | :---: | :---: | :---: | :---: |
| C25638 | $5 / 12 \times 14^{\circ}$ | 120 | 200 | 10.86 .76 |
| C25639 | $3_{i n} \times 14^{*}$ | 150 | 280 | 73 |

## CARTER Genemotors and Super-Converters


(F) Genemotor, standampliurs. small aircraft transmitters, small vessels. Low ripple, efficient, dependable. Al ratings for continuou duty except numbers marked (*) are Int. All
less filter and relay. All

inputs are 6 volts DC except C17208 which is 5.5 volts DC.
Stock Input Output Your Stock Input Output Your No. Amps. Volts MA Cost No. Ainps. Volts MA Cost 1) $2^{\prime \prime}$ Frame. Size $5^{9}{ }^{16} \times 41 / 8 \times 3$ ! $/ 2^{\prime \prime}$. Weight 7 Ibs. $\begin{array}{lllllllll}C 17200 & 7.9 & 250 & 100 & \$ 32.24 & C 17201 & 10.9 & 350 & 100\end{array} \$ 33.61$ $2^{\prime \prime}$ Frame. Size $6 \frac{1}{8} \times 41 / 8 \times 31 / 2^{\prime}$. Weight 8 lbs.
8.2
$400 \quad 150 \quad 37.0$ $3^{\prime \prime}$ lirame. Size $71 / 8 \times 4 / 8 \times 3!2$. Weight 10 lbs. $\begin{array}{llllllllll}\text { C17208 } & 25 & 400 & 200 & 541.16 & \text { C17206* } & 27.4 & 500 & 200 & 40.47\end{array}$ $\begin{array}{lllllllllll}\text { C17204 } & 23.4 & 400 & 200 & 39.44 & \text { C17209* } & 32 & 600 & 200 & 44.25\end{array}$ $\begin{array}{llllllllll}\text { C17205* } & 27.4 & 400 & 250 & 37.73 & \text { C17213* } & 39 & 600 & 250 & 46.51\end{array}$

G Super Converter, change 115 Volt DC to 115 Volt, 60 cy . AC for non-inductive loads. Minimum load P.F. $85 \%$. All models here are for continuous duty. 13 lb . frame is $81 / 4 \times 41 / 2 \times 4^{3} 4^{\circ} .19 \mathrm{lb}$. frame is $101 / 4 \mathrm{x}$ $4^{1}{ }_{2} \times 1^{3} 3^{4}$.
C17214-13 lb., 100 watts. $\$ 41.16$ C17246- 19 lb ., 200 watts $\mathbf{\$ 5 0 . 7 6}$ C17215-13 lb., 150 watts. $\mathbf{4 4 . 5 9 ~ C 1 7 2 1 8 - 1 9 \mathrm { lb } . , 2 5 0 \text { watts. } 5 4 . 1 9 ~}$

(5)

(D)

## DETECT-O-RAY Electric Eye

## Use for Remote Controls, Automatic Counters,

 Sorters, Electric Door Openers, Burglar, Fire, Smoke Alarms, Machine Safety Devices(A) Projects a light beam which is reflected by a small external mirror (A) to the photo cell in the unit. Any object breaking either beam instantly activates an alarm, bell, camera, safety device, or sets into action any ot her unit you wish to perform work automatically. Provides action orlar and fire protection for homes, stores, olfices, or perfect burglar and fire protelications such as safet $y$ devices on machines, as sorters, conveyor controls, electric door openers or automatic counters.
Effective range is about 60 ft . on the White beam; about 35 fcet on the "Unseen" beam. Selection of beams by switch on front panel. Sensitivity dial regulates units reaction to purpose and conditions. Signal selector for choice between Continuous Action from one break in beam until shut off-or Single Action with each break.
Simple to install. Plugs into 110 V AC light socket. Housed in attractive black wrinkle finislied steel case. $5^{\prime \prime}$ high, $614^{\prime \prime}$ wide, $7^{7}$ deep. Shpgwt. 7 lbs .
C15725-Complete with outside mirror.
Your Cost

# Photo ${ }^{8 E}$ Electinc EQUIPMENT 

## DETECT-0-RAY Power Relay

(B) Model L-205 Power Relay carries 1000 watts, at 110 V AC. Require no extra wiring to be used for controlling most motors, machinery, floodlights and other devices. Input plugs into 110 V AC socket. Output connects to device you wish to control. Output connects to de
$\$ 6.86$

## Cetron Phototubes

(C) The finest phototubes for use in Worner equipment listed on this page Type CE-23-C-Gas
160 microamps average sensitivity per lumen.
C10580-Your Cost.
Type CE-1-D Gas
100 microamps average sensitivity per lumen
$\qquad$

## Selenium Photo-Cell

(D)
These cells are of the barricr layer, self generating type. Light striking upon cell generates current sufficient to operate relays directly without the use of auxiliary power. The lifetine of the cell is unlimited for practical purpose. Leliuers 600 microamperes output at 100 foot candles, $2^{\prime}$ diameter, mounted in plastic housing. C10576-Photo Cell, in plastic housing. Your Cost

(B)

(C)

## WORNER Fotoelectric Announcer

(A) Destgned to project a light beam across entrance. Breaking of the light beam by any person entering will activate a chime or other device to ano coll unit in compact metal case Suplied with mirror for rellecting light up to 10 fect. For 115 -volt, 60 -cycle A for rellecting light up to 10 fect. For 115 -volt, 60-cycle c15654-You C15654-Your Cost

### 16.35

## Model 301 Mirror

Can be used in connection with any model alarm. Function is to reflect the beam around obstructions, and to criss-cross the area to be
 C15657Your Cost
$\$ 4.22$

## WORNER Burglar Alarm System

(B) Tight source projects beam of invisible infra-red light to condensing lens of receiver. Interruption of beam or disconnection of power o visible alarm device. Alarm is continuous and can only be silenced by he possessor tey to pick-proof switch lock on the receiver. Mirrors may be used to project the light beam around a room to protect several may entrance 110 volts 60 cycle AC only Shipping weight 10 lbs.
C15659-Model 5100 System. Your Cost
$\$ 55.12$

## WORNER Industrial Photo-electric Set

C) A two-unit system for use in counting, grading, sorting and speed control in conveyor belt set-ups. to operate automatic rloors, and as safety device on heavy machinery. Relay in receiver unit operates up to 500 times per minute. Receiver includes light cell, amplifier sensitivity control and relay. Sensitivity may be set so that unit is not affected by daylight or artificial light. Light source contains low-wattage bulb with approximately 2000 hours' life. Throws concentrated age bup to 50 feet. Less counter. C15655 Your Cost
$\$ 51.45$


## Photo Electric Eye Amplifier Kit

(D) Burlar alarm, door announcing, counting and sorting are just a few of the many applications of the photo electric eye amplifier. Operates with any light source. Kit contains all necessary parts and complete instructions, including $51^{2} \times 4 \frac{1}{2}^{\prime} \times 2 \frac{1}{2}^{\prime}$ casc. Operates on 115 volts, AC or DC C15672 Your Cost
99.75

## Photo Electric Light Source Kit

(E)
Dependable light source for above amplifier kit. Projects a beam of light 25 feet. Kit includes light bulb, socket and all necessary parts including case. Operates on 115 volts, AC or DC C15673
Your Cost
$\$ 5.83$

## TORK Freezalarm

(F) Gives warning of electrical or mechanical fallure of deep freeze refrigerators. Provides a single-stroke alarm bell every few seconds for 18 to 20 hours. Alarm uses spring-driven mechanism, that is always fully wound but electrically locked. Upon rise in temperature or power failure, alarm goes off. For 110 -volt AC. C15605-Your Cost.
\$24.50

## TORK Electric Time Switches

(G) Self-starting, for automatic control of solenoid valves, signs stokers. Shown with cover off. For 110 volts 60 cycles. $81 \times 5 \times 33 / 3$ Shipping weight 8 lbs. Model 1918 has 2,2 -minute ratchet dial. Capac ity 20 amps., 2000 watts. For general use. Single-pole on-of swich Your Cost
s9.10

## Model 962B

Double pole. Capacity 4000 watts, 20 amp . per pole C15601-Your Cost
\$10.50
Model 5191BP Poultry House Lighting Timer For morning and evening operation. Bright light circ Dimmer circuit 800 watts. C15602 Your Cost..
$\$ 12.95$
Personal Model similar to Model 191B but in portable case, fitted cord and plug and a clock controlled receptacle. Automatic conirol at of 45 minutes between on and off, bedside radios. Minimum sets. of 45 minutes between on and off positions. Capacity $\$ 8$ Your Cost
$\$ 9.45$



## Bakelite Knobs

 Molded and polished walnut bakelite knobs for $14^{*}$. shafts. All are set screw type except those marked with * which are hrown push-bution knobs; $\dagger$ is knurled hole mtg:; ** have recessed tops. Stock Yype Dia. Ea. ${ }^{10}$ No.| C9655 | A | 17 | 8 c | 72c |
| :---: | :---: | :---: | :---: | :---: |
| C9693 | B† | $78{ }^{\prime \prime}$ | 4c | 33 c |
| C9736 | D | 8 | 5 c | 44 c |
| C9737 | D | 8 | 6 c | 54 c |
| C9692 | E | 8 | 5c | 44c |
| C9694 | G* | 70", | 3 c | 27 c |
| C9695 | G** |  | 3 c | 27 c |
| C9661 | H* | ${ }^{31}{ }^{\text {cos. }}$ | 4 c | 33c |
| C9696 | H** | ${ }^{31}$ 先" | 4 C | 33 c |
| C9657 | J | $3 / 4$, | 7 c | 63 c |
| C9660 | L | 15.10 | 7 c | 63 c |

Pointer and Lever Knobs Polished Black bakelite. All have lilled nointers except " $\mathrm{A}^{\prime}$ " (has ridged iop). For ${ }^{1}$ thafts. No. Lgih. Ilt. Type Ea. 10

 C13024
1.
c9



## WALSCO Flock

## Spray Outfit

Complete. With instructions. Beginners turn out professional vel-vet-like flock jobs. Contains spray gun, ivory and brown fell llock, undercoats to match, thinner, brush. Shpg. wt. 3 Ibs.
Walsco K-50, Coniplete outfit. C15489-
Your Cost
\$6.76 Spray gun only from the outfit. 455.

Extra containers of felt oz. each ( 1 oz. covers $1!\frac{1}{2}$ to $\frac{1}{2}$ 3quare (15.) in bright colors: C15491-170. Brown) C15492-47, Ivory. C15494-475, Green
Exira half-int Green. Exira half-pint cans of undercoat: acts as color base and adhesive. $\frac{1 / 2}{}$ pint covers about 10 square ít. on non-porous surfaces. C15495- \#480, Brown) C15496-481, Ivory. C15597-484, Red
$82^{\text {c }}$ C15498-4485,' Green. Exira half-pint can of thinner. Use to clean br:sh and undercoat if necessary C15499- Walsco $\$ 468$ 112


WALSCO Plastic Cement
(A) Cements plastics, metal, Strong bend. Wat erproof and heat resist ing. Especially made to rereair broken plastic cabinet knobs, pair broken plastic cabinet knobs,
trid caps, etc. Brush altached to cap. Walsco No. 42, 2 -oz. bottle. C15321-
Your Cost
$3^{\text { }}$

## KROMALL

(B) KROMALL gives that and mooth satiny appearance and provides a linish that can hardly 1 edist inguished fron? metal. Shows no brush marks or laps, flows to a beatiful chromelike finish. $20-\mathrm{min}$. set, 4 -hr. drying.
C15305- 4-oz. bottle. ......23c
C15306-16-oz bottle.
60 c


## "WALSCOLUB B"'

## Lubricant

New chenical that eliminates noise on bandswitches, controls, and other air-exposed contacts. Superior to graphite. In a dispenser tube.
## C15378 Your Cos

## DUCO Cement

Excellent for repairing speakcloths, etc. lots of 12 Each.
## WALSCO Contact <br> Cleaning Fluid

Prepared to clean tuning con-denser springs, volume con trols, band switches, etc. Prevents uture corrosion of contacts. With brush. ${ }^{2}$-ozz. botile.
$24{ }^{c}$
$\begin{array}{lll}\text { Color } & \text { Pointer Pointer Ea. For } \\ \text { Walnut } \\ \text { C9667 } \\ \text { O }\end{array}$ $\begin{array}{lllll}\text { lyory } & \text { C9677 } & \text { C9681 } & \text { Gc } & 54 \mathrm{~S} \\ \text { lic } \\ \text { Red } & \text { C9678 } & \text { C9682 } & \text { Gc } & 54 \text { c }\end{array}$ $\begin{array}{lllll}\text { Blark } & \text { C9679 } & \text { C9682 } & \text { Gc } & \text { 54c } \\ \text { C9683 } & \text { Gc } & 54 \text { c }\end{array}$

## Kit of 50 Knobs

(N) Assorted sizes and colors in on new, modern designs as used on the hatest post-war sets. Al standard shait size openings. Four each of 12 different designe, two 12 set screw type, 18 knurled sliaft ype and 20 flatted shan spring type.
4662 your cost. $\$ 2.48$

## G.C. Knob Puller

(P) K nobs that are hard to grip this knob puller simply slip the G-C puller behind the knob and pull it off Gaves time, the cab net, and the knob. Ilave one in your shop and in your tool kit Your Cost
$15^{4}$


## AMPHENOL <br> \section*{"Liquid-912"}

(A) Polystyrene base. A synthetic resin that is non-hygroscopic and has low-loss qutor. Ideal for midity vatiations from altering your calibrations or from altering Keeps metallic dust particles froms. coils. Use on antenna particles from C15362 2 2oz. lottle

294 C15363-4 oz bottle ${ }^{312^{\prime \prime}}$ "916-2" Thinner tor
$15^{4}$ C15364-2-oz. bottle.

## Radio Service Cement

 (B) Suitable for cementing replacement cones and repair-ing torn cones. Used on glass, to ing torn cones. Used on glass, to
hold wires in place, eic. Vibra-tion-Proof, Waterproof, Fast Drying.
C15314-2-oz bottle, brush at tached to cap. Each. 29 c
.53 c C15315-4-oz. battle .53 c
.94 c C15317-1-oz. bottle \$1.76

## All-Puxpose Cement

## (C)

> For speaker cones, bakelite, metal, wood. hard-rubber C15310-2-oz. size C15311-8-oz. size 324 $\$ 1.76$


## GENERAL CEMENT SERVICING NEEDS

(A) A complete kit of 8 chemical ctte porket case. A handy kit for ette proket case. A handy kit for
servicemen. Consists of the following necessities: Service Cement, Rubber Drive Cement, Carbon-X, Crafoline, Scratch Polish. Nom-Slip Compound, Dial Cil, and Contact Cleaner. An applicator is attached to the cap of each container to make it easy C15529
Your Co
Cost
$\$ 1.62$

## Coil Dope Kit

(B) Has a polystyrene base and ligible even if used for high frequency work. Will render articles moisture proof. May also be used for cementing parts made of polyof coil dope, contains 2-oz. bottle of coil dope, $1-\mathrm{oz}$. bottle of special wi. 111 .
c15313-Your cost

## Air Drying Finishes

Sow you can get professional D apparing linishes in either cryctal, wrinhle or smooth with ply new air -drying firishes. Simrible and lasting finish. Air-dry or bake on metill or wood. In 2-oz. and $8-\mathrm{oz}$. sizes.Wrinkle Lacquer (Crystal)
No. Each Color No. Ea. C15259 26c Black C15309 88. C15319 2Gc Gray C15387 88c C15320 26c Brown C15388 88c C15380 26c Red C1538988c
Wrinkle (Varnish) Finish
C15381 26c Black C15390 73c C13382 26c Red C15391 73c C15383 26c Gray C15392 73c Telephone (Smooth) Finish C15384 21c Black C15393 62c C15385 21c Gray C15394 62c C15inner for Above Finishes

## Felt-Koat

## "Flock Finish Kit"

(E) Complete Flock Finish Kit () for applying soft felt-like flock to phono turntables, cabinets, testers, panels, displays, tool chesis, compartments, es, wire mesil on speakers, and microphone grills, etc. Produces heavy soft velvet-like coat that prevents scratching. Easy to apply. DeLuxe Kit containing Brown flock, special applicator, undercoat, thinner and brush.
C15528-Your Cost
$\mathbf{\$ 1 . 1 8}$

## Colox Coding Enamel

©
For color coding coils, ter-
minals, etc. Green, blue, red, yellow and a bottle of thinner. Two brushes are inclutled. Have your own system of color coding. Adds yreaty to appearance. C15258
Your Cost
$44^{9}$
CARBON-X-For Noisy Caxbon Controls
(C) A practical method to touch ap worn and noisy piots on carhon controls. Jusi apply Car-bon-X over the bad spots. Ideal for servicemen. Also an electrical conductor C15531--i-oz. botlle . . . . . . . 29c C15532-2 oz. lootile 44 c

## LUBE-REX

(G)A contact cleaner that is button switches, etc. Clean contacts and prevents coriosion. Moisture repellent, rust preventing and clings to metal. Excellent for Philco Mystery controls. C15533-2-O2

29 c
1.32

## GRAFOLINE

Made for noisy controls, switches and wire wound controls. Eliminates noises. C15536-Pint. C15536-Pint.ANTA, GA

## MUELLER Clips and Plastic Insulators

Spring actuated clips for lab., test and battery uses. Type 27 and 27C are laboratory types with mesh teeth on three sides, others have teeth in front only. New Plastic insulators cover entire clip as shown. Listing below shows insulators opposite proper size clip. All packed 10 to a box; chips are marked + and - ( 5 each ), insulators 5 red and 5 black.

| No. | Type | Size | Ea | or | No. | Type | Each | For |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C16029* | 45 | 13" | 5 c | \$0.36 | C16031 | 47 | 9 c | \$0.59 |
| C16030 ${ }^{\text {t }}$ | 45 C | $112^{\circ}$ | 6 c | . 54 | C16031 | 47 | 9 c | . 59 |
| C16032* | 48 B | 2 | 5 c | . 39 | C16033 | 49 | 9 c | . 59 |
| C16034 | 24A | $3{ }^{\prime}$ | 10 c | . 78 | C16035 | 26 | 19c | 1.27 |
| C16326* | 27 | 214 | 8 c | . 68 | C16028 | 29 | 12c | . 82 |
| C16027 $\dagger$ | 27 C |  | 13 c | 1.17 | C16028 | 29 | 12c | . 82 |
| C16018 $\dagger$ | 211 |  | 13 c | 1.17 | C16019 | 23 | 32c | 2.25 |

No. 85T Mueller Crocodile Tip Clip
For connecting Rridges. Voltmetcrs, etc., or $=135$ anvthing having binding posts with non-removable heads. Fine for test prods. C16023 Your Cost Each.
No. 85. As ahove, less phone tip.
Plastic insulator for either of the above No. 87 C16021 Your Cost Each
… ....
MUELLER Wee-Pee-Wee Clip
Non-Ferrous R.F. Clip. Will not heat in
high frequency circuits. Ideal ins insulated with Red or Black jacket (specify color desired. No. 88-93).
C16022
Your C
10 For.
st Each.
(A) $^{(4)}$ (B)

FAHNESTOCK Clips

Fahnestock clips used where connections must be made and broken a great deal. No tools required to make connection. (orips wire with right pressure for good electrical contact without injury to wire. All are nick 4 -plated brass except $\dagger$ which are nickel-plated bronze. All are ${ }_{8 / 8}{ }^{\circ}$ wide except ${ }^{*}$ which are $5^{5} 10^{\circ}$

Stock Fig. Lgth. Max. Wire Mig. Ilole 10 For 1000 For C14824
$C 14828$
C14826
C14823
C14825**
C14820 +
Screen Grid Clips
Miniature Clins for Mletal E Tubes. With wire ferrule. C14985
Your Cost Ea
Per Doz.
For Glass Tubes For Standard Glass Tubes C14827Each 100 For

## Rubber Insulated Clip

 Soft rulbber outer covering. Each with approx. $12^{\circ}$ lead.

## Angle Brackets

 With Tapped Holes Heavy gauge steel. One one tapped hole.

Contains 100 most populair solder terminals. For all servicing and set building requirements. In transparent container C14790-

424


114 $\begin{gathered}10 \text { For } \\ 93 \mathrm{c}\end{gathered}$
$16^{4}$


Jacket
Type Tube Shields
Will form-fit all glass tubes. Bodies consist of two halve he tube by a spring ring Sup plied complete with ground clip phed complete with ground clip o be held by socket mounting bolt amainst shield
C13258 For ST' 1 it tubes with or without cap such as $21 \mathrm{~A}, 01 \mathrm{~A}$, C13262
C13262 For ST-12 tubes without caps such as 2-,56,41, 11I 4 C C13264-i or ST-12 tubes with rid cap such as $6 C 6,57,58,75$ 6A7, $6 . J 7$ (i, elc.
Any Type Above, Each... 10 For...59c 100 For... $\$ 5.75$

## Bantam

 Tube Stields Designed especially for the new 1.5 volt and bantam "GT" tubes or ot her "r-9" bulbs. Available grid-cap, as de-
(A) scribed below
c13259- i"lain shield, without cap. One-picce, grounds autoYour Cost Each.
C13260 Same as above, but with short cap and ground clip. For tubes without top grid cap
Type A. 10 lor....38c $\leqslant 1 / 2$ ¢
c13261 Type B. With grid-lead cap and yround clip.
10 For 49 c . $\leqslant 1 / 2$ 个

## Split Lock Washers

E14791 For No. 6 screws C14792 For No. 8 screws C14793
screws


## Threaded Rods

Brass threaded rod for making your own long screws. Easily cut to any length. In $12^{\circ}$ lenkths. C14913-6-32 size. ler Lgth. 18c C14914-8-32 size. Per Lyth. 18c C14918-10-32 size. ler Lagth. 24 c

## Rivet-Eyelet Punch Set



Hardened steel tools. Cast iron holder. Hex sides to krip in vise. With rivets and eye lets.
C15045
Your \$2.35
Rivet-Eyelet Assortment C15066-100 assorted rivets and eyclets. Fyelets.

474


## Hole Plugs

 10 asst. sizes snap button hole plugs in celophane enplugging up holes in panels, C14837 Your Cost 24
## Snap Fasterer Battery

## Terminals

Same as used for Everready types 430. 435, 455 , 467; Burgess type XX - 45 midget bat-

${ }^{\text {Ceries }}$ - Set 2 ( 1 male, 1 femour cost.............. 10 sets for
Metal \& Class Tube Cap Fits either type With $11^{\circ}$ lead and pin tip. In
red or black. Specify color with order
color with order.
C11728-
Your Cost Ea..

## Mounting Lugs <br> Of heavy plated steel. Hole in hat end for $8 / 2 \mathrm{~s}$ screw; threaded end $\%$. C14955- <br> 84 <br> Your Cost Per 100

"Form-Fit" Shields
Smooth, seamless drawn walls ess drawn walls assure a snug, positive fit on the tube. Vertical grooves provide llexible fit, and the shield automatically grounds to the tube base on metal based tulos. For GT tubes: $1.218^{\circ}$ base
C13256-Open top
C13257-Clost dop
For GT/ G tubes: $1.165^{\circ}$ base.
C13246-() ren top C13247-Closed top. For Loktal Tubes: C13247-Closed top Each, Any Type Above

Metal Tube Cap Shields
For use with screen
grid metal tubes. Bake Pride inetal tubes. Bakeshorting. C13216-


10 fo C13217
Your Cost, Each

## Bumper Feet

Of felt, with No. 6 P-K screw for mounting. Felt is permanen in place by metal ring $\% / 4$ in diam. C14757${ }^{38}$ 10 For. $25 c$
$\$ 1.96$
 C14775 C14776 Your Cost Cup washer $6 c$
$8 c$
$7 C$

## JOHNSON Tube Clamp

 Holds tube securely to withstand heavy vi brations and = shock. For C13157Each. $21^{4}$

## Cable Clamps

Heavy gauge steel. No. 6 mig. hole. Plated. c1.4951-1/4 cable. 4 For C14952-1/2 cable 3 For.

Wing Nuts
Sturdy, well made. Have numerous uses.



## Insulated Banana Jacks and Plugs

（B）Plug has set screw for solder－ less wire connection．Jack fits thick．Red or black insulation on both．Specify color desired． on both．Specify color desired．
©12915－Plug 10 For 100 For
 $\begin{array}{llll}\text { C12916－Jack } & 10 \text { For } & 100 \text { For } \\ \text { Each．．．．9c } & 81 \mathrm{c} & \$ 7.60\end{array}$

Beryllium Banana Plugs （C）Signal Corps approved．Used ment Made of Beryllium copper． Rivet shank of plug can be turned over without splitting．Shank $1 / 4^{*}$ long．1／6＂diam．Overall size C13183－Your Cost Each． 9 个 C13184 Overall size $11 /$ 月 $^{\circ}$ ．Same but with $6-32$ threaded stud $3 / 8$ Your Cost Each．
$15^{\text {c }}$

## （A）

Right Angle Tip Plugs Streamlined plugs with set screw for solderless connections． C12937－（A）Specify red or black． Your Cost Each． C12984－（B）Red． $325^{24}$

## Solderless Insulated

## Phone Tip Plugs

C）Solderless type：fit all stand－ C ard tip jacks．Used on test leads．In red or black；specify color．
C12973－2 ${ }^{\prime}$ long．
C12974－1 6 long
104 ＇er T＇en，Either Type 90c

## Standard Phone Tips



## Plain Solderless

## Phone Tip Plugs

E All metal tip plug for use．Solderless connection． 15 long．
C12943－10 for 54 c
Your Cost Each
As above but $11 /{ }^{\prime \prime}$ long．
Your Cost Each．

## Split Type Banana Plug

 （D）Insulated．Fit standard ba－ nana jacks．Set screw in bar rel for solderless connection．Posi－ ive spring action．Plug ${ }^{2}$ long C12902－124 Each124 10 For $\$ 1.07$

## Alligator Clips

（E）Powerful grip． $2^{\prime}{ }^{2} \mathrm{clip}$ is $11^{\circ}$ Steel non－rusting finish． No．Length Each 10 For C12956 230 5c 39c ＊End takes banana plug．$\$ 1.08$ Copper－with bronze spring．For LRF work．Has set screw $2^{\prime \prime}$ long． C12947－$\quad$ © 10 For $\qquad$ ．50c

## Insulated Alligator Clips

 （F）Plated metal grips with insu－ nanated handles that take ha－ black；specify．Steel non－rusting finish．| No． | Length | Each | 10 For |
| :--- | :---: | :---: | ---: |
| C12911 | 21, | $7 \mathbf{7 c}$ | $63 \mathbf{c}$ |
| C12909 | 312 | $15 \mathbf{c}$ | $\mathbf{5 1 . 3 5}$ |
| C12949＊ | $21 / 4$ | $10 \mathbf{c}$ | $88 \mathbf{c}$ | C12949er－with bronze spring 88 c




Meavy Duty Phone Tip （F）Iligh quality heavy brass． leads－prods，etc． $1 / 5{ }^{\circ}$ long over－ all． C14822 10 for


## Phono Needle Plug



Constructed so that the in－ sulated sleeve will take a ba－ nana plug，and the prod it－ self will make positive contact with the banana plug．Tip holds phono needle（needles easily re－ placeable）．Overall length 114 ． Red or black；specify color

## C12917

Each
124
10 For
．$\$ 1.08$

## Phone Tip and Lug Adapters for Prods



Handy for use with any ba－ nana plug，or test prod fitted with a banana plug end．Fits either tip jacks or binding posts． Red or Black－Specify color． C12913－Phone tip end． C12914－Spade lug end． 10 ¢ 10 For

（4）
（B）

（C）

## EBY Binding Posts

 Non－Removable Tops （A）Specially designed for use on （A）metal chassis．Post has hole or wire or phone tipC13082－Junior Post．Has 6－32 stud，期long．
Your Cost Each ．．．．154 C13083 Ensign Post．Has 6－32
Your Cost Each ．．．．．．23 C13084－Commander Post．Has 8 Your Cost Each． 294

## EBY Twin Post Units

 Two posts molded into a Bakelite base．C13062－Your Cost $4 \boldsymbol{4}$ As above，but with three posts

## Insulated Posts

（B）Red or black composition top．Plated ferrule．Specify color． 10 for 99 c ．
Your Cost Each ．．．．．．．T1世


Tip Jacks
（A）Mounted on $3 / 22^{\circ}$ Bakelite A Contact springs grip cord tips securely． 10 For
C13036－Triple jack．．－81e Your Cost Each

Ea．-4 14

## Plain Tip Jacks

（B）For test equipment．Powerful spring．$/ 4$ mounting hole C12918
Your Cost Each 10 For $\qquad$ 64
$.54 c$

## All Insulated Tip Jack

## （C）Countersunk $8 /{ }^{1 / 2}$ overall．Fits $3 / 8$ head

 Bronze spring Each C12934－Red C12935－Black9

## Insulated Tip Jacks

（D）Have new type springs which provide sure grip contact Mounts in hole．In red or black．Specify color．
C12879－Each
94

## 10 For

 ．80c
## Molded Bakelite

## Insulated Tip Jacks

（E）Large diameter molded Bake－ lite heads take all phone tips． Phosphor bronze springs．With insulating washer． C12877－Red 12878－Black $12^{9}$ Each
10 For

## Combination Jack

（F）New type，takes both phono insulated，with insulated washer In red or black．Specify color desired．
C12925
Your Cost Each．．．．．．．． 1 \＆
10 For．

（E）

## Spring Clamp <br> Binding Posts

（C）Insuiated top．Spring clamp C13046－ C13046
Your Cost Each

## Binding Post With

## Banana Jack Top

（D）Hole in top takes hanana plug．Hole in stem for wire． In red or black．Specify color when ordering． C12945
Your Cost Each
154
Spring Clamp Binding Post Assembly
Mounted on Bakelite strip $2^{\prime \prime}$ long，＂1＂ 16 ＂wide．Centers 111 ＂．Marked＂Ant＂and＂Gnd． 10 for $\$ 1.44$ C13049 Your Cost Each ．．．．． 5

（C）
（D）


UHF Tip Jack
（G）Takes standard phone tips， but contact may he removed and the body used as an UHF thru－panel bushing as well． Mounts in $5 /{ }^{\circ}$ dia．hole Retainer riny included．

## C12767－

Your Cost Each．
$18^{\text {c }}$

## AMPIENOL Phone

## Tip Jacks

（H）Bakelite body．Takes stand－ （H）ard plain or solderiess phone tips．Mounts securely by means of snap ring．Requires ${ }^{3}$ if hole．Red or Black－specify color desired
Amphenol type 78－IP．
Each．
$5^{c}$

## High Voltage Jack

13000 V．Tip Jack．As above but $1 / 2^{\prime \prime}$ diam．For x＇mitters，etc． Red or Black．Specify color． Type 78－IPI．
C12766－1
Alligator Phone Tip Jack
（J）Alligator clip fitted with test prods equipped with phone tip ends．Red or black－specify color． C12880．
Your $\qquad$ 254

## Phono Tip Plug and Jack

（K）Single prong shielded plug used extensively for mike or phono pickup and other connec－ tions．The phono jack mounts in rear of panel through ${ }^{8} 8$ hole and is ${ }^{11116^{\prime \prime} \text { between centers．}} 5$
C11774－Jack，Each．．．．．．．．．8c


## Single Contact Mike Connectors

 Pressure type compact connecmicrophone cable-utilize shell for second contact. Contact is made when center soldered connections are pressed toget her by tightening coupling ring. Plated metal shells. Insulation is special tissue base laminated bakelite. Cable shield easily grounded through shell by soldering to cable protector. Accommodate cables up to 1 in diameter
## nector. (A). <br> C13359-Each <br> $32^{\text {f }}$

Type PCIM-Male chassis connector. Same as MClM, but for chassis mtg. (C)
C13361-Each
194
Type MC1F-A-Right angle female cord connector with spring cord protector. Use with $\mathrm{I}^{\prime} \mathrm{C} 1 \mathrm{M}$, SP-PC1M or CL-PC1M. 39 \&

Shielded Locking Type Microphone Connectors


MC series. With polarized shells. Can be used on $5 / 8$ "-27 stands. Locking ring on male, and cable clamps on both, with spring cord protector. Interchangeable hakelite elements. Coupled, $23 / 4^{7 / 8}$.

3-Contact Connectors $\left.\begin{array}{l}\text { c13489 Male }(\Lambda) \\ \text { C13490-Female }(B)\end{array}\right\} 5 \mathbf{S}^{\text {EEa. }}$ C13490-Female(B) © C13396-Female chassis type (C). For ${ }^{13}$ ' ${ }^{\prime \prime}$ hole. $32^{\text {¢ }}$
4-Contact Connectors $\left.\begin{array}{c}\text { C13488-Male( } \Lambda \text { ) } \\ \text { C13499 Ficmale }(B)\end{array}\right\} 7 \boldsymbol{T}$ Ea. C13397-Hemale chassis type (C)



## Pin Connectors

Metal shells are heavily plateri. Bakelite elemetits. Screw type coupling rings. Shells may be utilized for second conductor. For cable up) to $1 / 4$ "dia.

## Single-Conductor

 C13287-Female(A) / C13288-Female chassis connec-
tor. Mounts in a single $5 / 8$ hole. (C).
(C). Cour Each.

264
C12574-Female chassis connector with riveting phate. Single $5 / 8{ }^{\circ}$
hole mitg. (D).
Your Cost Each.......344

## Two-Conductor

 As above, but for 2 -conductor cables and twisted pairs. C13289-Female 5 - Ea. C13290-MaleC13292-Fenale chassis connector. Mounts in a single 5 . hole. Your

294 C12575-Female chassis connector with riveting plate. Single $5 / 8$ hole mtg. Your Cost Each $35^{\circ}$

## ICA Shielded 3 Way Microphone Plug

Type MC1M-Male cord con-
nector. (B). nector. (B).
$26^{\circ}$
Type SP-PC1M-Sameas PCIM but with center contact float ing on
a heavy coil spring. (D). a heavy coil spring. (D).2 $\mathbf{C 1}$
Type CL-PC1M-Closed circuit chassis connector. Closes circuit automatically when mike is disconnected. (D)

## C13268-Each

254

## Popular Phone Plugs



For 1 or 2 phone er cords. Molder bakelite shell. $234^{\circ}$ long, C14974-Black C14971-Red. Each $\$ 2.43$

## Metal Shell Type

Same with nickeled brass shell C14970. Each $\$ 4.41$ s

## "Stubby" Metal Shell

 As above but with short metal shell. $2^{11}$ overall. 10 For $\$ 3.75$. shell. 2 overall. 10 For $\$ 3.75$.E14959.

## Midget Bakelite Plug

 Bakelite shell. 21," overall $x^{9}{ }^{\circ}{ }^{\circ}$ C14960 Black C14963-Red Your Cost 10 For $\$ 2.43$ C14Each

Midget Metal Shell
Same with metal shell. $21^{1 /}$ overall $x{ }^{9}{ }^{6}$ diam. 10 for $\mathbf{\$ 3 . 4 0}$. C14958-Your Cost

## U. S. Army and Navy Specification Plugs

Manufactured to, meet the very exacting requirements of the U.S. Army Signal Corps and U.S. Navy Specitications. Will fit all standard jacks.
C14965-PL54. Short, 2-way Plug.
C14966-PL55 Long 2-way Plug. Your Cost Either Type...50c Cour Cost Either ype.ing Your Cost Each


Flat Plug
Ultra-compact type, for use where space is hamited
Molded bakelite body. $11{ }^{11}$ "thick. dia.
C14964-Each 14 "thick 39

## Phone Plug Adapter



Makes a standard phone plug out of the MC1F cable connector. No soldering or wiring required. C13388-MC1P
Your Cost..........

Microphone Switch

Attaches between male and female of any of the above connectors. Push to talk or slide switch for permanent connection C13357-MCIS

654
plubs gan
councerons

## (A) <br>  <br> Long Frame Jacks

(A) Extend $31 / \sqrt{8}$ behind manel. lite separators.
No. Open Circuit. 284 C6400-Your Cost C6401 No. 2 Circuit Closing C6402-No. 2 A . Two Circuit. Either Type,
Your Cost Each . . . . . $\boldsymbol{T}$

## ICA Shielded 3 Way Jack

(B) Phosphor bronze spring jack. C13520-Your Cost. $\mathbf{S}$. C13522-lack, less shell
Your Cost.......

## MALLORY Junior Jacks

(C) Compact, extend only $1^{3}{ }^{\circ}{ }^{\circ}$ plated springs
No. 701 Open Circuit. 32 \&
C6450-Your Cost....
C6451-No. 102 Circuit closing C6449-No. 7021 . Two circuit C6435-No. 702B. Three circuit microphone. Any Type © 4 C6452-No. 703. Single circuit C6452-No.
C6459-No. 703 A . Circuit revers ink.
C6466-No. 703B. 3-circuit Mike. Your Cost, Any Type 50 ¢ C6453- No. 704. Interstag C6478-No. 704A. 2-circuit fila ment control. Any Type 59 C6479-No. 705. 2-circuit filament lighting.................. 68 c C6448-No. 706. Interstage fila-

## ${ }^{3}-\mathrm{C}$

## High Volt. Plugs \& Jacks

(A) Heavy duty tyre in medium and giant sizes. Handle 1000 volts at 10 amps. For use with high R.F. currents, diathermy work, x'mitters, etc. Insulated hreaded heads and handles Hardware furnished with jacks Viedium jacks for panels up to ${ }^{1 / 10}$ thick; giant jacks for panels Mp to ${ }^{3}{ }^{8}$ "thick.
Medium Plugs $-2 \times 1 / 2 \times 35 / 8^{*}$ c12870 blk. \& red
c12871-black 32 \& Medium Jacks $2 \times 3 /{ }^{3}{ }^{*}$ ea C12872-blk. \& red/5 8 \& ea. Giant Plugs $\quad 2 \times 1 / 2 \times 33 / 4^{\prime \prime}$ $\left.\begin{array}{l}\text { C12785-blk. \& red } \\ \text { C1278-black }\end{array}\right\}$ Giant facks $21 / 4 \times 3 / 8^{\circ}$
12787 blk. \& red


Signal Corps Type Jacks (D) Phone Jack: Like Sis, Corps Takes Mallory 75 . Open circuit 47 B ; Sig. Corps No. PL-47, PL 48, 1'LL55, PL-148, PL-155. PL 6300
Each
$32^{\text {¢ }}$
Mike Jack: Three circuit. Like Sig. Corps No. JK-33A. Takes H. E. 109 : Sig. Corps No. PL-46,
PL-68, 1'L-168. C6301-Each

384

## MALLORY Midget Jacks

(E) Extremely compact. Mount fant" jack is not illustrated.
No. Part Type Each C6182 A-1 Open Circuit 18c C6184 A-2A Two Circuit 32c C6185 A-3A Cir. Reversing 47 c

## Grounding Jack

No. GJ-1-For grounding airplanes while re-fueling. Similar in construction to midget jack No. C 8339
$26^{6}$

## Midget Jacks

(F) Midget jacks of compact size, high quality, and low price. Fine grade bakelite insulation and tempered nickel silver springs. Mounts in " dia. hole in pariels up to ${ }^{3}$ is thick. With mounting nut and washer. C6548-Closed circuit jack. 19c C6549--Open circuit jack. . 16c New Imp. Short Jack. Fits stand$\operatorname{ard} 3$-circuit mike plug. 24
C6550-Each.......

## MALIORYPlugs \& Jacks

PY $-\infty$ - -
(B) No. 75. Two way. Bakelite C6295Each.

384 shell. Tie cord anchor but nickel C6293-Each
No. 75A. As above, with built-in cable clamp

974
No. 100. 2-Way Extension jack. Fibre shel C6348-Each
c63 76 c
No. 100N. As above, but with nickel shell.
C6342 Each ..............97c
No. 100A. As above, with nickel shell, cable clamp.
C6349-Each
.$\$ 1.35$
Microphone Plugs \& Jacks No. 76. 3-way mike plug. BakeNo. sheil.
C6296 Each
C6. 76A No. 76A. Same, but with nickel C6347-Each
$\$ 1.15$

WALSCO Miniature Plug and Jack
Two-Conductor precision army type. Needs no screws, molded plastic case cements together. Ideal for hearing aids, speaker extensions, etc. C14961 1 plug (type PL-291) C14962-1 jack (type JK-48).24 c


MALLORY Vibrapacks
Flexible, heavy-duty vibrator power supplies for supplying high voltage direct current from a storage battery or similar d.c. source. For use with receivers, amplifiers, transmitters, etc., in marine, vehicular P.A., aircraft, police car, fire truck and similar applications. Four voltage outputs in 25 volt steps. Compact and light in weight (aver age shipping weight is approx. 10 lbs .). High efficiency reduces drain on batteries. NOTE: Two types are listed, self-rectifier and tube rectifier. " $B$ " minus is at ground potentials in the self-rectifier types. Use the tube rectifier type for applications where " $B$ " minus should not be grounded No. Type Vltg. Output Voltage Output Type Each C6094 VP-552 6.3 125-150-175-200 100 ma. Self-Rect. $\$ 10.88$ $\begin{array}{llllll}\text { C6094 } & \text { VP-552 } & 6.3 & 225-250-275-300 & 100 \mathrm{ma} \text {. Self-Rect. } & 13.23 \\ \text { C6091 } & \text { VP-553 } & 6.3 & 125-150-175-200 & 100 \mathrm{ma} \text {. Tube Rect. } & 11.47\end{array}$ $\begin{array}{llllll}\text { C6091 } & \text { VP-5.3 } & 6.3 & 125-150-175-200 & 100 \mathrm{ma} . \text { Tube Rect. } & \mathbf{1 1 . 4 7} \\ \text { C6095 VP-554 } & 6.3 & 225-250-275-300 & 100 \mathrm{ma} \text {. Tube Rect. } & \mathbf{1 3 . 8 2}\end{array}$ $\begin{array}{llllll}\text { c6095 VP-554 } & 6.3 & 225-250-275-300 & 100 \mathrm{ma} & \text { Tube Rect. } & \mathbf{1 3 . 8 2} \\ \text { C6066 VP-555* } & 6.3 & 300 & 200 \mathrm{ma} . & \text { Tube Rect. } & 27.05\end{array}$ $\begin{array}{llll}\text { C6066 VP-555* } & 6.3 & 300 & 200 \mathrm{ma} \\ \text { C6067 VP-557* Tube Rect. } & 6.3 & 400 & 150 \mathrm{ma} \text {. Tube Rect. } 27.05\end{array}$ C6092 VP-G556 12.6 225-250-275-300 100 ma . Self-Rect. 13.82 C6068 VP-F558 $32.0 \quad 225-250-275-300 \quad 100 \mathrm{ma}$. Tube Rect. 14.42 *Special Dual Packs for high output. Output voltage not adjustable. Type VF-223 Filter--For all single unit packs where utmost hum suppression and voltage regulation is required. C6060

## Replacement Vibrators for Vibrapacks

No. Vibrapacks Type Each No. Vibrapacks Type Each C6062 VP-551,552,540 $725 \quad \$ 4.50$ C6064 VP-G556 G-725 \$5.32 C6063 VP-553, 554, $\quad 825 \quad 3.67$ C6065 VP-F558 F-826 4.06 555t. $557 \dagger$

## MALLORY VP-540 Filtered Vibrapack

A complete " $B$ " power unit that operates from any 6 volt storage battery and delivers 250 volts at 60 ma., closely matching the power requirements of most auto, marine and aircraft receivers. The self rectifyink unit is fully filtered. Complete with overal dust cover and special mounting bracket. Size: $71 / 2^{15} \times 3^{15} / 6 \times 51 / 8^{\circ}$. Wt. 9 lbs

## Cous9 Cost

s15.29


UTC Standard VARITRAN Voltage Controls
The VARITRAN is an ideal voltage control unit of the type employing a sliding contact riding over the transformer turns. They pro vide continuously variable output voltage FROM of the circuit. Used extensively to control lights, line voltage, rectifiers, motors, transmitters, etc. Type V-1 (illustrated) is completely shielded and includes cord, plug, and switch. Other units are completely shielded and have screw terminals on an insulated strip. All units shown below for 115 volt input.

| No. | Type | Watts | Amps. | Size | Wt. | Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C5733 | V-0 | 230 | 2 | $4 \times 6 \times 434^{7}$ | 10 ibs . | \$11.27 |
| C5771 | V-1 | 570 | 5 | $5 \times 81 / 2 \times 31 /{ }^{\prime \prime}$ | 14 lbs . | 17.15 |
| C5716 | *V1-M | 570 | 5 | $5 \times 101 / 2 \times 312^{\prime \prime}$ | 14 lbs. | 28.42 |
| C5772 | V-2 | 570 | 5 | $5 \times 7 \times 43{ }^{\prime}$ | 13 lbs. | 14.70 |
| C5773 | V-3 | 850 | 7.5 | $5 \times 7 \times 518^{\circ}$ | 19 lbs. | 21.56 |
| C5774 | V-4 | 1250 | 11 | 63/4× $93 / 4 \times 6{ }^{\circ}$ | 37 libs. | 31.36 |

## Sonic Vacuum-Tube Inverter

## $\star$ No Vibrating Parts $\star$ No Radiation

 $\star$ Quiet Operation $\star$ Speed Control $\star$ Steady Voltage Output $\star$ PowerfulThe first really new and different idea in inverters. Changes 115 v DC to 115 v AC Especially useful with radio-phono combinations where receiver is of AC-DC type and the phono motor of AC type. No vi plished by vacuum parts, inversion accomthe undesirable inherent noise of vibrator inverters. Constant voltage output and variable speed control insures faithful reproduction of recordings. Delivers ample power to maintain constant speed even through record changing cycle of automatic changers of the Garrard and Webster types. C17241 -


(A)

(B)

## THORDARSON

 Autornatic Voltage Regulators(A)
Continuous duty transformers Which hold output constant to within $\pm 1 \%$ regardless of line variatiarions from no-load to full load. variations from no-load to full load. for primary, receptacle on front for output

Stock Mir's VA Wt. Your $\begin{array}{cccc}\text { No. No. } & \text { VA lbs. Cost } \\ \text { c2133 } & \text { T23VO6* } & 20 & 12 \\ \$ 29.40\end{array}$ \begin{tabular}{lllll}
C22129 \& T23V00t \& 20 \& 12 \& $\$ 29.40$ <br>
\hline

 

C2130 \& T23VO1 \& 100 \& 18 \& $\mathbf{3 3 . 8 1}$ <br>
\hline
\end{tabular} $\begin{array}{lllll}\text { C2131 } & \text { T23V02 } \dagger & 250 & 68 & 52.92 \\ \text { C2132. } & \text { T23V05 } \dagger & 500 & 76 & 79.38\end{array}$ $\mathbf{C 2 1 3 4}$ T23V10 $\dagger 1000 \quad 150 \quad 135.24$ *Secondary 6.3 volts.

$\dagger$ Secondary 110,115 , or 120 volts. as selected by switch on back.

## THORDARSON Voltage-Changer

 AutotransformersChange $220-250$ volts, 50 -60 cycle
to $110-125$ volts. Cont. duty Line to $1100-125$ volts. Cont. duty. Line cord and plug for primary, standard line receptacle for secondary

| Stock | Mfr's |  | Wt. | Your |
| :--- | :---: | :---: | ---: | ---: |
| No. | No. | VA | lbs. | Cost |
| C2135 | T23V21 | 80 | 5 | $\mathbf{5} 5.88$ |
| C2136 | T23V22 | 150 | $61 / 4$ | $\mathbf{7 . 0 6}$ |
| C2137 | T23V23 | 250 | $101 / 4$ | 8.82 |
| C2138 | T23V24 | 500 | 13 | $\mathbf{1 1 . 7 6}$ |



This easily controlled rheostat type of voltage regulator plus a high effi$c i$ en cy
transformer fills the need for a portable heavy Voltage adjustment provided by means of a self-lubricating moving contact which taps turns of the winding. Output voltages obtainable from two ranges: 0 to 140 voits, and from 0 to 280 volts. Output is independent of load. Units are ruggedly constructed, well ventilated and made to operate on $50 / 60$ cycles. Control on panel has calibrated scale. Proon panel has calibrated scale. Pro-
vides smooth control of voltage to vides smooth control of voltage to regulate: AC lines, power, heat, light and speed devices. All rated at 860 V .A.
$\begin{array}{clllr}\text { Stock } & \text { Input } & \text { Output } & \text { Wt. Price } \\ \text { No. } & \text { Volts } & \begin{array}{c}\text { Volts }\end{array} & \begin{array}{c}\text { Pbs. } \\ \text { E19eh }\end{array} \\ \text { C1990 } & 115 & 0-140 & 25 & \$ 17.15 \\ \text { C1991 } & 230 & 0-280 & 25 & 24.99 \\ \text { C1992 } & 230 & 0-140 & 37 & 22.05\end{array}$

## Isolation Types

Constructed similarly to the above, but have isolated primaries. Husky cores and windings, smooth continuous control plus fuse protection guarantee continuous operating service. Used in any applicaing service. Useful to servicemen to detect seful to servicemen to detect faulty oscillators by dropping line voltage to 105 volts or to check breakdown intermittent part by increasing voltage to 130 or 140 volts. Both rated at 500 V. . . $\begin{array}{llrr}\text { Stock } & \text { Input } & \begin{array}{c}\text { Shpg. } \\ \text { No. }\end{array} & \begin{array}{c}\text { Price } \\ \text { Each }\end{array} \\ \text { C1993 } & 115 & 25 \text { Wt. } & \$ 23.03\end{array}$ $\begin{array}{llll}\text { C1993 } & 115 & 25 \text { lbs. } & \mathbf{\$ 2 3 . 0 3} \\ \text { C1994 } & 230 & 25 \text { lbs. } & 24.01\end{array}$

ELECTRO Model "A" DC Power Pack
(B) 6 or 12 volts. To demonstrate or repair auto, marine, or air craft radios. Plugs into 60 cycle ine, primary taps for 105,115 125 v . Two separately filtered and fused 6 v outputs, each $71,2 \mathrm{amp}$ Use separately, or in series for 12 v , or in parallel for $6 \mathrm{v}, 15 \mathrm{amp}$ Will furnish 20 amp intermittent o operate relays and solenoids Bridge rectifier, chokes, two 2000 mí condensers. Negligible ripple Steel cabinet blue hamnerloid nish line Cord +Plug $73{ }^{\circ} \mathrm{H}$
 C15703
Your Cost
$\$ 38.22$

## E-L Model 976

## Rectifier Pack

 input. Fused and filtered. Use a trickle charger, or to demonstrate and service auto radios. defroster fans, heaters, etc. $6^{5} 8^{\circ} \mathrm{W}, 818^{\circ} \mathrm{L}$ $65^{\circ} 8^{\prime} \mathrm{H}$. Shpg. wt. 13 lbs . Line cord + plug.$\mathbf{C 1 7 2 4 9}$

## E-L Inverter



Model 307Input6 VDC output 115 VAC 60 cps . 100 wat ts max At rated load $67 \%$ efficient regulation Carefully filtered to eliminate RF noise from 550 KC to 20 MC . Ruggedly constructed to withstand severe shock or sudden jar. Complete with vibrator, and 5 ft . battery cable with clips. Size: $103 / 47^{3}, \times 81 / 4$. Net. wt. 23 bibs. C17248-

## Your Cost

\$23.52

## ATR Inverter



This newly developed line of DC to AC inverters is especially recommended for operating $\Lambda \mathrm{C}$ : Radios, Public Address Systems, Amplifiers, etc., from DC voltages. Extremely well filtered to insure interference-free all-wave radio reception. All models listed below have 110 volt 60 cycle AC output Standard Models measure $7, / 8 \times 8^{3}{ }_{16} \times 1,1$, shipping weight. 17 lbs. Ileavy Duty Model measures $71 /{ }^{\prime \prime} \times 9 \frac{5}{8} 8^{\prime} \times 6 \frac{1}{4}$. shipping weight 26 lbs .

| Stock | Volts | Watts |  | YOUR |
| :---: | :---: | :---: | :---: | :---: |
| No. | Input |  | Con | CosT |
| C17242 | 6 | 85 | 75 | \$22.34 |
| C17243 | 12 | 125 | 100 | 22.34 |
| C17244 | 32 | 150 | 100 | 23.23 |
| C17245 | 110 | 250 | 150 | 23.23 |
| C17246* | 110 | 325 | 225 | 33.52 |
| C17247 | 220 | 250 | 150 | 24.70 |

## Heavy Duty Model.

## Vibrators for Above <br> C6048-For 6 V models. <br> Your Cost. 110 V model $\mathbf{\$ 5 . 0 0}$ <br> C6049-For 110 V models. $\mathbf{Y}$. $\mathbf{5 . 0 0}$



# AMATEUR BOOKS 

## CQ-DX Handbook

First Edition, Published by CQRadio Magazines, Inc. Written by and for hams. lawrence LeKashman, editor. 16 chapters covering essentials and operating techniques of working $\mathrm{DX}, \mathrm{DX}$ predictions, WAZ system, interpredictions, WAZ system, interworld and country livis, $Q$ codes word miscellaneous information calculated to be of help to amacalculated to be of help to annateurs who wish to become DXers.
Gireat Circle direction charts and Great Circle direction charts and
Great Circle maps centered on principat U.S. cities. Varnished paper binding. $63 / 4 \times 93101$ papes.

Sowr Cost.

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By Alfred Morgan. Complete basic radio theory written in the simplest terms. Includes construction details for crystal sets, one- and two-tube receivers, a simple phono oscillator, etc., and how to learn the International Morse corle and obtain a license $5 \times 8^{\circ} .192$ pages, illustrated C20256 - Postpaid. $\$ \mathbf{2} \mathbf{8}$
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Revisions in this new Eleventh Edition adapt it for basic training and general use to a greater exient than ever before. Contains added and simplified theory in the clearest possible language, test equipment, home or field constructed and at review of mathematics for solving radio problems. Nlore han $6(x)$ pares durably clore bound old pages, durably clothbound, gold-stamped. Radios outstanding practical tevt for radio C20000 Postpaid. C20000 Po

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llow to make your own shortwave coils. Method of computing ire size, turns, forms, spacing No duplication No duplication.
$25^{\text { }}$

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C19916 - Amatcur Radio Builder's Guide.
C19917 - Radio Test Instruments.
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C19919-llow to Build Radio
Any Above
Your Cost, Postpaid 504

## Radio Amateux <br> Call Book

Issued March, June, September and December. Contains a complete up-to-date list of all $\mathrm{l}_{1}$ censed radio amateurs throughout the world. $8 \frac{3.6}{4} \times 11_{4}^{\prime \prime}$. New
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C19936-
Your Cost
$\$ 1.50$

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C19982-Postpaid. 1. CA Receiving Tube Characteristics Chart. C19984-Postpaid RCAPT-20R1 Phototube C20226-Postpaid.
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tutes in New York. Used as tutes in New York. Used as official texis. Vol. 1 covers
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ometry. Vol. 2 covers Advanced ometry. Vol. 2 covers Advanced Algebra, Trigonometry and C19676-Vol. 1.
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"RHINO" Screwdrivers with Amberlite Handles


Finest screwdrivers, for electrical use. Special analysis steel blade over half-way into Shock-proo(Amberlite handle.
C15345-3x ${ }^{2}$, blade. Each...41c C15345- $3 x^{8}$ i6
C15346- $6 x^{3}$ in
blade. Each... 41c
54c C15346-6 $x^{3}$ blade. Each.. 54c
C15347- $8 x^{8}{ }^{16}$ blade. Each. . 62c

"Grip" ScrewdriversGripper holds screw and not in use up out of the way when screw is driven. Fine for after sclaces. Tempered steel find tight Amber plastic insulated handles.

| No. | Blades | Each |
| :---: | :---: | ---: |
| C14710 | $2 x^{5}$ | $26 c$ |
| C14721 | $4 \times$ | 46 c | 4x -6 26 c C1472 10x.5 52 c

## Phillips

## Offset Screwdriver

(F) A very handy alloy steel offPhillips No. 1 size. One end for Phillips No. 1 size; other end tor
C15255-Each.......354

Phillips Recessed Head Screwdrivers

(G)
Many sets now use the type of screw requiring this new model driver. Sturdy sure-grip wood handles. Shpg. wt. 1 lb. Stock Size Length Your C15251 up to $4 \quad 634^{\circ}$. 25 c $\begin{array}{rrrr}\text { C15252 } & 5 \text { to } 9 & 838^{\circ} & 25 c \\ \text { C15253 } & 10 \text { to } 16 & 111_{2}^{\circ} & 33 c\end{array}$

STEVENS WALDEN "SPINTITES"


The original Spintite. A handy wrench that works like a screw driver. Indispensable for radio and electrical servicemen and small parts manufacturers. Made of selected steel, cadmium plated with hardwood handle.
Stock Part Size Lgt. C15556 No. IIex Nut Wrench C15562 3106 $\begin{array}{ll}562 & 3407 \\ 563 & 3408\end{array}$ 15563408 C15564 3109 C15557 3410 C15558 3111

Chuck Type Spintite Kit


Deluxe kit consisting of chuck type handle adaptable for use with the wrench shanks, screw drivers and reamer. Includes ${ }^{3}$ "
 "rench shanks; $1 / 8,3 / 1 / 2$, and $1 / 4$, by $4^{\circ}$ screw drivers; ${ }^{\circ}$ to ${ }^{3}{ }^{\circ}{ }^{\circ}$ Reamawl; one $7^{\prime \prime}$ long nose and one $5^{\prime}$ diagonal cutting pliers and one neutralizing and alignment one neutralizing and alignment wrench. All in leat Complete Kit Complete
\$8.23 Similar to above but less pliers and neutralizing tool. C15571-Type T51 Your Cost
$\$ 5.00$


Spintite Wrench Set Set of 7 popular size SPINTITES in a convenient holder for bench or "tool rack. Includes ${ }^{3}$ " 16 ", 3 " C15s70-Your
$\$ 3.38$


Cost Complete

## 

## Stevens-Walden Midget Wrench Sets

(A) Designed for accurate work on meters, radios and small appliances Consists of 8 midget hex sockets ${ }^{5}$ i6 10 " 10 : 3 double square socket $1 / 4{ }^{16}$ and ${ }^{3}$; ratchet, hinge, and spintite handles; $6^{\circ}$ extension and C15573-Defuxe Set Type $\mathbf{3 1 0 0}$.
$\$ 10.29$
Similar to above but less ratchet, sliding tee handles a C15574-
Standard Set. Type 3100A
55.73

## Tomahawk Wrench Set

(B) Good quality socket wrench set consisting of 31 L handle and 6 hexagon sockets-sizes ${ }^{3} 10,1 / 4,{ }^{3} 16,3,8,7_{10}$ and $\frac{1 / 2}{2}$. Cadmium plated. Shpg. wt. 1 ll .
$67^{9}$

## GREENLEE Push Drill

(C) Spring controlled automatic drill. Supplied with 8 sizes of drill points from ${ }^{16}$ to ${ }^{11}$. 1 andle holds drills and has plastic window making cutting parts of points visible. Precision made and heavily C17183 Your

XCELITE Nut Drivers Shockproof Unbreakeble!
(D) Transparent amber handles insulate against 5000 volts. Extra-deep sockets for long studs or two nuts at once. Overall length $6^{\circ}$
C15330-For " 1 " hex nut (No. 6). C15328-For "fis" hex nut (No. 7 ) C15331 For $1 / 4^{\prime \prime}$ hex nut (No. 8) C15327 F'or 9 hex nut (No.9). C15332-For ${ }^{5}$ /i6" hex nut (No. 10). C15333 For ${ }^{11}{ }^{3}{ }^{\prime \prime}$ hex nut (No. 11). C15334-For 3 ' hex nut (No. 12)
Any Above Type-
Your Cost, Each. ... $\boldsymbol{S}$ C15335-For ${ }^{7} / 6_{6}{ }^{\text { }}$ hex nut (No. 14). C15336-For hex nut (No. 16) Either Above,
Your Cost, Each ....STG


## THOR $1 / \mathbf{4}^{\prime \prime}$ Capacity

 Electric Drills(A) Standard Duty. 3 conductor A line cord with ground wire and plug for use on 115 volt line either AC or DC. Free speed approxi mately $1900-2000 \mathrm{RPM}$. Wt. 3 lhs Overall length $734^{\circ}$. Bail bearings throughout. Uses 2 -pole trigger witch. For continuous or intermittent duty

## C15799-

our Cost
\$35.50
(B) "DRILL Champion." Light length $113 / 4$ ". Oifite self-lubricating bearings and special alloy steel gears. Extremely efficient motor. Recessed thumb-control switch. For light duty intermittent service Your Cost


## Portable Electric Drill Set

 (C) Complete "on the job drill set consis ing of $14^{\prime \prime}$ capacity elec tric drill, 13 high speed mechanic's size drills ${ }^{1}$ ts to $1 /^{\prime \prime}$ by 64ths, and sturdy steel box. Portable drill and drills always together! Drills are set in indexing removable holder that can be set on lench. Gear drive type universal motor with oilite bronze bearings mounted in die cast alumibearings mounted in die cast alumi-num alloy housing. Jistol grip handle and 6 ' power cord. 115 volts AC IDC

## C15769- <br> Your Cost

## \$24.95

DeLuxe Handee Grinder (D) Will drill, grind, polish, cut, carve, saw and engrave all materials. Fits the hand, yet has powerful high-speed motor (25,000) RPM). Ball bearing construction, packed-in lubrication, enclosed motor, buitt-in sivitch. Operates on $110-120$ volts $20-60$ cycles AC or DC. Supplied with $1 / 8^{\prime \prime}$ spring collet chuck.

DeLuxe 1 landee outfit, with 27 accessories ir steel carrying case. Accessories include: rubber polizhing wheel with mandrel; saw with mandrel; slitting saw; two steel cutters; three drills; push-pin matrelrel; steel wire cavity brush; bristle brush; wire scratch brush; rubber disc with inandrel; felt polishing point with mandrei; rubber polishing point with mandrel; felt polishing wheel; drum sander and three bands; disc cleaning brush; mounted wheels (six); wheel dressing stone; vial of Cl5263 No. 3010
$\$ 23.37$

## Your Cost

C15264 No. 3011 Same as the above, but with 26 assorted Mounted Wheels for industrial application. Each. Whels for indusitial alplication. Each. with 7 accessories as follows:
C15354 IJe Luxe IINNDEE complete with $1_{8}{ }^{\circ}$ Collet; 5 Wheels; 1 Rubber Polishing Wheel; 1 Wheel Dressing Stone. Speed 25,000 r.p.m. No. 3008. Each
$\$ 17.42$

## WALSCO Staple Driver

(E)

For neater, faster jobs on all wire and cable installations. Lightully C150 automatic. Magazine holds 24 staples. Wt. 2 lbs Your Cost

Rubber Cap
Covers plunger head and makes it easier on the hand.

WALSCO Steel Staples
(A) Made of carbon tool steel. In Walsco staple Driver Inside coated with special clear insulating lacquer Brown color.
C15093-Box 250
C15099 130x 1090
C15100-130x 5(M)
Feathe
and Stapling Machine
(B) A quick, handy tacker that is Exceptionally convenient for tacking on grille cloth, attaching ight wire or spaghett , labels, etc. In addition to its use as a tacker it can also be used as a regular office or home stapling machine for clipping papers, receipts, checks, etc precision buitt of steel with fine black finish. With 100 staples. C15280
Your Cost
91. 50

15281-Box of 1000 Staples. 35 PER 10,010 .

## Wood Chisels

(C) Cienuine Amberite handled, beveled wood chisels. High grade steel blades, heat reated and oil tempered. Correctly proportioned bevels-tested to cut rockmaple.

| No. | Blade | Each |
| :---: | :---: | :---: |
| C15513 | $1 / 4$ | 45 c |
| C15514 | $15^{\circ}$ | 49 c |
| C15515 |  | 52c |
| C15516 | 1 . | 56c |

## Handy Chisel Kit

Consists of one each of the above chisels, in a strong canvas roll. Buy the complete set at this special
low 1 rice!
C15517-Your Cost C15517-Your Cose
CAN'T
ROLI

## Center Punch

(D) Temperedsteel with large head and knurled grip. Square head will not roll. Length $4^{4}{ }^{\circ}{ }^{\circ}$. diameter $.325^{\circ}$ Shpg. wt. I lb.
C14999
Your Cost

# DrillsandGrinders <br> <br> CENTURY High Speed DRILL SETS 

 <br> <br> CENTURY High Speed DRILL SETS}

CENTURY high speed drills are highest quality, high precision tools Made from linest ungsten-molybdenum tool steel. These drills have the stamina to withstand the punishment that dulls or burns carbon steel drills. They will withstand operating temperatures up to $1200^{\circ}$ The mechanic's length is slightly shorter than the toolmaker's ditil, thus lessening whip and breakage. The all-steel Huot Index opens up like the pases of a book, stands on the bench with every drill accessible and identified as to size. When closed the drills are safe from harm

## Set No. M-7

> Seven Century high speed drills $1 /{ }^{\prime \prime}$ to $1 /{ }^{\prime \prime}$ by 32 nds with a sturdy red bakelite stand. Stand serves as an index, each hole is marked to indicate size of drill that fits into it. C15760 Your Cost

Set No. M-3


Set No. M-2


Twenty one Century high speed drills in to $3-9^{\circ}$ by Giths with Huot index. Medium size 1 luot index, with the extended drill size range, adding those often needed drill sizes.
C15762
Each.
$\$ 11.17$
INDIVIDUAL DRILLS

| stock No. | Size | Each | Stock No. | Size | Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C15770 | Size | 18c | C15780 | 7/8" | 36 c |
| C15771 | 56 | 19 c | C15781 | 13 \% | 39 c |
| C15772 | $36^{\circ}$ | 20c | C15782 | $1{ }^{\circ}$ | 42 c |
| C15773 | 7 | 21 c | C15783 | 17.61" | 47 c |
| C15774 | 1/8* | 22c | C15784 | \% | 51 c |
| C15775 | 9. | 24 c | C15785 | $100^{\circ}$ | 56 c |
| C15776 | $3 \%$ | 26 c | C15786 | 510 | 61c |
| C15777 | $11{ }^{\prime \prime}$ | 28 c | C15787 | 21.6 | 67 c |
| C15778 | 316 | 30 c | C15788 | $11:$ | 73 c |
| C15779 | 13.4 | 32c | C15789 | 3.8 | 85 c |

Fifteen Century high speed drill$1 / 16$ to ${ }^{1}$ " by 32 nds wilh lluc) index. Large size I Iuot, with p: visions for adding the larger size 6 th sizes. Has the larger drills often needed C15763
Each
$\$ 12.75$
Set No. M-15


## ACRO Chassis and

 Changer Cradle

E Steel framework and corkpadded clamps to hold chassis or phonochanger at any angle. Keeps your he rottom of chase. Work in the boing chassis without endangering tubes. Stand on table or workbench. Tilt chassis vertically 10 work while sitting, or horizontally if you prefer to stand. Adjustable for any size of chassis or changer. Groove in each clamp accommodates llanged-in bottom edges of chassis. Complete with standard clamps for grasping vertical surfaces of chassis or changer

## C15085

Your Cost
$\$ 4.85$
Straight clamps for holding flat work. Will also enable you to use your cirdle as a reel
C15086-Your
$\$ 2.45$

(D)

RADIO PARTS AND ELECTRONIC HEADQUARTERS


## DRAKE Industrial Irons Underwriter's Listed 100 Watt

(A)No. 600-10. Suggested for switchboards radio and other light manufacturing uses Ideal for close quarters. Complete $21 \mathrm{lips} . \$ 42$ C15152- Peplacent

## 100 Watt

(B) No. 600. Suggested for switchboards, radio (B) and other light manufacturing uses. Complete with $6-\mathrm{ft}$. cord and Nagic Cup stand. C15551-Your Cost
C15152-Replacement tip for above
$53-82$

## 200 Watt

No. 800. Recommended for general factory soldering, art glass and medium tin work. $6-\mathrm{ft}$. cord. Ideal for auto work, lamp wiring, and home repairs. Shpg. Wt. 3 lbsC15550-5 ${ }^{-1}$ tip. Complete with stand
Your
$\$ 5.29$
C15153-Replacement tip for above

## DRAKE Compact Iron

No. 400. Smallest industrial iron, for tight corner and delicate instrument wiring. Measures $9^{\prime}$ and weighs only 9 oz. 60 watts with $1 i^{\prime \prime}$ tip. With 6-ft. cord and Magic Cup stand. Underwriter's Approved. W't. 1 lb . C14835-Your Cost
$\$ 2.91$
C15157-Replacement tip for above

## Soldering Iron Tips

Replacement plunger type tips of quality copper.| No. | Irón | Size | Each |
| :---: | :---: | :---: | :---: |
| C15167 | 25-40 w. | 14x278" | $25 c$ |
| C15166 | 60-75 w. | ${ }^{36 \times 278 \%}$ | 27 c |
| C14903 | $85-100 \mathrm{w}$. | $38 \times 4{ }^{1}$ | 21 c |
| C15168 | 115-150 w. | 1.5314 | 32 c |



## UNGAR Electric Soldering Pencil

(L) An unusually small light weight iron that can be handled with the ease of a pencil. The total weight is only 3.6 ounces, yet it is a well constructed and efficient suldering iron. Can be used in those hard-to-reach places for everything rom the most delicate jobs to some of the larger soldering tasks. Draws 0 watts. Its overall length is only 7 inches. Ilandle is of sturdy heat resistant plastic. Heats in 90 seconds. Underwriters Listed. For 110 volt AC-DC. With line cord and plug. Uses any of the five special tips isted below.
C15575-Soldering Pencil, less tip
C15576-(A) Standard (opper, tip only
C15577-(B) Elkaloy A, Extra Hot, tip only C15578-(C) Elkaloy A, (hisel, tip only C15579-(I)) Elkaloy D, Pencil, tip only C15580-(E) Brass Mlarking, tip only Your CostAny Above
$78^{4}$

## SPEED IRON

## * Heats and Cools in 5 Seconds

* Gets into Tight Corners
$\star$ Easy to Hold


## t Easy to Tin

(M) This iron is the first really new idea in soldering tools. Operating on the resistance welder principle giving a high current at a very low voltage. No time is lost waiting for the iron to heat up. No heat is wasted keeping the iron hot -pull the trigger when ready. Working at arm's length is over-1 the pistol grip gets you in close. No bulky ip to get in the way-you can always see where you are working. lips stay tinned, can be bent to get into difficult positions, and have a low replacement cost. Impact resisting case house's aircooled transformer. Modernize your soldering ools now, 100 watts, 115 vols, 60 cycles . C15183. Your Cost C15182-Extra tip, your cost C15181-Extra long-life tip, your cost

## KWIKHEAT Soldering Irons

 225 Watt(N) Hot in 90 seconds. Built-in thermostat. Long For life. Cool handle. $13^{1} 2{ }^{\circ} \mathrm{Oz}$. with No. 9 tip. For use with tips $0,1,2,3,4,5,9$, and Kordless receptacle UL approved. Guaranteed ! yrar With No. 9 tip and stand. 100-125 C15121-
Your Cost. . $\$ 8.25$ Lots of 3 ea
${ }^{\text {s } 7.34}$

## 450 Watt

(O) Same features as the 225 W iron described (Obove. 22 oz , with No. 6 tip. For use with tips $0,1,2,3,4,5,6,9$, and Kordless receptacle Complete with No. 6 tip and resting stand. 100

## 125 volts AC only. <br> C15119- $\$ 10.87$ Lots of 3 ea. Your Cost C15113-Extra No. 6 tip only.... <br> $\$ 9.68$ <br> 510.87 6 tip only

## KOPPERKORE 100 Watt

Companion to Kwikheat. No thermostat. $131 / 20 z$. with No. 9 tip. For use with tips $0,1,2,3,4,5,9$, UL approved. Guaranteed. WC. NO. $110-120$ volts AC or DC. $\$ 5$. C15120-
Lots of 3-Each
54.83

## KORDLESS KOPPER Set

(P) A 3 piece accessory for Kwikheat 225 W or f50W rrons. Replace lip of iron with Kordless receptacle, and slip the $1-4$ dia Kordless tip C15160 Yoceptacle to heat up. Lots of 3-Each.............................. $\$ 1.67$

## Interchangeable KWIKHEAT Tips

(Q) No. 5 is aluninum. Others are forged Tellurium.
Stk. No. Type Stk. No. Type Stk. No. Type C15122 No. 0 C15125 No. 3 C15127 No. 5 C15123 No. 1 C15126 No. 4 C15165 No. 9 Your Cost Any of above-Each.... 44 Lots of 3 Tips-Each.. Set of 5-(0,2,3,4.5)



## SERVICINGTOOLS


(c)

"All Purpose" HackSaw
(A) Fits where ordinary hack saws cannot be used. Includes $71,2^{\circ}$ tapering blade. Very handy for tight places.
Your Cost
Extra hlades only.

$26^{\text {c }}$ | Ext1279 |
| :--- |

124 MISENER

## Rotary Hack Saw

(B) The ideal hole culter for Wilhor, metal bakelite, etc. With $3 / 8$ round slank. Many Stock No. Hole Size Cost Ea. C17250. Hole Size Cost Ea.
 ${ }_{C 17253}$ ${ }_{C 17254}$
C17254
$C 17256$
Combination Tool cuts holes from $3^{3} 4^{\prime}$ to $216^{\prime \prime}$ in eleven $1 / 4^{\prime \prime}$ steps. $3 / 8^{\circ}$ round shank
Siock No. II Iole Size Cost Ea. C17265 $34^{2}$ to $2^{1}$ \$10.14 C17267 Extra Shanks 1.01 C17268 $1 / 8$. Round 1.01 C17269

## FLEX-O-CLAW

©
Flexihle remote grasping tool for work in otherwise inac cessible places. Available in 4 c14728 (12") Your $14^{\circ}$ dia. C14728 (12"), Your Cost. \$0.66 C14729 (15 ), Your Cost. . 83 C14730 (18 ${ }^{\circ}$ ), Your Cost. . 1.00 14731 (22'), Your Cost. . 1.17 HAHE Hack Saw
Tenite IIandle. Adjustable for $8^{\circ}$ to $12^{\prime}$ blades; blade may be faced in four directions. Nickel-plated stock $.165^{\prime \prime} \times 5 / 8^{\prime \prime}$ depth $318^{\circ}$. Complete with $10^{\circ}$ blade. Excellent addition to radio mechanics and electricians' toolbox. Shpg. wt. 2 lhs. $\$$ Y
C 17282 - Your Cost Flex. IIack Saw Blades (E) Extra hard. Extra tlexible. (E) Longer life. Scientilically heat treated for hardness and flexibility. For all standard frames. Shpg wt. approx 1 lb . per doz. All are ${ }^{1} 2$ wide and 025 thick.
Stock

No. I-gth. Teeth; Ea. Doz. $\begin{array}{lllll}C 17273 & 10^{\prime \prime} & 18 & 7 \mathrm{c} & 67 \mathrm{c}\end{array}$ $\begin{array}{lllll}C 17274 & 10^{\prime} & 21 & 7 c & 67 c \\ C 17275 & 12^{\prime} & 18 & 8 c & 80 c\end{array}$ | $C 17276$ | 12 | 24 | $8 c$ |
| :--- | :--- | :--- | :--- |
| 10 |  |  |  | *Number of teeth per inch



Standard Hand Dxill
(A) 11 "overall length with hard wood handle $51 / 2^{2}$ long. $31 / 2$ gear wheel meshed with smal gear at $4: 1$ ratio $1^{\prime \prime} 4^{\circ}$ capacity chuck with ${ }^{3}$ spring controlled casc-hardened jaws accurately centered to hold drill bits true and steady
C14727-
Your Cost
\$1.47

## Breast Drill

(B) ${ }^{121}{ }^{1}$. long, full-size breast plate and $312^{\prime \prime}$ gear meshed with small gears at $4: 1$ ratio. ${ }^{3} \mathrm{~B}$ capacity chuck. A good husky tool nicely finished.
C14726-
$\$ 2.25$

## Dxill Case

(C) Compact metal drill case With handy tap drill index numbered from 1 to 60 , Lifting cover automatically brings up drills for easy selection. Size


## 

Set of 9 Steel Drills
(D) Sizes. ${ }^{1} 18$ to " $\mu$." Cioord fast ground Will hold edge prectly ground. Will hold edge. Pspular sizes for radio work. In hardwoor ${ }_{\text {C14708 }}$ Your Cost $\$ 1.29$

## Tap, Drill and Die Set

(E) Contains three diameter die dies (4-36, 632, 8.32 ) with die stock; three taps 4 - $36,6-32$, 8-32) and 3 matching tap drills for these taps. Tap holder also included. All housed in natural mahogany case. Shpyg
C14994.
Your cost......
I

## Swivel Head Hand Drill



A hand drill that works adjusts and locks to seven differeni positions, handle adjusts and locks anywhere along $180^{\circ}$ arc Drills true, because flat hub base always remains parallel to the drill bit. Chuck size, $14^{*}$. Overall lenpth, $81 / 2^{\circ}$. Shpg Your Cost

GENERAL PURPOSE CIRCLE CUTTERS


Provides an easy, accurate method for cutting clean circular holes in brass, aluminum, steel, wood, bakelite, etc. Of fine heat-irealed steel. Used with ordinary hand brace or slow speed drill press. All American-made.

| Stock No. | Type No. | Cuts <br> Iole | Shank Style | Type Work | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C14720 | JR | 58 to 23/2" | Round | Light | 50.78 |
| C14711 | . 4 | $7 / 8$ to 4 | Kound | Medium | 1.30 |
| C14713 | 5 | 1 to $51 / 2^{\prime \prime}$ | Round | lleavy | 1.88 |
| C14715 | 5 | 1 to 51/* | Square | l leary | 1.88 |
| C14717 | $1 \dagger$ | $7 / 8$ 10 $4^{\prime \prime}$ | Round | Medium | 1.88 |
| C15069 | 5 | 11/4to 8* | Square | Fx. Ileavy | 3.88 |

## Replacement Drills and Blades

## C15068 Drill for use with C15069. Your Cost <br> C14716--Blade for use with all above except Ci509..........35c Your Cost <br> C15070-Blade for use with C15069. Your Cost. ..................... $\mathbf{5 0 c}$


(A)


## "RAPID" Electroplaters

(A) Small portable electroplating outfits for home or workshop. Easy to use. For replating jewelry, utensils, radio parts, etc. Fach kit contains: 1-oz of plating compound; 1 oz. of metal polish; 1 anode brush; battery wires with clips attached; full instructions. Requires two No. 6 cells not supplied) Wt. 1,2 its.
C15359-Nickel 1'Iating Ouffit. C15360--Copper Plating Outfit, C15370 Cadinium 1lating Outfit. Your Cost, Each
C15371-Silver Plating Outlit. Your Cost, Each
Additional 1 oz . botles of conipound (plate $125-175 \mathrm{sq} . \mathrm{in}$.) 15372 Nickel Compound C15373 - Copper Compound C15374-Cadimium Connound. Your Cost, Each

Industrial Kit
Comprised of $8-\mathrm{oz}$. Electrolyte, Sterling Silver Applicator. 4-Oz. metal cleaner. Shye. wit. 3 libs.
\$. 50

## Deluxe Coil Winder

B) Will wind honey comb, spider-web, or solenoid coils of various width and diameters equal in appearance to fictory made coils ncludes .ll accessories for winding the various types. llas recorder and C14725
Your cost


## SPEEDEX Wire Stripper


(A) Strips all types of wire instantly, Pocket size, fast (up to 1000 wires per hour) positive acting. Works on eurds or any place along wire. Will not danmage solid or stranded. wire. Shpg. wt. 2 lbs. *Has "Stay Open Feature


## SPEEDEX Wize Strippez Kit

(C) Kit complete with wire stripper and 7 different size blades in permanent steel box. For radio servicemen, electricians and manu facturers. 11 andle No. 8 to No. 30 wire
C15568-Deluxe kit complete with automatic stripper \$10.0 0 Your Cost

Your Cost

## Push Back Wire

## Solid Tinned Copper Core Type

No stripping is necessary. Just push back the double cotton-covered moistureproofed braid. No. 20 cuit identification. Weight 2 lbs . per 100 feet.


Stranded Tinned Copper Core Type Very flexible wire of multistrand tinned copper; equivalent to No. 20. Cotton braid pushes back easily. Available in $4 \mathrm{col}-$ ors. Weight, 2 lbs. per 25-Foot Coils
C16350-Red C16352-Black C16351-Green C16353-Yellow Your Cost ( 10 For 2, c \$2.25), Per Coil. 50-Foot Coils
C16358-Red C16360-Black C16359-Green C16361-Yellow Your Cost ( 10 For
$\$ 4.23$ ), Per Coil.......

100-Foot Coils
C16366-Red C16368-Black C16367-Green C16369-Yellow Your Cost (10. For ©

1000-F oot Spools
C16374-Red C16376-Black C16375 (ireen C16377-Yellow C16375- Green C16377-Yellow
Your Cost, Per Spool..... $\$ 6.95$

C16354-Red C16356-Black C16355-Green C16357-Yellow Your Cost (10 For \$2.43) 27 C 50-Foot Coils C16362-Red C16364-Black C16363-Cireen C16365-Yellow Your Cost ( 10 For
$\$ 4.68$ ), Per Coil........ $\mathbf{S O}^{\mathbf{c}}$ 100-Foot Coils C16370-Red C16372-Black C16371-Green C16373-Yellow Your
$\$ 8.91$ ), Per Coil........ $\$ 9$ 1000-Foot Spools C16378-Red C16380-Black C16378-Green C16381-Yellow
Your Cost, Per Spool..... $\$ 7.95$

## Finest Grade Magnet Wire

Highest quality copper wire. Excellent for retransformers transformers and chokes. winding coils or any other radio and electrical purpose. Ideal for use in shops, schools, laboratories, etc.
Plain Enameled

|  |  |  |  |  | Extremely popular with amateurs and experimenters. Highest quality. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock | Size |  |  |  |  |  |  |  |  |
| No. | BES | Per | 4 Lb . | Lb. | Stock | Size |  |  |  |
| C20950 | 16 | 125 | \$0.20 | \$0.33 | No. | B\&S | Per |  |  |
| C20951 | 18 | 202 | . 20 | . 35 | C20973 | 16 | 122 | \$0.24 | \$0.39 |
| C20952 | 20 | 319 | . 22 | . 37 | C20974 | 18 | 192 | . 24 | . 43 |
| C20953 | 22 | 506 | . 22 | . 37 | C20975 | 20 | 298 | . 26 | . 49 |
| C20954 | 21 | 801 | . 24 | . 39 | C20976 | 22 | 464 | . 32 | . 54 |
| C20955 | 26 | 1280 | . 26 | . 43 | C20977 | 24 | 711 | . 37 | . 63 |
| C20956 | 28 | 2030 | . 29 | . 47 | C20978 | 26 | 1080 | . 39 | . 69 |
| C20957 | 30 | 3220 | . 32 | . 51 | C20979 | 28 | 1630 | . 47 | . 84 |
| C20958 | 32 | 5100 | . 36 | . 55 | C20980 | 30 | 2120 | . 52 | . 98 |
| C20959 | 34 | 8080 | . 39 | . 67 | C20981 | 32 | 3500 | .69 | 1.19 |
| C20960 | 36 | 12800 | . 50 | . 78 | C20982 | 34 | 4920 | . 84 | 1.51 |
| C20961 | 38 | 20300 | . 67 | . 98 | C20983 | 36 | 6660 | 1.08 | 1.91 |

## High Grade Magnet Wire on Handy Size Spools

Economical sized spools of high grade magnet wire for those desiring less than $1 / 4 \mathrm{lb}$. All spools are plainly marked with the length of wire contained on the spool as well as the size. Available in double cotton, double silk and enameled insulation

|  | Double Cotton |  | Double Silk |  | Enameled |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gauge | Stock No. | Ft. In. Spool | Stock No. | Ft. In. Spool | Stock No. | Ft. In. Spool |  |
| 14 | C16500 | 21 | C16514 | 19 | C16528 | 25 |  |
| 16 | C16501 | 33 | C16515 | 25 | C16529 | 40 | Your |
| 18 | C16502 | 42 | C16516 | 31 | C16530 | 48 | Cost |
| 20 | C16503 | 60 | C16517 | 42 | C16531 | 85 | Cost |
| 22 | C16504 | 81 | C16518 | 60 | C16532 | 133 | Each, |
| 24 | C16505 | 110 | C16519 | $8: 3$ | C16533 | 200 | Any |
| 26 | C16506 | 148 | C16520 | 101 | C16534 | 292 | Spool |
| 28 | C16507 | 168 | C16521 | 119 | C16535 | 420 | Spooi |
| 30 | C16508 | 192 | C16522 | 141 | C16536 | 590 | 1 |
| 32 | C16509 | 216 | C16523 | 163 | C16537 | 805 | 404 |
| 34 | C16510 | 242 | C16624 | 190 | C16538 | 1150 |  |
| 36 | C16511 | 266 | C16525 | 219 | C16539 | 1560 |  |
| 38 | C16512 | 294 | C16526 | 243 | C16540 | 1980 |  |
| 40 | C16513 | 325 | C16527 | 275 | C16541 | 2430 |  |

## Spaghetti on Spools

High grade varnished cambric tubing. 5000 V . dielec tric strength. On fibre spoils, 8 and 12 -yard lengths. For No. 12 wire, in 8 -yard lengths: C15951-Red C15952-Green C15954-Yellow C15955-Black For No. 11 wire, in 8 -yard lengths: C15750 Red C15752-Green C15751-Yellow C15753-Black For No. 18 wire, in 12-yard lengths: C15754-Black Any of Above Sizes,
Your Cost, Per Spool


| Stock | Size | I. |  |  |
| :---: | :---: | :---: | :---: | :---: |
| No. | BaS | Per Lb. | $1 / 4 \mathrm{lb}$ |  |
| C20962 | 18 | 199 | \$0.37 | \$0.71 |
| C20963 | 20 | 311 | . 41 | . 73 |
| C20964 | 22 | 494 | . 43 | . 76 |
| C20965 | 2.4 | 778 | . 45 | . 84 |
| C20966 | 26 | 1220 | . 53 | . 98 |
| C20967 | 28 | 1910 | . 62 | 1.13 |
| C20968 | 30 | 2960 | . 74 | 1.32 |
| C20969 | 32 | 4570 | . 94 | 1.64 |
| C20970 | 34 | 6980 | 1.25 | 2.27 |
| C20971 | 36 | 10500 | 1.72 | 3.32 |

## Double Cotton



## Double Silk Covered

Extremely popular with amateurs and experimenters. Highest quality.
lock Size Ft. Your Cost

 $\begin{array}{llll}C 20974 & 18 & 192 & 24\end{array}$ | C20975 | 20 | 298 |
| :--- | :--- | ---: |
| C22976 | 22 | 464 |
| C20977 | 24 | 711 |
| C20978 | 26 | 1080 |
| C20979 | 28 | 1630 |
| C20980 | 30 | 2120 |
| C20981 | 32 | 3500 |
| C20982 | 34 | 4920 |
| C20983 | 36 | 6660 |
|  |  |  |
| et Wire |  |  |
| Spools |  |  |
| de magnet wire for |  |  |
| spools are plainly |  |  |
| sained on the spool |  |  |
| uble cotton, double |  |  | Stock Ft. In.




674

## HOOK.UP. MAMNEI W I R E

## Colored Rubber Wire

Stranded and tinned 18 gauge copper wire covered with a live rubber compound. Very flexible; easy stantly. Availablein three colors.


25-Foot Coils
C16272-Red YourCostEach $\left.\begin{array}{l}\text { C16273-Black } \\ \text { C16274-Green }\end{array}\right\} \begin{gathered}51.00\end{gathered}$ 1000-F oot Spools C16108-Red Y YurCostEach $\left.\begin{array}{l}\text { C16109-Black } \\ \text { C16110_Green }\end{array}\right\} \$ 7=8.5$

## No. 16 RUBBER COVERED

C16280-Black C16281-Red 50 Ft. 100 Ft .500 Ft
Your Cost 62c $\quad \$ 1.18 \quad \$ 5.49$
Stranded No. 14 Gauge
C16121-Black C16120 Red $25 \mathrm{Ft} .50 \mathrm{Ft} . \quad 100 \mathrm{Ft}$ Your Cost 55c $\$ 1.05 \quad \$ 1.99$

Stranded No. 12 Gauge
C16122-Black C16123-Red 25 Ft .50 Ft .100 Ft Your Cost 72c $\$ 1.39 \quad \$ 2.65$

## Multi-Conductor Cable



A high grade, heavily insulated cable. Each lead has a different colored rubber jacket for easy dentification. 18 gauge, stranded inned copper wire. Cotton braid overall.
No. Wires Per Ft. 100 Ft

| C16089 | 3 | 4c | $\$ 3.60$ |
| ---: | ---: | ---: | ---: |
| C16090 | 4 | $5 c$ | 4.50 |
| C16091 | 5 | $6 c$ | 5.40 |
| C16092 | 6 | $7 c$ | 6.30 |
| C16093 | 7 | $8 c$ | 7.20 |
| C16094 | 8 | $9 c$ | 8.10 |
| C16095 | 9 | $10 c$ | 9.00 |
| C16096 | 10 | $11 c$ | 9.90 |

## Giant Sleeving

No. 2 Spaghetti I.D. ${ }^{\prime \prime} ; 36^{\circ}$ long. High Voltage oil varnish mpregnation. Black only. C15956-10 For \$1.44 Per Length.............

## Copper Bus Bar

Round tinned copper bus bar No. $14-21^{\prime \prime}$ lengths C15965- 10 Lgths. 100 Lgths. Your Cost $\qquad$ 19 c $\$ 1.80$

## No. 14 Tinned Solid

 Copper Push-Back WireDesigned for heavy-duty work in power amplifiers. transmitters. etc. Cotton wrapper with heavy lacquer insulating material and final layer of impregnated coton hinailayer of impregnated cotton braid. High breakdown
C16341-Black C16339-Red Your Cost,
$46^{4}$
Per Coil $100-$ Foot Coils
C16348 Black C16346-Red
Your Cost,
Per Coil


## Extruded Plastic Tubing

$10,000 \mathrm{~V}$. di-electric strength. Will not support combustion. Resistant to petroleum solvents, acid. alkalis and soldering temperatures. All are $\mathbf{3}$-foot lemgths.

## Sire No. $16 \quad 10$ For C16186-Black C16187-Yellow sc Ea. 454 Size No. 12 <br> C16188-Black 6c Ea. 10 For $\left.\begin{array}{c}\text { C16190-Yellow } \\ \text { C16191-Green }\end{array}\right\} 554$ <br> Size No. $8 \quad 10$ For C16192-Black C16193-Yellow 8c ea. 724

## Spaghetti Tubing



Red, yellow, green and black. *12. C15960-Specify Color 7 (
Your Cost 10 Lengths..

## Resistance Wire on Handy Size Spools



IIigh grade resistance wire in small quantities for use in highly sensitive instruments where accurately determined resistance values, secured through the employment of a high grade alloy wire, are necessary.

| - |  | Enameled |  | Bare |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wire | Ohms | Stock | Ft. In. | Stock | Ft. In. |  |
| Gauge | Per Ft. | No. | Spool | No. | Spool |  |
| 14 | . 04603 | C16600 | 20 | C16614 | 24 |  |
| 16 | . 07318 | C16601 | 31 | C16615 | 38 | Your |
| 18 | . 1164 | C16602 | 40 | C16616 | 46 | Cost |
| 20 | . 1850 | C16603 | 57 | C16617 | 81 | Each, |
| 22 | . 2941 | C16604 | 77 | C16618 | 126 | Each, |
| 24 | . 4678 | C16605 | 104 | C16619 | 190 | Any |
| 26 | . 7438 | C16606 | 141 | C16620 | 277 | Spool |
| 28 | 1.183 | C16607 | 160 | C16621 | 399 | Spool |
| 30 | 1.879 | C16608 | 182 | C16622 | 560 | 4 |
| 32 | 2.990 | C16609 | 205 | C16623 | 765 |  |
| 34 | 4.756 | C16610 | 230 | C16624 | 1092 |  |
| 36 | 7.560 | C16611 | 253 | C16625 | 1482 |  |
| 38 | 12.02 | C16612 | 279 | ${ }_{C 16626}$ | 1881 |  |
| 40 | 19.11 | C16613 | 309 | C16627 | 2308 |  |

## Transmission Line Cables



8216: 72 ohm coax. Puncturing voltage 30.000. No. 14,19 No. 27 tinned; low-loss rubber ins., tinned copper braid, rubber atien. $C^{\circ} .51 \mathrm{db}$ at $1 \mathrm{mc}, 2.9 \mathrm{db}$ at 10 mc . atiten, $C^{\prime} .51 \mathrm{db}$ at $1 \mathrm{mc}, 2.9 \mathrm{db}$ at 10 mc . C20859-Bulk. Yous Cost per ft........ 14c C20936-250 ft spool
\$28.38
8204: 72 ohm twisted pair. No. 18,7 No. 26 tinned; cotton wrap, rubber ins. Cabled with weather-resistant cotion braid overall; $.190^{\circ}$ at $1 \mathrm{mc}, 123 \mathrm{db}$ at $61 \%$
C20860 Bulk. Your Cost per ft..........3c C16174 500 it sumo
.3 c
$\$ 13.42$
8209: 72 ohm shielded twisted pair, conductors and outer cotton like 8204 , but cabling includes paper wrap and tinned copper braid; $235^{\circ} \mathrm{OL} .32 \mathrm{mmf} / \mathrm{ft}$. between conductors, VP $57 \%$, atten. $/ C^{\prime} 1.1 \mathrm{db}$ at $1 \mathrm{mc}, 14.9 \mathrm{db}$ at 100 mc .
C20861-Bulk. Your Cost per ft......... $\mathbf{\$ 2 5 . 2 3}$ 8205: Twisted pair. No. 22, 7 Nu. 30 tinned, rubber ins. Cabled with weather-resistant cotton braid; $175^{\circ}$ OD


C20862-Bulk. Your Cost per ft.
$\$ 8.41$
8452 Rubber Jacketed Portable Cord No. 18, 41 No. 34 bare copper; cotton wrap, rubber ins. Cabled with fillers, cotton wrap, b/2" rubber overall.
 Radio Wire
8664: No. 28 solid tinned steel, yarn braid, polyethylene ins., tinned copper braid, vinyl cover; $260^{\circ} \mathrm{OD}$., $15 \mathrm{mmI} / \mathrm{ft}$.
C20863-Bulk. Your Cost per ft C20884-100 ft. spouol. Flex. Stranded tinned copper, cellophane wrap, rubleer ins., lacquered cotton braid, tinned copper braid. $17^{\circ}, .195^{\prime \prime} .225^{\circ} \mathrm{OD}$.

8799

Intercom and P.A. Cable
8799: Twisted pair, No. 18 solid bare copper plastic ins. Tinned copper braid overall; $.155^{\prime \prime} \mathrm{OD}$.
C20867-Bulk. Your Cost per ft.
C20914-100 f1. spool.
C20911-500 f1. spool.


## 8943

## General Use Hook-Up Wire

Tinned conductor, cellulose acetate yarn wrap, cel. acet. braid, lacquer coating. 1000 volts breakdown. OD's from $.072^{\prime \prime}$ to $.087^{\prime \prime}$ Comes in black, blue, green, red, yellow. Specify color.


Shielded Phono-Pickup Cable
8431: Flexible and limp. No. 24, 16 No. 36 tinned; rubber ins., tinned copper braid. cotton braid overall; . $085^{\circ}$ OD. C20872-Bulk. Your Cost per ft. . . 21/2c C20848 100 ft spool
\$2.11


Low-Loss R-F Push-Back Wixe
Tinned conductor two cellulose acetate yarn braids, waxed. 100 ( volts breakdown. OD's from $067^{*}$ to $095^{\prime \prime}$. Come's in black, blue, green, red, and yeilow. Specify color.
Package Stock No. Each Stock No. Each 8841, No. 20 solid 8839, No. 20 stranded

$25 \mathrm{ft} . \quad \mathrm{C} 16246 \quad 50.35 \quad \mathrm{C} 16249 \quad 50.39$ | 1000 | ft. | C16245 | 9.39 | C16258 |
| :--- | :--- | :--- | :--- | :--- |
| 108 | 1.23 |  |  |  | 8861 , No. 20 solid 8844, No. 18 stranded 25 ft C16199 $\quad \mathbf{\$ 0 . 3 9} \quad$ C16208 $\$ 0.42$ $\begin{array}{lllll}1000 \mathrm{ft} & \mathrm{C} 16204 & \mathbf{C 1 6 2 0 3} & 10.76 & \text { C16205 } \\ 1021.37 & 12.19\end{array}$ 8863 , No. 16 solid 8862 , No. 16 stranded 25 ft . $\mathrm{C} 16220 \quad \$ 0.45 \quad \mathrm{C} 16230 \mathrm{\$ 0.49}$ $\begin{array}{lllll}100 \mathrm{ft} & \mathrm{C} 16221 & 1.49 & \mathrm{C} 16231 & 1.61 \\ 1000 \mathrm{ft} & \mathrm{C} 16222 & 13.34 & \mathrm{C} 16232 & 14.74\end{array}$

Micxophone Cable, Vinyl Covexed
8411: No. 25 stranded tinned copper and steel mixed, polyethylene ins, tinned copper hraid: 40 minf it., $150^{\circ} \mathrm{OD}$.
C20857-25 It. coil. Your Cost
98 c
$\$ 3.36$ C20858-100 ft. spool 8401: Sime construction as 8411 but heavier ins., $25 \mathrm{mmf} / \mathrm{ft}$., .200 OD.
C20846- 25 ft. coil. Your Cost. ..... 51.30
c20844-100 ft spoo
2.60
4.76

8422: 2 -cond. No. 22, 16 No. 34 tinned copper, polyethylene ins. Cabled with cotton braid and tinned copper braid; $210^{\circ} \mathrm{O} \mathrm{D}$ 16 mmf . ft . between conductors, $28 \mathrm{mmf} / \mathrm{ft}$. to ground. 1 inyl overall
C20868-Bulk. Your Cost per ft...... 7 c
C20874- 25 ft. coil. ....................... $\mathbf{S 1}_{3.01}^{3.54}$
5.74

Shielded Cable, Rubber Overall No. 20, 26 No. 34 inned copper; cotton wrap, rulbber ins. Cabled with cotton braid, tinned copper braid, cotton wrap, rubber overall. Package Stock No. Each Stock No. Each
 $\begin{array}{llllll}250 \mathrm{ft} \text {. } \mathrm{C} 20845 & 16.76 & \text { C20877 } & 20.45\end{array}$

Indoor Aerial and Lead-In Wire 8014: Indoor aerial, flexible No. 25, 13 No. 8014: Indoor aerial
36 tinned, vinyl ins 36 tinned, vinyl ins. C16130- 25 ft card, Your Costa...... 17c C16131 500 ft. spool . .................. $\$ 1.73$ 8200: Lead-in, No. 18, 7 No. 27 tinned, rubber ins. $126^{\prime \prime} O D$.
C16228- 100 ft spool. Your Cost .... 81c
C16229- 500 ft . spool. ................... $\$ 3.35$
C16227-100
6.15 8206: Same, but tinned copper braid shield verall, $155^{\circ}$ OD
C20871 Your Cost per ft
C20888-250 ft. spool. Your Cost ..... \$5.25
Test Prod Wixe, Flexible and Limp
No. 18,65 No. 36 tinned; cotton wrap, rubieer overall; red or black. Specify color.
8893: 5000 volts ins., $110^{\prime \prime}$ OD
C16336-7 ft . red, 7 ft . black.
Your Cost..................
ft. spool.
.28 c
C16337-1(Kא) it. spool $\$ 13.03$
8898: $10,(\mathrm{kN})$ volts ins., $230^{\circ} \mathrm{OD}$.
C16332-Bulk. Your Cost per ft .3 c
.52 .48
Cathode-Ray Tube Lead Cable
No. 20, 7 No. 28 tinned; polyethylene ins., red cotton braid, lacquer coating.
8869: 10, (1, 0 volt ins., $140^{\circ}$ OD
C20889-25 ft. spool, Your Cost. ..... . 69c C20890-1100 ft spool 8868: 20.000 volt ins., $200^{\circ} \mathrm{OD}$. C20891-25 ft. spool, Your Cost. ..... $\$ 1.12$ C20892-100 ft. spool. $\frac{1.61}{}$

## Litz Wixe, for RF Coils

8817: 7 No. 41,2 nylon wraps. 234
Tinned Bus Bax, 100-ft. Coils C16111 8012,
No. 11.
$90^{4}$
c16112 8011, No. 12 ..................... $\$ 1.29$

## 8338 <br> 8885 <br> Rubbex-Insulated <br> Push-Back Wixe

No. 20 tinned, cotton wrap, unvulcanized rubber ins., yarn braid, lacquer coating. $2(A K)$ volts breakdown. Solid is $.075^{\circ} \mathrm{OD}$., stranded is . $180^{\circ}$ OD. In green, blue, red, yellow, and black. Specify color.

## 8837, solid 8838, stranded

 Package Stock No. Each Stock No. Each 25 ft C16258 \$ $0.36 \quad$ C16261 \$ 0.39 100 ft . C16259 1.15 C16262 1.23 $\begin{array}{lllll}100 & \mathrm{ft} \text {. } & \text { C16260 } & 10.09 & \text { C16263 }\end{array} \quad 10.79$Shielded Hook-Up for Grid Leads, etc. 8885: No. 20, 10 No. 30 tinned; rubber ins., 8885: No. 20, 10 No. 30 tinned; rubber ins., yarn braid, açjuer coat, tinned copper brai C16293-25 ft. coil. Your Cost. C16294 100 ft . spoo!

(A)

©

## 3 and 5 Conductor Shielded Cable

(A) Three color-coded stranded (A) conductors in tightly woven tinned coppler shield. $1 / 8^{\prime \prime}$ outer covering of high percentage rubber.
C16145-
I'er Foot.
71/2
C16206-50 Foot Roll 53.65 C16207-100-Foot Roll 7.02 Similar to above, but 5 conductor. C16100- 100 -Feet $\$ 9.78$ 11
Your Cost per Foot

## Ultra Low Loss <br> Coaxial Cable

(B) For use in high frequency transmission lines, photoelectric work, or wherever coaxial cable is required. The dielectric is solid thexible low loss Polyethylene thernoplastic. $185^{\circ}$ in diameter with a woven copper shield braid and heavy vinyl outer covering. Inner conductor is I strands of No. 2 copper wire. 1 mpedance 58 ohins. Capacitance Available in 75 -foot leng ths only.
C17127-
Per 75 Ft. Length
$\$ 3.75$

## Heavy Rubber Cord

(E)
The thick belt of flexible rubber that cuvers the conductor is made of smooth oil-resisting, abrasion proof high quality Jacket.

No. Size Ft. 100 Ft . C20945 18 2-wire 4c $\$ 3.60$ C20946 16-2-wire $41 / 2 \mathrm{c} \quad 4.05$ $\begin{array}{lllr}\text { C20946 } & 16-2 \text {-wire } & 41 / 2 c & 4.05 \\ \text { C20947 } & 14-2 \text {-wire } & 12 \text { c } & 10.80\end{array}$ | C20948 | $18-3$-wire | 5 c | $\mathbf{4 . 5 0}$ |
| :--- | :--- | ---: | ---: |



## Thermoplastic <br> Hook-up Wixe

(A) Underwriters listed. $10,0(x)$ A volt breakdown lest. New thermoplastic insulation strips clean and is oil and acid resistant. Will withstand $180^{\circ} \mathrm{F}$. For use where high conductivity and low loss is essential. Shipe. wt. per 25 ft ., 4 oz . Available in Black, Red, Blue, Green and Yellow. Specify color.
C16382-25 ft. 20 Solid... 24c C16383 100 ft . 20 Solid. 86c C16384-25 ft. +20 Stranded 28c C16385-100 ft. 20 Stranded 99c

## No. 18 Lead-In Wire

(B) Solid tinned copper 3:a rubber casy-strip insulation. For lead-ins, ground leads or aerials Shpg. wt., 2 lbs . per 100 ft . Specify length when ordering. C16200- 25 ft .
Your Cost single coil. 224 Lots of 10 $\$ 1.98$ C16215 50) ft
Your Cost single coil. Lots of 10 C16216-1ヶ ft Your Cost single coil. Cour of 10
C16217-1000 it.


## Single Conductor Crystal Mike Cable

(D)Flexible stranded tianed copper single conductor; tinned copper braid shield; cotton wrap and lacquered braid, rubber overall. Outside diam. $280^{\circ} .51 / 2 \boldsymbol{4}$
C20842-Per Foot c20842-Per Foot... $51 / \mathbf{2}^{\boldsymbol{Y}}$ C16333-50-Foot Roll. $\$ 2.40$
4.70 C16334-100-Foot Roll.... 4.70

## Low Impedance Crystal And Velocity MikeCable

Consists of two conductors, color-coded in a closely woven tinned copper shielding with outer covering of rubber. Abrasion pronf C16079-Per Foot
$61 / 2$ C16201 50) Foot Roll. $\$ 3.07$
5.49 C16202-100-Foot Roll 5.49

## Parallel All Rubber

## Lamp Cord

(F)
Both conductors sheat hed in coating of tough live rubber. Groove between conductors allows easy separation without fear of ruining insulation. In Black and Brown. Specify color desired. Shpg. wh. per 100 ft ., 3 lbs. C20920-18 Gauge Your Cost. Per Foot $2{ }^{4}$ Your Cost.
Per 100 Feet …................ $\$ 1.90$
9.25

## Parallel Rayon Cord

(G) ${ }^{\prime}$
I'opular type for connecting Overall covering of rayon braid. 18 Gauge- $1{ }^{\prime \prime}$ Wall C20836-Maroon C20838-13rown C20837 Old Gold $21 / 2 \boldsymbol{C}$ 100 Fit. $\quad \$ 2.18 \quad 500 \mathrm{Ft}$. $\$ 10.38$

## WIRE ELin CABLE

## Transmission Cable

(H) Consists of iwisted rubbercovered conductors covered by a black weatherproof cotton outer braid. Shpg. wt. ( 100 ft .) | outer braid. Shpg. wt. 100 lt . |
| :--- |
| 4 |
| 17152 | C17152-Per Foot $\begin{array}{r}52.00 \\ \hline\end{array}$



## Telephone Wire

(J) For general use and inter-

Conductor R.C

C20895-100 Ft. 500 Ft. 1000 Ft.
Your Cost $\$ 2.64 \quad \$ 13.10$ \$25.95
C20896-3-Conductor No. 19
Your Cost $\$ \mathbf{\$ 3 . 9 0} \quad \$ 19.25 \quad \$ 37.95$
Cotton Twisted Pair
(K) 18 Gauge, 1 R?, wire with and a cotton coveri
(A) C20902-Your Cost
\(\begin{aligned} \& C20902-Your Cost <br>
\& Per Foot. <br>

\& Per 250 Fi. Your Cost\end{aligned} .\)| S |
| :--- |

Shielded Lead-In and Hook-Up Wire
(L) A 10 -strand wire covered (L) with live rubber, a waxed cotton braid and a woven, tinned shield.
C16240-Per Ft. 50 Ft. 100 Ft -
Your Cost 3c $\$ 1.35 \quad 2.25$

## Copper Shielding

(M) Flexible tinned conper shielding that slides over cables and bunched conductors. Heavily tinned to prevent corrosion.

| Stock | ln. | Per | Per |
| :---: | :---: | :---: | :---: |
| No. | Dia. | Ft. | 100 Ft |
| C16233 | $1 / 8$ | 2 c | 51.66 |
| C16237 | $1 / 4$ | 2 c | 1.70 |
| C16238 | $3 / 8$ | 3 c | 2.66 |
| C16239 | 1, | $51 / 2 \mathrm{c}$ | 5.04 |
|  |  |  |  |


(D)

## Copper Aerial Wire

C. Made of the imest copple obtainable. All rolls are guar anteed to be full length and any type aerial.
Bare Stranded-75 Ft. Coils $\begin{array}{lll}\text { Stock } & \text { Per } & 10\end{array}$ $\begin{array}{llll}\text { No. } & \text { Size Coil Coils } \\ \text { C16041 } & 7.26 & \$ 0.29 & \$ 275\end{array}$ $\begin{array}{lrrr}\text { C16041 } & 7,26 & \$ 0.29 & \$ 2.75 \\ \text { C16042 } & 7.24 & .42 & 3.99\end{array}$ $\begin{array}{llll}\text { C16042 } & 7 & 24 & .42 \\ \text { C16043 } & 7,22 & .63 & 5.99\end{array}$ Bare Stranded 100- 5.98 C16113 $\quad 7 / 26 \quad$.37 $\quad 3.51$ $\begin{array}{llll}\text { C16113 } & 7 / 26 & .37 & 3.51 \\ \text { C16114 } & 7 / 24 & .54 & 5.13 \\ \text { C16115 } & 7 / 22 & .81 & \mathbf{7 . 7 0}\end{array}$

Enameled Stranded C16045 75-Ft. Coils $\quad 7 / 22 \quad 1.05 \quad 9.00$ Enameled Stranded-100-Ft. Coils C16117 $\quad 7 / 22 \quad 1.34 \quad 11.50$ Solid Enameled-100-Ft. Coils C16118 No. $14 \quad .95 \quad 8.80$ $\begin{array}{llll}\text { C16119 } & \text { No. } 12 & 1.47 & 13.00 \\ \text { C16129 } & \text { No. } 10 & 2.19 & 20.81\end{array}$
Indoor Antenna Wire
(D) Multi-strand flexible copper wirc covered by a brown mererized cotion braid. For indoor or a.c.-d.c. antenna use. 25-1t C16155-Your Cost... 174
C16167-100-ft. Coil . . . . . . . 53e

## समझमाडाO

## Low-Loss High Frequercy

Coaxial Cable


Dielectric is a solid flexible low-loss mechanically stable therinoplastic of Polyethylene proven most efficient in high frequency transmission circuits. All cables listed below are impervious to acids, alkalis, oils and gasoline. All have a woven copper shield braid over the Polyethylene dielectric with a heavy Vinyl outer covering overall. Many other single and twin conductor types available. Write for technical bulletin-C19900 sent FREE on request
Stock Armphenol Ohms Cap/ft. Wire Dielectric Cable Your Cost No. No. Imped. nmf. Size O.D. O.D. Perft. C17120 RG 8U $19 c$
$20 c$



## CTIHFNO <br> $Z^{\text {TWIN }} 300$ LEAD

Twin Lead Transmission Line 300 ohm Amphenol 14-056 represents the latest design in RF transmission line the latest design in Provides proper match of antenna to all standard 309 ohm input FMl and television for use with television receivers in broad band operation. For use in dons or outdoors. Low-Ioss Polyethylene insulation is efficient, tough and veather resistant. Will withstand severe weather conditions. C17130.
$3^{5}$
Per 100 feet
52.85

75 Ohm Amphenol14-080. Especially for dipoles of 72 ohm impedance.
C17131-
$2^{4}$
Per foot
$\$ 1.90$
750 hm Amphenol 14-023. For amateur transmitting antenna systems. Conservatively rated at 1000 watts. at 30 MC or lower frequency. C17132
$7^{4}$ reivers. 300 ohin recommended by RMA

Per 100 feet

## AUTO Antennas • Accessories

## Reliance Auto Radio Suppressors


lixh quality suppressors housed in black molded cases
No. Type 1)escription C5283 A Standard Spark Plug C5246 A Special for Ford V8 C5278 B Compact Snark Plug C5247 B Compact Spark Ilug Type for Ford V8 C5253 C Cable Type for Buick C5285 D Elbow Cable Type C5279 E Standard Distributor C5293 F Distributor Type for Ford 1936 and earlier C5277 F Distributor Type for C5256 * Elbow Type for 1938

Your Cost Each Plym
Per 10 Assorted. *lake "i"" with "T." connector.

Wire Wound Units
(G) Most efficient type. Do not imresistance, higt inductance. Acts as r.f. choke. Extra rugged C5297-I Distributor Type 3 \& 10 (Assorted) for $\qquad$ $\$ 3.15$

## Master Distributor Unit

 Hermetically sealed; impervinus to moisture and heat. Eliminates need for ot her suppressors. D.C. re-sistance is 10.000 ohms. C5284-Each 5 For.
 43

## MALLORY Replacement Vibrators

 Mallory replacement vibrators for auto radios and battery operated household receivers. I'recision made, Mallory vibrators are noted for their long life and trouble free service. AlI vibrators are rated at 6 volts except types W245A and W246 which are rated at 4 volts. Mallory Replacement Guide listed below is complete index to correct vibrator replacement. Guide is free on request.| No. Type. | Each | No. | Type | Each | No. Type | Eact |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C6114 222 | \$4.50 | $\overline{\mathbf{C} 6135}$ | 292 | 52.82 | C7292 839 | 52.82 |
| C6096 245 | 4.06 | C6136 | 294 | 2.41 | C6084 852 | 2.41 |
| C7278 245 A | 4.06 | C6i37 | 298 | 3.23 | C6085 853 | 2.41 |
| C6088 245C | 4.06 | C6093 | 505P | 2.03 | C6086 854 | 2.41 |
| C7280 W2 15A | 4.06 | C7285 | $50 ¢ \mathrm{P}$ | 3.23 | C7276 859 | 2.41 |
| C6097 246 | 4.06 | C6071 | 507P | 2.03 | C6076 860 | 2.41 |
| C7281 216A | 4.06 | C6073 | 514 | 4.06 | C7293 870 | 2.4 |
| C7283 W246 | 4.06 | C6074 | 716 | 4:06 | C7296 901M | 2.03 |
| C6169 247 | 4.06 | C6062 | 725C | 4.50 | C6079 952W | 4.06 |
| C6098 218 | 4.06 | C6107 | 742 | 4.06 | C6080 953W | 4.06 |
| C6171219 | 4.06 | C7289 | 743 | 4.06 | C6081 954 | 4.06 |
| C6127 271 | 4.88 | C7277 | 748 | 4.06 | C7275 1100 | 2.41 |
| C6130 273C | 4.50 | C6063 | 82, C | 3.67 |  |  |
| C6167 2731) | 4.50 | C6108 | 826C | 3.23 |  |  |

## MALLORY Replacement Guide

Includes alphabetical listing of radio and vibrator power supplies by mfg . and model number. Gives M fallory replacement in each case. Also how to install 1946-47 auto radios. Other valuable information for the serviceman. Available on request at no charge. C19993.

## NEW! MALLORY Vibrator Data Book

A complete Technical manual on the operation and application of vibrator
C19992 Your Cost
$98^{4}$


## Antenna Connector

 C16714-Two piece metal container, fibre in side insulation 64 10 For54c

## FORD V8 Condensers



Tailor made for Ford V8's C14219-Type A. For V8 models up to 1936
C14199-Type B. For '37 to '41 Your Cost Each,
Either Type.

## Reliance "Universal Type" AUTO RADIO ANTENNAS

## Auto Top Cowl or Fender Mount

> Adjustable
> 3 section, $56-1$ nch. Single hole mount on any contour. Ball swivel with l.ocking point permits adjustment to any angle and positive lock. Rugged rust proof construction, brilliant chromium plate. Ilas excellent pickup wit h minimum noise. Permanently attached shielded moistureproof 36 nch lead-in and bayonet adapter. Easy to install

C22007
Your Cost
$\$ 2.67$
$12^{\prime}$ Lead extension for fender installation.
C22008-Each $\qquad$
Top Cowl Mounting
3-Section, 56-inch


Mounts securely on all car cowls, re gardless of contour Triple Chrome finish, sturdy rattleproof construction liquipled with 36inch moistureproof
lead-in and bayonet adapter. This antenna is easy to vide perfect noise rec reception regardless of cars position in relation to transmitter.
C22003-
\$2.67

C)3-Section, 66-inch Side Cowl Mount 2 stanchion universal mounting. Jlas rustproof triple chrome plated finsh, sturdy raltieproof construction, and streamined insulators. Equipped With $36^{\prime}$ moistureproof lead-in. Also includes conversion kit for streamlined bodies and bayonet adapter for lead. A real buy.

## C22000

Your Cost Each
\$2.13
100-Inch Side Cowl Mount Same as above but 100 -inch, 4 section.
C22001
Your Cost Each
$\$ 2.98$
Generator Condensers
Standard auto radio condensers designed to eliminate generator
noise. Fully
shielded. Dirt and oil proof.

| No. | Mfd. | Each | 10 For |
| :---: | :---: | :---: | :---: |
| C14220 | .25 | 25 c | $\$ 2.25$ |
| C14215 | .5 | 27 c | 2.43 |
| C14216 | 1.0 | 39 c | 3.50 |

## Dual

Similar to above, but $2-.5 \mathrm{mfd}$. 2 leads. Your Cost 49 Ammeter Condenser

Eliminates noise in ammeter, horn, etc. 10 For 52.43
C14218-
Each...


Disappearing 3 sections, 56 inch telescopes to 4 inch es exposed. Single hole mount. Rust weather, and rattle proof. Triple chrome platebrassconstruction, with bakelite insulation and Static discharge tip Ilas highty eflicient pickup with minimum noise. Has 18 nch coaxial lead-in with (ieon plastic nsulation, outer shielded loom, bayonet connector at one end, and coaxial swivel connector at other end.

## C22009-

Your Cost

## $\$ 3.25$

## Cowl or Fender Mount

 Adjustenna 3 section, 65 inch. A truly universal type install lleary Chrome linish sturdy rust. sturdy rust proof construc lenful pickup derful pickup with minimum
noise. Equipped with 36 -inch moist ureproof lead in ind bayonet adapter for lead. Ideal item to sell for use on any type car and to conform to any body design.
C22002
Your Cost
$\$ 2.29$
2-Section
52-inch Underhood Type

mtg. brackets, insulated lead-in and bayonet adapter. $\$ 1,9 ?$ 3 Section 66 Inch
Complete as above. $\$ 2.43$
C 22005 Each...
MOTOROLA 65 and 70 Condenser

consists or
.0008 mfd .1000 volt units in a single housing. Four leads. Made by Sprague
Y142075.

## Dome Light Filter

Eliminates the noise in dome $\underset{\text { light wiring }}{\text { las condenser }}$ Has condenser choke.
C14208
Ycur Cost Each.
194
10 For.


## Reliance window Mast



## ©



(1)

(A) Fast, easy acrial installation in apartments, homes, an and oflice buildings. Enjoy fine radio reception with an aerial installed in only 3 minutes. Attach lead-in strap, screw bracket down on sill, and the job is done. 3 section rod extends to 80 inches, telescopes to 40 in . Cadmium plated steel consiruction. C22006-Your Cost

91-73

## Vertical Home Antenna

(B) Eliminates unsightly and dangerous horizontal
Sturdily constructed and much much easier nosie foree reception. 1 ypes of antennas. Complete out it includes a special 12 foot 4 section antenna mast of rust prosf, flexible steel 40 ft . of lead-in wire, 10 ft . of ground wire, lightning arrester, insulators, screws, two pipe straps, one sirap mounting assembly, instructions for installation and use. Slupg. wi. 4 lbs.
93.70

## AMPHENOL All-Wave Antenna

(C) Noise-free. 500 kc through 108 mc without switching. M-derived nller with $30-\mathrm{mc}$ cutoff autornatically takes broadcast hand and short wave from the 6.3 -it. section which is polvet hylene covered to reduce precipitation static. FAl and other frequencies above 30 mc come rom the $2^{\prime \prime}$ diri. horizontal dipole supported on the $5-\mathrm{ft}$. steel mast. 13uth sources feed through the $50-\mathrm{ft}$. 5 ?-ohin coaxial lead-in. Coax eliminates interference due 10 trans-mission-line pickup. Standing-wave ratio in FM band cludes base plate and tripud-guying clamp. Complete, ready to install. Shpg wt. 9 lbs. C22039-Amphenol 124 -001.
Your Cost
\$17.49

## ICA Flexible EM Dipole

(D) Consists of two folded dipole elements spliced to 300 ohm twin lead transmission line. Flattened end insulators permits use indnors under carpet, on room moiding, etc., as well as outdoors. Losses in line measure only .85 db per 100 ft . at 100 mc .
C22038-Your Cost
$\$ 1.15$

## TACO FM Folded-Dipole Antenna

(E) Directional front and rear. Includes $60-\mathrm{ft}$. coil of 3(1)-ohin transmission line, antenna with terminal block, $5-\mathrm{ft}$. Wood mast, all hardware, and complete in-
structions. Shpe. wt. 6121 lbs . structions. Shpg, $\mathrm{wtt}^{2}$ ' $^{1} \frac{1}{2} \mathrm{lbs}$. C22024-Your Cost.
$\$ 5.59$
Reflector assembly for above. Makes antenna unidirectional. Complete. Shpg. wt. 3 lbs. $\$ \mathbf{\$ 2 0 2 5} \mathbf{Y} \mathbf{8}$ (F) Matching transformer to use FM ant. on either FM either band to antenna. Shpg. wt. Automatically matches either band to antenna. Shpg. wt. $11 / 2$ lbs.
$\$ 101$

## Antenna Loops

(G) Ideal for battery and midget sets or portables. Replaces antenna coil; gives satisfactory pickup and excellent selectivity. Inductance slightly higher than necessary, permitting removal of turns for adjustment $43 / \times 8^{\circ}{ }^{\circ}$
C16450 Your Cost
489
Lots of 10

## ICA Tenna-Scope

(-1) A new st yle built-in tuned radio antenna which may changes. It eliminates the use of an outside aerial and ground. Here is the opportunity for dealers and service men to cash in on the newest aerial invention. Some of the features of this unit are: Better selectivity, no aerial necessary, no ground necessary and higher signal to noise ratio.
$\$ 1.76$

## CONCORD Low Cost Aerial Kit

J) No finer low cost nerial has ever been offered. Complete in every detail and containing only the finest components to provide the ultimate in reception. This in inced clamp, lead-in strip, two porcelain insulators, two nail-it clamp, lead-in sirip, two porcelain insulators. two nail-it wave receivers
C16476-Your Cost
${ }^{\text {s }} 1.09$

## ECONOMY AERIAL KIT

Contents: 90 feet $7 / 27$ stranded aerial wire, 25 ft . rubber covered lead-in, lead-in strip, ground clamp, 2 nail-it knohs and 2 porcelain insulators. Shpg, wt. 2 lbs. 89 f
C16748 Your Cost.........................


Plated Ground Rods

(K) Used wherever a pipe ground is not avallable. heavy steel yoke for head, $3 / 8$ " heavy plated steel | No. | Feet | Each | Per 10 |
| :--- | :---: | :---: | ---: |
| C17187 | 4 | 48 c | $\$ 4.56$ |
| C17188 | 6 | 66 c | 6.27 | Single Lead-in Strip (L) $\mathrm{Clip}^{\text {Cip }}$ terminal each end. (L) C17101Your Cost Each

54 Your
"Grip" Ground Clamp
(Mi) Nakes a vise-like grip on pipe. contact. lleavily blated
C17015-Your Cost Each.
10 For.

## Pipe Ground Strips

(N) Broad ground clamp adjustable to ameter. Has clip for attaching ground lead.
C17102-Your Cost Each.
54 $C 17102$
10 For
Axrestex for Doublets
(O) An approved arrester for the dou-
blet type of antenna. Air-gap type,
insulated from ground. Porcelain case
C16950
Your Cost Each.................


(N)

## BRACH NEON Arrester

(P) Uses a NEON TUBE instead of an air-gap or resistance. Fully Underwriters Approved. Shpg. wt. 1 lb

## C16700-

824
DUPLEX TYPE: Same as above, but for use with sets having doublet antennas.
C16701-Your Cost
s1.15

## Porcelain Axrester

(Q) Housed in brown glazed (a) approved

C16753-Your Cost Each . . . 94 10 For.

## Kwik-Klip Fastenex

(V) Fastens wire quickly and easily to post insulators. Made of heavy galvanized wire, no tools necessary, can be used over and over again. Clip only. Box of 100

324

## Special Insulator Kit

Kit contains 50 -type $W$, 4 -type $X$ as shown at right. With leather washers. C15683
Your Cost
854


## Aerial Insulators

Dependable porcelain insulators. " $R$ " is screw-in type for holding lead-ins or grounds off-walls; " S " is standard nailknob; " $T$ "' is strain insulator

| No. | Type | Size | Each | 10 | 100 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C16972 | R | 3 | 51.2 | 50c | \$4.50 |
| C16986 | 12 | $7{ }^{*}$ | 5 c | 45 c | 4.05 |
| C16977 | S | 2 | 4 c | 35c | 3.15 |
| C16802 | T | $2^{1}{ }^{\prime \prime}$ | 4 c | 35 c | 3.45 |

## Glass Insulators

(U) Special tempered glass, unaffected

 Your Cost Each.


## ELECTRIC FENCE

## Porcelain Insulators

(W) Good quality heavy glazed porce C156a0

## 4 For.

100 For.
74
(X) For insulating on corner C15681-
Each....


CONCORD RADIOCORP., CHCAGO, ILL. ATLANTA,GA

# $F M$ and $A M$ antennas 



## RELIANCE FM Antennas

## WARD FM and Television Antennas

 (D) Provides an antenna for varying requirements of each $F M$ or televi sion installation, insuring finest reception. Each antenna kit includes sixty feet of 300 ohm polyethylene insulated transmission line. 3 low loss rubber standoffs to guide transmission line down mast, and six low loss plastic stand-offs to guide line to receiverthus mininizing capacity to ground Ring for attachment of guy wires assures secure installation. Universal base for mounting on any roof or wall angle. Vertica! element revolves or tilts in base for maximum signal pick up. Dipole of aluminum, all other up. Dipole of aluminum, all otherparts weatherproofed. FNI antenna for 88 to 106 mc . range. Television antennas from 44 to 88 mc . range FM Straight Dipole.
C22027-
Your Cost
$\$ 5.29$
C22028-Television straight Dipole.

## Folded Dipole Antenna

(E) Folded dipole is especially de signed for broader antenna tun ing and matched impedance to 300 ohm transmission line for maximum response and energy. Less Your Cost C22030-Television Antenna. Your Cost

## Mast Extension

Sixty-inch weatherproofed extension to increase height of vertical mast on both FMl and Television antennas. C22031 Your Cost
$\$ 1.53$

## Reflector Kits

Wards reflector kit combined with straight or folded dipoles provide maximum directional gain of desired signal and eliminates undesirable and interfering reflections. Kit consists of sturdy weatherproof cross member with rellector dipole and specially designed "polarizer" connection for mounting. Dipole elements can be rotated to any direction and tilted at any angle to easily orient for highest gain.
C22032 FM reflector kit.
Your Cost
C22033-Television reflector kit.
Your Cost
$\$ 3.09$
$\$ 3.79$

## BELDEN FM Antennas

(F)
Belden FM Dipole antenna system is scientifically engineered and may be used on all FM radios, can also be used for standard broadeast reception. Careful electrical design gives excellent response, maximum signal and trouble free reception over entire FMI band. Kit contains 65 ft .300 ohm line and all necessary jarts for installation C22034-Your Cost....
\$4.83

## BELDEN FM Reflector

Belden FM reflector when used with the above dipole antenna forms an antenna retlector array which improves FM reception on any installation. It is a necessary part of antenna when distance from station is great or location among buildings causes weak reception. Kit consists of aluminum rellector element and cross member, porcelain junction block and complete imstructions. C22035-
$\$ 1.89$

## 300 Ohm Twin Lead-In

(G)

Special low-loss 300 ohm transmission line. Ideal for use with proof C17130-Your Cost . . . .per ft. 3c yer $100 \mathrm{ft} . . .$. . \$2. 8
CONCORD RADIO CORP., CHICAGO, ILL. ATLANTA, GA.

Antennas are of all metal weather-proof construction and provide maximum electrical efficiency. Each antenna complete with 60 ft . of 300 ohm line, rubber stand-off pads, six low loss plastic stand-off insulators to minimize rubber stand-off pads, six low loss plastic stand-off insulators to minimize
capacity to ground and eliminate reflections on line. Acljustable universal capacity to ground and eliminate reflections on line. Adjustable universal
mounting base on $5-\mathrm{ft}$. mast enables installation on any roof or wall angle, mounting base on $5-\mathrm{ft}$. mast enables installation on any roof or wall angle, and facilitates orien
with each antenna.

## Cixcular Folded Dipole Antenna

(A) Newly designed circular folded dipole antenna, is non-directional, simplifying its installation, reorientation unnecessary for new station reception. For use fairly close to transmitter. Adaptable fo or frame mounting. C22010-Your Cost
5.25

## Flat Folded Dipole Antenna

(B) Not completely non directional, may easily be oriented for maximum gain. Provides broad tuning and good pick up. Does not include reflector C22011 Your Cost
\$4.60

## Folded Dipole with Reflector

(B) Provides additional signal strength where installations are remote or where signal output from tran-mitter is weak. Nlso eliminates interfering reflections from high buildings and hills. Antenna is directional but completely adjustable to facilitate mounting and orienting
C22012-Your Cost.
s.50 Additional $5-\mathrm{ft}$. mast extension for use with above antenna.
1.30

## TRICRAFT Television \& FM Antenna

(c)
Model 300 was designed to satisfy the users of both television and FM receivers for an all-purpose, all-wave antenna. Provides for complete coverage of both television bands, as well as the permanent FM band. Complete with 6.3 feet of 300 -ohm transmission line and all aceessories are necessary for installation. Universal mounting bracket at base of $8-\mathrm{ft}$. mast
C22036
s11.61

AMEIL NOS


## FM Dipole Antenna Kits

FMI receivers perform to their maximum efficiency when equipped with the Amphenol Dipole Antenia and Rellector combination plus a low loss 30() ohm Twin-Lead transmission line. This complete beam type of antenua provides high gain. Made of light but superior strength tubular steel. Streamlined, rugged and weatherproof, this assembly will give years of trouble-free service. For 88 to 106 Nc. C22040-Dipole Antenna and Reflector Kit, less 300 ohm twin lead-in. Your Cost
$\$ 6.91$ C22041-Dipole Antenna Kit, less rellector and 300 ohm twin lead-in. Your Cost.
$\$ 4.12$ C22042-Retlector array conversion kit. Consists of necessary parts to convert Lipole Antenna Kit to Dipole and Reflector as illustrated. Less
300 ohm twin lead-in.
Your Cost.
$\$ 3.23$
C22043-Side mounting bracket .88

## AMPHENOL Stand-off Insulators

For twin lead transmission line. Polyethylene insert fits all types of receiving $t$ win leads. Insulators do not have to the strung on line. No. 14 wood screw 3 inches long. C16957-Your Cost
$\because 4$
(J) Low loss polystyrene insulator for use with 300 ohm, twin lead. Holds line securely but will not pinch and change impedance.
C16958-
$\because 4$

## WARD Stand-off Insulators

(K) Unique plastic design, holds transmission line (A) firm but cannot pinch line to change ime pedance. Your Cost

94

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## WORKSHOP ASSOCIATES

## Broad-Band Ham Antennas and Accessories

## 10-Meter 3-Element Beam

(A) Horizontal elements made of adjustable telescoping aluminum alloy sleeves. Spacing between elements also adjustable. DeEigned for strength and durability to withstand high "inds and ice. refleclor val rigidity provides smooth easy rotation. Director, dipole, reflector, very unidrectional. mpedance ro ohms at the fued point inside the weatimerpros plastic head. from 28.0 to 29.7 mc . Comes standing wave ratio never excecds 1.3 from 28.0 to 29.7 mc . Comes complete with all beam parts, plugs, gaskets, but less mast and mast
parts.
C22014-Workshop No. 29. Your Cost. . . . . . . .

## 6-Meter 3-Element Beam

(Not illustrated.) High gain. 3 horizontal elements. high front-toback ratio. Standing wave ratio less than 1.1 over contire band using 72 ohm cable. Aluminum alloy elements tit securely into a heat y-duty plastic head. With all necessary bolts, connector assembly, and fit tings, less mast.
C 22016 Work

## 2-Meter 6-Element Beam

(Not itlustrated.) Power gain of $6,7.8 \mathrm{dbl}$. Six vertical elements of $1 / 2^{\circ}$ aluminum tubing sealed at the ends, dipole, two directors. and two reflectors, all phased to give at very high front-10 back ratio and very narrow forward direction. For 50 -ohm coasial line. Rugged and rigid Complete, less mast and mast parts. C22015-Workshop No. 146AB. Your Cost
s21.50

## Manual Mast Rotator

(B) By adding the extra sections and brackets in the manual rotator arm is supplied we attach to the lower end for locking the A rotating arm is supplied us attac
$\$ 5.00$

## Mast and Mount

(C)
Rugged tubular steel mast in $t$ wo $4-\mathrm{ft}$. sections to make overall leng th of $7, \mathrm{ft}$. Strong adjustable steel mounting arms eliminate guy wires. Adjust to the side of any structure by shortening or lengthening the mounting arms. Complete kit, contains all holts and brack C22017 Workshop No. AM. Your Cost
$\$ 8.25$ Workshop No. AM1, Extra 4-ft. mast sections to heighten above mast.
${ }^{1.30}$

## WORKSHOP Remote Rotator

Sturdy smooth-operating mechanism. Years of trouble free serv ice. Will accommodate a 10 - and 20 -Meter combination beam or any one array. Unbroken coaxial line feed made possible by automatic North stop. Full rotation at 1 rpm , reverses instantly from any point Single switch on indicator controls rotation. Comparss-dial pointer shows bearn direction at all times. Sturdy base plate nounted on ball thrust bearing handles $500-\mathrm{bb}$. loid with ease. Iteavy duty 110 v AC motor with high gear ratio. Precision-cut gears minimize backlash and wear, maintain high accuracy. Compass dial indicator housed in attractive black enameled aluminum case, rotator housed in weathertight aluminum casting $9 \times 9 \times 6^{*}$; weight 27 lbs.\$157.50

AMATEUR
ANTENAS


## PREMAX Rotary Beam Kit

(E) A high gain directive 3 -element array using a single frame and ad(5) justable seamless duraluminum tubing to cover the 6,10 , or 11 meter bands. Angle iron supporting frame is provided with mounting holes and hardware for easy one-man assembly. All metal, no warping or cracking. Insulation at voltage nodes to reduce leakase ir s. "T-match" feed and 3 (th) ohm line usually used, but removable shorting plates permit other feed systeins as well as facilitate tuning. Kit includes frame and 3 pairs of elements with necessary insulators and hardware, including T-match accessories. Shpg. wt. 30 lbs . c22021-1'remax No. RB-6309. Your Cost
$\$ 29.40$ Extra clements only, in pairs. Shpg. wt. per pair 2 lbs.
5.29

## PREMAX ROTOMOUNT

©I land operated turntable will support largest beam assembly. Turned manually with flexible steel cable and pulleys on the same principle used to steer boats. Inexpensive but practical and easy operating. Full $360^{\circ}$ rotation in either direction. $7^{\prime \prime}$ diameter ball thrust bearing. Shaft supported by 2 side bearings to eliminate side play. Supplied 17 lbs . C22023-Premax No. BM1-46.
\$21.46

## MILLEN Antenna Matching Preamplifier

Impedance matcher and broad band preamplifier. 20, 10 and 6 meter bands. Tunes antenna to receiver and amplifies signal with 6AK5 for total gain up to 60 db . Plug-in coils fit into front panel. Gets 180 v IC at 10 ma and 6.3 v AC at 175 ma from receiver. Complete with plug-in for

$124-75$
C21016-I lug-in assembly for $48-55 \mathrm{mc}$. Your Cost
$\$ 3.15$
3.15
C21017-Plug-in assembiy for $13-15 \mathrm{mc}$. Your Cost

## GORDON Heavy Duty RF Relay

DIPDT, for antenna changeover or tank switching. llandles 1 KW easily Alsimag 196 insulation, $l^{\prime} F .01$, negligible loss even above $100 \mathrm{mc} .3 \mathrm{~s}^{3}$ coin silver self-wiping contacis go together with no clatter or bounce. 110 V 60 cy . coil holds contacts together with 4 lb . pull. $1 / 2^{\circ}$ contact spacing when open, no flash-overs. $4{ }_{4} \times 55_{16} \times 3$.
C14135-Gordon No. 1000
s 10.58

## Coaxial Antenna Transfer Relay

(G)
SPDT, capacity 750 wat1s RF if impedances are matched. I las three SO-2:39 female receptacles to accommodate plugs on $12 \mathrm{G}-8 / \mathrm{U}$ cables to antenra, transmitter and receiver. Coil is for $1101,60 \mathrm{cy}$. C14133 - I'rice No. $6: 350$
$\$ 9.80$
Your Cost Type 6351, same as above with the addition of two sets of auxiliary con-
tacis, one SI's' normally open and one SPST normally closed, both rated tacis, one SIxT nornally open and one SPST normally closed, botli rated at 250 ma, 300 VC . Use for ECO and receiver switching. Overall dimen
sions with auxiliary contacts are $11,3 \times 2^{7}$
C14134 Yo..

## GORDON ROTO-BEAM

(H) Dual selsyn and drive motor system to rotate (H) antenna remotely. Station conirol (J illustrated) contains selsyn-driven azinuuth dial which follows antennal, ()n-()ff master switch, and rotation control switch with 3 positions: CCW (counter clock wise), (Sff, and CW (clochwise). Antenna sta tion is weather sealed and designed for easy mounting both of itself and of antenna arrays. Drive motor develops 13,200 inch ounces at the spider through the 1800:1 gears. Antenna speed is ${ }^{3}{ }^{+}$rpmi. Direct RF coupling through slip rings and inductive coupling through rings $W^{2}$ " apart permit dual band operation at up to $5 \mathrm{KW}^{-}$. For 115 volt, 60 3oth stations
C22026-Your Cost

## Direction Indicator Potentiometer

 Simplest azimuth indicating system. Pot designed for continuous rotation is put in series with a $200 \mathrm{ohm},{ }^{1} 2 \mathrm{~W}$ resistor and an On Off SI'ST switch across 6 v DC. Beam is mounted directly to arm of pot. An 01 ma JDC meter is connected to the pot arm through a 6000 ohm rheostat. Antenna is oriented so beam points South when pot arm picks off maximum voltage, and rheostat is adjusted so meter reads full scale ( 1 ma ). As beam is turned through $359^{1} 2^{\circ}$, meter drops to zero. The next $1 / 2^{\circ}$ swings the meter back to 1 ma . 130 th 0 and 1 ma are therefore $\mathrm{S}, 3,4 \mathrm{ma}$ is $\mathrm{E}, 1, \mathrm{ma}$ is N , and $1 / 4 \mathrm{ma}$ is W. Neter scale may be marked as above. Potentiometer only. Ohmite RB-2C8393- Your Cost

# ALL-PURPOSE (5ibe ReLAYS <br>  <br> © 

## POTTER-BRUMFIELD Relays

## Type "PR"

(A)A series of heavy-duty power relays high heater loads, or any nower control circuit requiring fast pxesitive swiching. Cont. duty with no over heating because coils take only ${ }^{2}$ wats (DC models) and 5 VA (AC models).
larger copper shaded pole piece prevents AC chatter. Ileavy contact pressure. Sturdy return spring. Metal parts heavily plated. Coils thoroughly impregnated with varnish and baked. Rugged screw terminals. Contacts are ${ }^{5}$ "0 oval-shaped coin silver. Ratings given below are conservative. I ouble-break types carry 20 amperes non-inductive load at 110 V . AC or 10 amps. 110 V . LC , or 1 IIP 110 or 220V. single-phase motor. Single break types carry non-inductive loads of 8 amp. $110 \mathrm{amps}$. . 110 V or 220 V . CC . Size $2^{5}$ " long, $23 / 8^{\circ}$ wide, $2^{\circ}$ high. Shipping weight 2 liss. each.

| No. | Type | Contacts | Coil Mts. | ach |
| :---: | :---: | :---: | :---: | :---: |
| C14254 | PR3A | SPST-DB-NO* | 6V/60c AC | \$2.80 |
| C14255 | PR3A | SP*T-DB-NO* | 110/60c AC | 2.80 |
| C14256 | PR4. | SPsT-DB-NC* | $6 \mathrm{~V} / \mathrm{f0} \mathrm{c}$ AC | 2.90 |
| C14257 | PR4 1 | SPsT-DB-NC* | 110/tioc AC | 2.90 |
| C14258 | PRi. 1 | SPDT | 6 V 60c AC | 3.10 |
| C14262 | PR5A | SPDT | 110/fioc AC | 3.10 |
| C14263 | PRTA | DPST-NO | $6 \mathrm{~V} / \mathrm{6or} 1 \mathrm{C}$ | 3.60 |
| C14264 | PRTA | DPST-NO | 110/60c 10 | 3.60 |
| C14244 | PR11A | DPDT | $6 \mathrm{~V} / 60 \mathrm{c}$ AC | 4.60 |
| C14245 | PRI1A | DPDT | 110/60c AC | 4.60 |
| C14265 | PR3D | SPST-DB-NO* | 6V/ DC | 2.80 |
| C14266 | PR3D | 'PsT-DB-NO* | 24/DC | 2.80 |
| C14267 | PR4D | SPST-DB-NC* | $6 \mathrm{~V} / \mathrm{DC}$ | 2.90 |
| C14268 | PlitD | SP*T-DB-NC* | 24 / DC | 2.90 |
| C14269 | PR5D | PDT | 6 V DC | 3.10 |
| C14270 | PR5D | SPDT | $24 \mathrm{~V} / \mathrm{DC}$ | 3.10 |

*N-normally open. *NC-normally closed.

## "MR" Series

(B) A more compact relay for lighter loads (B) than the "Pl"" series. Will handle 8 amps. AC or 4 amps . DC non-inductive loads. Adiustable spring. No current carried through spring. $27 / 8^{\prime \prime} \mathrm{L}$. $138^{\circ} \mathrm{W}, 1 \frac{1}{3 / 8^{\prime \prime}} \mathrm{HA}$. AC coils require approx. 2 watts; $D C$ approx $1 \frac{1}{2}$ watts.



 $\begin{array}{llll}\text { C14274 } & \text { MR1A } \\ \text { C14275 }\end{array}$ C14276 MR5D SPDT 21T1DC C14277 MR11D DPITT 6V/DC

## Plate Circuit Relays

(C).(D) Armature spring adjustable for applispecified currents or voltages. Talule below shows standard factory adjusist ments for current to energize, also minimum after readjustment of spring. Residual screw is adjustable for faster of spring. Residual screw is adjustathe ior faster
release when de-enervized 1 N. reease when de-energizcd. contacts rated conservatively at ${ }^{5}$ amps, LS5 series. Hilustration (I)) for the LM series. LS series. Illustration (D) for the LM series.


| Stoch | Mif's | C | Current |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  | 6 |  |  |
| ${ }_{C 14279}$ | LS5 |  |  | 9.0 |  |
| ${ }_{C 14209}$ | LAL | 2,500 | 2. | 6. | - |
| 14210 | 1.15 | 5,000 | 17 |  |  |
| C14211 |  | 10,000 | 2 |  |  |
| C14212 | LM11t |  | 5.3 |  |  |
| 1213 | LM1 | 5,000 | 3 |  |  |
| 1214 | Ll1 | 10,00 |  |  |  |

## Photoflash Relays

(B) Enerrizing coils, available for both 6 volts AC and 2 vols New alloy contacts discharge capacitor through arc lamp, handle hundreds of amps during
flash. $25(\pi)$-volt insulation. Varnish flash. $25(\pi)$-volt insulation. Varnish
impregnation prevents moisture alisorp-


| ck | M |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | C | Co |  |
| C14150 |  |  |  |  |
| C14151 | FRSA | ac |  |  |
| C14152 | FR1A |  | DPD |  |
|  |  |  |  |  |
| 14154 | 1 F |  |  |  |
| 1415 |  |  |  |  |

## Automatic Lock Relay

## Electrical Release

Employs two coils-one to operate relay and another to release the lock When the circuit to the operatink coil is losed momentarily the normally closed contacts open and the normally oper ones are closed with the relay remaining in this position even with the current removed from the coil. In order to return the contact positions to normal, current is applied to the "release", coil which removes the automatic lock and allows the relay to return to its original position. ${ }^{3}, 6^{\circ}$ fine silver dome-shaped contacts rated conservatively at 4A; less conservative rating is $20 \mathrm{~A} .3^{15} / 6^{\circ} \mathrm{L} ., 214^{\circ} \mathrm{H}$., $1^{3} 4^{\circ}$ W. Shpg. wt. 2 lbs.C14142-EL11A. DPDT contacts, 110 V , Your cost coils.
Your Cost
C14143-EL5A. Same as above but SPDT contacts.
Your cost.

(A)

(C)

(1)


## WARD-LEONARD Relays

## Standard-Antenna Change-over

(F)
Mycalex base and cross-arm. Coil consurnp ping make watt break silver-to silver contacts. Base $27,6 \times 273^{\circ}$. Double-pole double-throw
 With Break-in (No. 507-534) Same as above but with two additional single poles. One normally closed, the other normally O14131 Base: $35,8 \times 27 / \mathbf{l}^{\circ}$. Shipping weight ${ }^{1}{ }^{\text {Ib }}$ Your Cost
$\$ 7.69$

## Remote Control Heavy Duty Midget

 (G) Single-Pole double-throw, single break, cleaning contacts. Rating: 20 amps. AC normally open, 15 amps. AC normally closed. Size: $2 \frac{5}{8} \times$ $17_{8}$. Sliipping weiglt 1 lb Type 50p

## Thermal Time-Delay Relay

(H) For rectiter tube protection. Single-pole double-throw, single break. Timing adjust able from 10 is sec. 4 amp contacts. Dust proof cover. $110 / 120$ V. $50 / 60$ cycle.
Your Cost
Yo.....................

## AMPERITE Thermal Delay

(J) SPST, normally open, closed by heater afte U delay (in secondsi per table below. In standard octal tube envelope. I leaters 13.3 V ., approx. 0.4 A . or 115 V .. approx. 212 IV . Contacts rated 115 V ., 3 A . AC, but can handle DC if shunted with capacitor Del ay 6.3 V Heater 115 V I Heater, Your Cost $\left.\begin{array}{rll}5 & C 14400 & C 14405 \\ 15 & C 14401 & C 14406 \\ 30 & C 14402 & C 14407 \\ 15 & C 14403 & C 14407\end{array}\right\}$

## GUARDIAN Relays <br> Keying Relay <br> SPST Normally Open Double Break

(K) Special oversize silver contact points control transmitters u-ing filament center-tap keying of any stage up to 2 KV on plate: or using AC primary keying control of poiver supplies delivering up to and ncluding 1 KW ; or using grid controlled rectitier keying of 3 K , power supplies. Insulation is high-test bakelite, will withstand 3 KV to ground. May be mounted in any type of panel. All terminals are insulated from ground. Coil takes 920 ma at 6.3 V AC. Relay will follow key or bug at highest WPMI rate obtainable. Iligh response speed, plus strong magnet and return speed, give clean make and break, producing the best CW note (iuardian Series K-320, $3 \frac{1}{2} \times 1 \frac{1}{2} \times 1{ }^{1516}$. Shpg. wit. oz C14119Your Cost
\$2.47

## Adj. Overload with Elect. Reset

(L) Positive precise protection against current surges or continuous overloads. Kemote panel instalation of the control potentiometer shunted across the coil as a current divider) simplifies acijustment of contacis for pilot-light current value "overload" or "clear" Reset relay uses $6.3 \backslash$ AC coil, draws 920 ma , can be operated from any convenient point. Vol tage drop across coil and pot. is less than 10 volts on current value. Insulation bet ween coil and ground rated at 3 KV Cuardian Series X-300-ER, $13_{4} \times 1^{15}$ is $\times 2^{\circ}$. Wt. $13 \ldots$ oz. $\$ 4$.

## Antenna and High Frequency Relays

Low capacity oversize silver contacts handle 1 KW in AF or $\cdot \mathrm{RF}$ circuits at frequencies up to 28 MC . Alsimag insulation; 110 volt. AC coils. C14118 Model R-100 Sn'ST. Normally Open. Your Cost. .... . $\$ 2.08$ C14115-Model R-100-B SPST, Normally Closed. Your Cost. . 2.08 C14117-Model R1OOG DPDT. Your Cost

## Break-In Relay

Specifically designed for break-in operation of transmitters. $1 / 4^{\circ}$ fine silver contact points handle 1500 watts non-inductive or 1000 watts inductive ( ${ }^{(K)}$ ) cycle AC. Two sets of SIPST contacts, 110 C14125-Model B-100. Your Cost


BLILEY Crystals
A CF6 single signal filter crystal unit. Low holder capacity permits Charp signal discrimination in filter networks. Frequency 455 kc. free of spurious responses within $\pm 7 \mathrm{kc}$
C13854-Your Cost
$\$ 4.50$
(B) KV3 precision 100 kc crystal unit for use as frequency standard. (B) Mounts in octal socket, will operate in any position. Comes with schematic of recommended oscillator
C13853 Your Cost
$\$ 6.95$
(C) CF3 single signal filter crystal for if filter. Frequency $455 \mathrm{kc} . \pm 5$ (kc. free of spurious responses $\pm 7 \mathrm{kc}$.
C13855-Your Cost
$\$ 5.00$
(D) SMC 100 dual frequency crystal provides either 100 kc or 1000 kc aligmence. 1 (月n kc $\pm$ C13856-Your Cost
58.75
(E) Ax2 crystal accurate to $\pm 002 \%$ at $25^{\circ} \mathrm{C}$ of nameplate frequency. (E) Two units can be mounted in octal socket. Molded phenolic case $1_{11}$ W. Wo units cari be mou
C13851-3500- $4000 \mathrm{KC} \pm 5 \mathrm{KC}$ specified frequency
C13850- $7000-8222 \mathrm{KC} \pm 5 \mathrm{KC}$ specified frequency.
C13852-14000-19850 KC $\pm 30 \mathrm{KC}$ specified frequency
Your Cost
Each


## PR Crystals

(F) Temp. cueffcient less than 2 cycles $/ \mathrm{mc} /$ degree $C$., aecuracy of calibration within 1 .o. Mounts in octal socket. Heavy drive without
crystal damage. C13860
C13861
C13862
C13863


Freq. Range
3.5 to 4.0 Mc

| 3.0 to 7.5 MC |  |
| ---: | :--- |
| 10 |  |

Price
$\$ 2.65$
1.1 .0 to $1-1.8 \mathrm{MC}$
$\$ 2.65$
2.65
2.65
3.50
5.00

## Crystal Sockets

(G) Available in low loss Polystyrene or Steatite, mounts, above or beNow chassis, soldered lug terminals. No. Make Insulation $\begin{array}{llll}\text { C8050 Millen } & \text { Steatite } & \text { *C8051 Milien } & \text { Steatite } \\ \text { Your Cost }\end{array}$ $\begin{array}{ll}\text { Your Cost 25c } & \text { Your Cost } \\ \text { C8062_Amphenol Polystyrene. } \\ \text { Your Cost. } & \text { 22c } \\ \text { holders. }\end{array}$ Your Cost.

Type
22
22
23
25
holders.

## Crystal Holder Adaptor

(H) Adapts new octal crystal holders to 5 prong mountings wost copper contacts and prongs.

(1)


Micromatch SWR and RF Wattmeter
(M) Model 908 MicroMatel connected in your transmission line will instantly reveal standing wave ratio, percentage of power wasted, and througli adjustment of your antenna tuner, let you put 9$)^{\circ}$ or or nore of your transmitter power into the antenna-raise your " S " reports. Reverse the connections and aiter a simple calibration, it will read your power output, be it 1 or 1060 watts. ur anything in between. Impedance range 50 to $3(\mathrm{~K})$ ohms, 3 thru 30 MC .
Easily read, large, open-scale $45{ }^{\circ}$ meter. Attractive appearance and small size add almost as much to station appearance as the vital measurements add to your 1)N. frequency flexibility and cutting down of 13CI. Factory wired and tested. In gray enamel steel cabinet with etched white on-gunmetal aluminum panel. Size: $10 \times 5 \times 51 / 4$. Shpg. wt. 8 lbs C21539-
\$29.90

## BUD VFO

(N) Mndel VFO-21 Variable Frequency Oacillator uses 6FG oscillator, $6 \backslash 6$ amplifier, VR 105 voltage regulator, NE51 tuning indicator and 5 V $^{\prime} 3 \mathrm{GT} / \mathrm{G}$ rectitier. U'ses plug-in coils for highest efficiency Power outpat 4.5 watts. Built in power supply in corporates voltage regulator tube that makes out put stability comparable to crystal oicillator, 1 las provisions for switching to crystal operation. Reyed in screen grid 115 V.AC 60 cyc. operation. Complete with tubes and three 40 -meter coils. In Grey

C9959 Set of 10 Meter coils. C9960-Set of 20 Meter coils C9961-Set of 80 Meter coils

## BUD Frequency Calibrator

(O) New frequency calibrator has 100 kc . crystal, usable harmonics up to 30 mc . Has on-off standby switch, thereby permiting FCC-90. Adju*tment for zero beating WIVV. Self contained nower supply C21014
Your Cost
\$14.65

## SLLVER 903 Absorption Wavemeter

(P) Frequency range $16(0) \mathrm{Kcs}$ to $4(\kappa) / 500 \mathrm{mc}$. (P) ranges. Consists of etched aluminum panel carrying $\mathbf{f ( K )}$ series low loss Steatite insulated tuning capacitor, inductor socket, resmance-indicating capicitor, inductor socket, resunance-indicating
lampand socket. Frequency range made possible by lamp and socket. Frequency range made possible by wo tymes of tuned circuits. On six ranges plug in inductor is paralleled with tuning capacitor, seventh $400 / 500 \mathrm{mc}$, range plug in inductor is quarter wave transmission line with series tuning. Size: $3 \int_{2}^{*}$ sq, $334^{\prime \prime}$ deep. Unit less plug in inducto C21291-
$\$ 3.30$
Plug in inductors with built-in indicator lamp coupling coil.
C21292-Range $1600 / 3700 \mathrm{kc}$.
C21293-Range $3500 / 8000 \mathrm{kc}$.
C21294-Range 8(1) 15000 kc .
C21295-Range $15 / 40 \mathrm{mc}$.
C21296-Range $1011(\mathrm{~K}) \mathrm{mc}$.
C21297-Range $100 / 300 \mathrm{mc}$.
C21298-Plug in quarter wave transmission line Range $400 / 500 \mathrm{mc}$. No indicator lamp coupling coil.
Your Cost, any type
654
NOTE: We carry a comprehensive line of amaNOTE. teur radio equipment. If you do not see what you want on these pages, write us your requirements. Your inquiries will receive our prompt attention.


## MEISSNER "Plastic" 1.F. Coils

Stable-Compact-Wide Range
A new transformer in which the trimmer base and the coil form (dowel) are moulded in one piece. The use of a special plastic material permits holding dimensions to within 0005 ". Trimmers "tloated" away from the base with an air-gap between the bottom plate and plastic base. Wide range. Compact in size; $11 / 4^{\prime \prime}$ square by $21 / 2^{\prime \prime}$ high. Specially-served Litz wire. Double tuned. Metal high. Specially-served can. Unaffected by temperature or humidity. Shuilable far Input and Output.

| Stk. No. | Meissner No. | Set at Kc. | Range KC |
| :---: | :---: | :---: | :---: |
| C10373 | 16-6649 | 175 | 140-300 |
| C10376 | 16-6652 | 262 | 200-310 |
| C10379 | 16-6655 | 370 | 305-480 |
| C10382 | 16-6658 | 456 | 400-550 |

## IF Transformer

For the new ultra high F.M. frequencies. Permeability tuned to 10.7 megacycles. Mounted in rectangular shield can measuring $1^{7 / 1 t^{\prime \prime}}$ screw type mounting luss.
C10329- Meissner 16.6665
Your Cost
$\$ 2.20$
Each

## Ferrocart (Iron Core)

IF Transformers
Double-tuned I.F.'s Accurat-lyss trimmers. best materials and oscil-loscope-tested for yain and selectivity Mounted in $13 \%$ square by $312^{\prime \prime}$ high black cracklefinished cans. Leads are RMA-color-coded.

"Universal-Adjustable" IronCoreAnt., R.F.
and Osc. Coils Will replace broadcast band coils in practically any receiver. Will accurately track with other coils in the receiver when properly adjusted. Exact inductance of burned out coil easily matched with screw driver adjustment of the iron core. Will improve gain and selectivity. Oscillator coil can be adjisted from and used with either cut plate or padding condenser circuits.

Unshielde
No. Type
Stock No. Type C10007-Ant
C10008-RF C10009-( ) scillator


Each
STANWYCK Midget IE


Standard iron core 455 kc . midgets. Compression tuned, exceptionally high gain due to specially designed powdered iron cores. For general replacement and new set construction of smal! receivers and portables. Dimensions of can $3^{\prime \prime}$ square by $178^{\prime \prime}$ long. C10350
$97^{\text { }}$

## Unshielded Universal

 Adjustable CoilsExact inductance of replaced coil covering 550-1715 KC matched easily. Os-
cillator coil adjustcillator coil adjust-
able from 175 to 520 kc . Have universal mounting facilities and can be mounted in original shield or used as is. Inductance adjusted by slipping core in or out of coil and then set with radio cement.
C10307-Antenna
C10309-R.F.
C10310- Oscillator
Any Type Above,
Your Cost, Each
$73^{\text {c }}$

## CARRON Cartwheel

 I.E. Transformers

For unshieldedoperation in midget radios. Not to be used where original was in shield can; not to be placed in a shield. Tunes to 456 Kc .
C10145-Input
C10146-Output
Either Above, Each. . 7 ?

## PEE WEE TYPE

Antenna and R. F. Coils

4) 

0
0Designed for service replacement in ininiature sets. Secondaries "progressive wound with
Litz wire on $12_{2} \times 1 / 2^{\prime \prime} \mathrm{im}-$ pregnated forms. High ad co mpedance primaries couping turns provided to give maximum response thruout. with 365 mmfd condenser. Ear ug mounting also perforated bracket for all mounting methods. Unshielded.
C10315-Antenna.
C10316-R.F....Each \&

## Ultra Midget Coils

Similar to above, but slightly larger in size. Litz wound on impregnated forms $3 / 8^{\prime \prime} \times 1 \frac{3}{4} 4^{\prime \prime}$, unshielded.
C10313-Antenna
C10314-R.F. Each 40 \&

## STANWYCK FM IF COILS

Newly designed SLUG TUNED FM coils, maximum " $Q$ ' and gain at 10.7 mc . Low loss ceramic and quality iron cores. Response curve symmetrical, extreme stability. Aluminum case $1^{3}{ }^{3}$ square by $3^{\circ}$. C10351-Your Cost.
$\$ 1=21$

## IM Discriminator

Same as above electrically and mechanically. Electrically centered secondary givesperfect symmetry between peaks. For $10.7 \mathrm{mc} . \$ 2$
c10352 Your Cost. . . . . . . . . . .

## CARRON Standard

## I. F. Transformers



Built to highly exacting standards, these double tuned I. F. transformers will assure excellent results. Low losstrimmers. In $13 / 8 \times 13 / 8 \times 31 / 2^{\prime \prime}$ shield can. Spaced leads eliminate "flutter" under vibration. Frequency 456 Kc.
C10147-Input
C10148-Output

## CARRON Midget

Iron Core \& Standard

## 1. F. X'formers

Designed for use with modern tubes. Wound with Litz wire. Ceramic base trimmer: poly-
styrene impregnated winding forms double tuned. Leads from trimmer spaced away from windings. For use in one or two stage amplitiers.
 Only $21 / 2$ inches high, $11 / 4$ " square

Iron Core 456 Kc.

## C10204-Input

C10205-Output
Either Above, Ea... $\$ 1,23$
Standard 456 Kc.
C10206-Input
C10207-Output $91^{6}$

## LITZ WOUND

Antenna and R. F. Coils
Employ new type bank winding for practically constant gain and selectivity over B.C. band. High impedance primaries. Tune $510-1500 \mathrm{kc}$ with 356 MMF condenser. I mpregnated $7 / 8 \times 21$ " "tube Round cans with spade bolt mtg. on $13 / 4$ centers. $1 \frac{1}{8} \times 2^{1} \frac{1}{4}$

Shielded Type
C10317-Antenna 5 C. 5 Unshielded Type Univ, bracket; standoff mounting. C10319-Antenna
C10320-R.F...Each 50

## Oscillator Coil



Use with converter tubes such as the 6SA7. Furnished in dowel wound type for opera-

1. F. frequencies only Paddin condenser value, $360-470 \mathrm{mmfd}$ condenser

## Your Cost

$\qquad$

## CARRON Unshielded

 456 KC Oscillator CoilDowel type, wound with cotton covered enamel wire, thoroughly dehydrated, treated, and Mash clipped in a high melting point wax. Color coded for connection values. Padder condenser value: $360-170 \mathrm{mmfd}$ C10238-Your cost 50 \&

## CARRON R.E. Chokes

All purpose r.f.
chokes wound on steatite dowels. Both winding and $=3$ dowelimpregnated, sealed permanently
againsthumidity. Accuratelyrated Mounted on "L" bracket, placing lugs in easy connecting position. Excellent replacements.

| Stock No. | Inductance in MH. | Your Cost ea. |
| :---: | :---: | :---: |
| C10208 | 2.5 |  |
| C10209 | 5.5 . |  |
| C10210 | 7.5 |  |
| C10211 | 10.0. | 40c |
| C10212 | 30.0 | 44 c |
| C10213 | 60.0 | 51 |

## BARKER \＆WILLIAMSON

Junior \＆Type B Inductors
（A）Juniors for powers up to 75 watts input with ard
ard 5 prong Sleante base． 3150 iox 4
（B）Type B for powers up to 150 watts input with plug－in jack mounting． $3 \frac{1}{2} \times 2 \% \times 4^{\prime \prime}$ ．
Capacities shown（in mmf）to resonate the L．F． end of the band can actually be 5 to 20 mmf less lecause of tube and wiring capacities．


## B \＆W Types T and HD

Type T：up to 500 watts input．For most amateur uses．The link for the variable center－linked models is hinged on the jack base and may be ar－ ranged for easy panel adjustment．Matches load impedances of 72 ohms．The same link is used with the plug－in coils for all bands．Allow mtg． with the plug－in coils or all hands．Allow mtg．
space $7 / / 2$ long $\times 61 / 4$
（C）Type HD：heavy duty，up to 1000 watts in－ Heavy steatite plug bar and jumbo banana plugs． Allow mtg．space $11 \times 9^{\prime \prime}$ and approx． $7^{\circ}$ wide．
Capacities：can be 5 to 20 mmf less than shown because of tube and wiring capacities


## B \＆W Turrets

The successfui development of the turret by B \＆W has made possible fast，positive band switching so much in demand for amateur rigs．By the use of a unique switching assembly unused coils are shorted，thereby eliminating absorption effects．Al models mount in a single $3.8^{\circ}$ pane hole and cover the $80,40,20,15$ and 10 meter bands by shaft rotation．

## Band Hoppers

（D）
For powers up to 75 watts．Uses Dame coil design as the Juniors listed at left．Unusually compact， hind panel $3^{*}$ ．Tunes with a 50 mmf bind panel 3 ．Tunes with a 50 mmi coupling between 2 beam－power tubes triodes．Type 2A． C10523－Your C

## 75 Watt Turrets

（E）For link counling single－ended or push－pull low power stages，with tabes operating at voltages up 8.51 4 deep behind panel， 6 ＂dia．Tyix JTCl，center linked， C10524
Your Cost
$\$ 9.38$ Type JTEL，end linked，untapped，
C10525 Your Cost．．．．．．．． 59.38

## 150 Watt Turrets

（E）
For single and double ended cir－ cuits，with tube voltages ups ${ }^{\text {an }}$
$1000.47 /{ }^{4}$ deep behind panel． 813 dia．Type 13 C I center tapped．
C10526 Your
$\$ 1159$
Type BEL，end linked，untapped C10527－Your Cost．


## Heliance <br> R．F．Chokes

## Reliance

## Transmitting Chokes

（R）Tapered 6－section winding or capacity 1 mmf． Stock Milli－Cap．DC Your $\begin{array}{ccccc}\text { No．} & \text { henries Ma．Ohms Cost } \\ \text { C10234 } & 2.8 & 100 & 5 & \text { S1．82 } \\ \text { C10235 } & 5.5 & 5(0) & 12.5 & 1.44\end{array}$ $\begin{array}{lllll}C 10225 & 5.9 & 200 & 3.9 & 1.44\end{array}$

## Parasitic Suppressor

（5）（S）Non－inductive， 50 ohm re－ cro－H．and 003 ohms 0.3 ml Prevents UHF parasitic tions．

## 021－Each

$\$ 1.15$
BUD H．F．R．E．Choke （M） 0.5 mh ．at 250 ma ． C10124－Each
$65^{\circ}$
BUD UHE R．F．Choke （N） 5.7 microhenries at 750 ma．
C10．resisiance 1.4 ohms．
Each．．．．．．．．．．．．．．．．．．．．．．．

## HAMMARLUND

 Bakelite－Cased Chokes （P）Very effective for broadcast ductance $S$ receivers，Larke in－ ductance．low distributed capac－ ity．Bakelite case 15 㢈＂${ }^{4}$ diam．， $13 / 6^{\circ}$high．Type RFC85 high．Type RFC85 ${ }^{2}$－Passes 60 C8525
Your Cost ．．．．\＄2．25 Type RFC250－250 millih．at 60 ma．i ${ }^{420}$ ohms． your cost $\$ 2,94$

## Power Line Chokes

（1）For suppressing interference as a filter，or to keep high RF currents from power lines．Witt． mitg．brackets． Stock M．H．Ohrms Core Your No．Tot．Amps．D．C．Diin．Cos \begin{tabular}{llllll}
C10017 \& 14 \& 5 \& .15 \& $4 x^{810}$ \& $\$ 1.25$ <br>
$C 10018$ \& 15 \& 10 \& .07 \& $6^{1}$ \& $x^{8}$, <br>
\hline

 

C10019 \& 18 \& 20 \& .045 \& 81 <br>
\hline
\end{tabular} C10020 $46 \quad 20 \quad .0858_{2}{ }_{2}^{2 \times 1} 1_{8}^{\circ} 4.59$

## OHMITER．F．Chokes

（V）Solenoid chokes designed to avoid fundamental or har－ monic resonations．All 1000 nrx No brackets on 2 or 6 meter

chokes． Stuek Buad Mic．Dimen．Your
No．Meters Hys．L． C Dia．Cos
 $\begin{array}{lllllll}\text { C10080 } & 10,11, \\ 15,20 & 27.5 & 3 & x^{8} ⿸ 厂 万\end{array}$ C10081 20 \＆ 408506

## MILLEN

## Right Angle Drive

(C)
Extremely compact right angle drive unit, ideal for operating switches and potentiometers that must be located for short leads in emote parts of chassis. Uses beve rears. Mounts on arljustable standoff rods " single tole pane bushing or tapped holes in frame. bushing or tapped holes in frame C8001-Millen No. $\$ 375$

## NATIONAL

 Shaft Couplings(D) All take $1 /{ }^{\prime \prime}$ shafts. $\mathbf{T X} \mathbf{- 8}$ C8461-Your Cost Ea. 5 I YX-9:Steatite insulation 754
C8470-Each
C8471. Phenolic insulation C8471-Each.


MILLEN

## Flexible Coupling



For angle drive up to
Steatite in ulated, for shafts. C8039
Your Cost
$36^{\text { }}$
Flexible Shaft Couplings
(F) Isolantite insulation with short lengt h of flexible shaft up to $90^{\circ}$. T'akes ${ }^{1} 4^{\prime}$ shafts. Shpg. wt. each, 8 oz
C14530-TX $12.4 \% 8^{\circ}$
Your Cost Each
844 Y14529-TX E13.71/8. 99 c14531-TX-11. Without Isolan tite insulation. 45: $8^{\circ}$. $\mathbf{4 6}$ Your Cost Each.
$42^{4}$
Solid $14^{-}$Shaft couplings: Solid Isolantite.

|  |
| :---: |
|  |  |
|  |


©

## JOHNSON Shaft

Couplings

(G)
Ultrasteatite insulated units (A) and (B). Flexibility is obtained by cadmium plated phosphor bronze spring. (C) A solid insulated Ulirasteatite unit. Long leakage path and accurate alignment. (D) Cadmium plated brass compression ur,it

Flexible $1 / 4$ "Shaft Coupler
(H) For use in coupling two 1 . 4 shafts or for extending a haft at an offset angle. Insulated. C9751_Bakelite. C9750-Ceramic. 304
384

(G) Fine etched metal black dial $300^{\circ}$ plates, calibnated $0-10$ in ing holes.

Plain Tone Record Gain Microphone


## MILLEN

## Panel Transfers

(H)Block letters $1 / \mathbf{z}^{\prime \prime}$ high. Ample supply of al markings for Ham and Commercial
C8012
White. Your Cost
Your Cost

## SPEAKER O

## Etched Metal Plates

## (1) $11 x^{3} \boldsymbol{x}^{0}$.

 markings: Amp. Grid Curr Amp. Screen Curr. Monitor Antenia Oscillator Buffer Plate Curr. Osc. Plate Curr st Buffer (irid? Output ist Buffer Plate 50 Ohm Ontput ribament Voltage 125 Ohm Output Fil. Ist ON: 2 d OFF 200 Ohm Output Cain Control 500 Ohm Output nput50 Ohm Input 125 Ohin Input $2(100 \mathrm{hm}$ Input 500 Ohto Inpu Key
Microphone
Modulation Ind.
. Spuake Specify marking desired.
C9898-Any Type, Each.


MILLEN Model 10035 Panel and Dial (A) Four scales for hand calibration, $0-100$ linear urbing de as guide. Escuicheon removes without disurbing dial mechanisnl, for easy calibration. Drive

s.00

## NATIONAL Type "ACN" Dial

(B) For E.C. oscillator or U.H.F. receiver. 5-Range scale for hand calibration, 0-100) linear scale as guide. 2 extra scales. I ucite dial and pointer. $5: 1$ Vernier. Frame $5 \times 7,1_{4}$. ${ }_{4}$ shafts. -Each

## Precision Vernier Dials

(B) (C) Have etched caibrations graduated from zero to knob-shafis. Shpg. wi. ll knob has bushing for $1 / 4$ No. Dia. Rot Each No. Dia. Rot. Each No. Dia. Rot. Each $\begin{array}{lllllllllllll}\text { C14236 } & 4^{\circ} & 325^{\circ} & \$ 1.62 & \text { C14238 } & 4^{\prime \prime} & 180^{\circ} & \$ 1.62 \\ \text { C14237 } & 2^{3} / 4^{\circ} & 325^{\circ} & 1.23 & \text { C14239 } & 2^{8} 4^{\circ} & 180^{\circ} & 1.23\end{array}$

## NATIONAL R \& O Dials

(E) Type R-15 Dial. Etched nickel silver. 180 C14568-Your Cost $0-10$. $1_{4}{ }^{\circ}$ shaft. 51 \& (D) Type O-31 ${ }^{\prime \prime}$ Dial. Nickel silver. Narked 0-100. For ${ }^{1}{ }^{1}$, shaft. C14567-Your Cost

## " ${ }^{\prime \prime}$ " Type Vernier Dial

(F) Ratio variable from $6: 1$ to 20:1. Black Bakelite shell. "diam.
C14367-Clock 200-0 in $360^{\circ}$. \} Either $\$ 1,80$ C14368-0-100-0; 180
Type "EM". Without variable ratio. $3^{\prime}$ dia. C14371-0-100-0; $180^{\circ}$. $0 ; 360^{\circ}$. $\}$ Either \$1. 5

$\$ 1.25$ Bakelite knob

Your Cost, Each.

## Type "N"' Precision Dial

(G) Engine divided scae and vernier. Reads to $1 / 101$ Of a division. Planetary drive ratio 5:1. Diam. 4'

C14363-Counter-clock. 0-100, $180^{\circ}$
C14364-Clockwise 1(10-0, $180^{\circ}$
C14366-Clockwise $200-0,360^{\circ}$

## GORDON Hand Wheels

(H) Rakelite Wheel with pointer. Fits all $14^{\circ}$ shafts Tuning controls that will add to the appearance C14641ting, and electronic equipment. Wi. 8102. C14641-31/ with $180^{\circ}$ scale. Each C14643-15 ${ }^{5} 8^{\prime \prime}$ with $180^{\circ}$ scale. Each C14644-1, with $180^{\circ}$ scale. Each .......... 1.09 C14645-1.8. with $270^{\circ}$ scale. Each ......... .76 HAND WHEELS with pointer only, less scale. . 82 C14646- $31 / 4$ ELS With pointer only, less scale. 9 . 94 c C14647-214. Your Cost. C14648-15 ${ }^{\circ} 8^{\circ}$. Your Cost

## MILLEN Dial

(J) 0 to 100 Counter-clockwise, heavy gauge nickel silver dial. Metal scale is insulated from the shaft by a large black bakelite hub. Easy-to-grip type knob. Overall dameter 3 Wt. 1 lb . C8078-Your Cost

## ICA Miniafure Dials

(K) Chrome Silver dials with black etched numerals. Equipped with finger grip black knob. Only $15,8^{\circ}$ diameter. Fit $14^{\circ}$ shafts. Ranges from $1-10$ over 180 and also 270 degrees. Ideal for matching dials on instruments, amplifiers, receivers, etc.
(B) C14235-0-10. $180^{\circ}$. Your Cost


## national Variable Condensers



\section*{"TMA" Heavy Duty Units} (A) Plates of heavy aluminum with buffed rounded edges. Isolantite insulation; hong; $43 / 4$ wide, $31 /{ }^{*}$ high; type $\mathbf{A}$ (last letter) have $1771^{\circ}$ gap; type B, $265^{\circ}$; type C, $.359^{\circ}$ have 171 gap; type B, 265; type C, 359 C14369 ype 100 B . lates 9000 Each $\begin{array}{llrrr}\text { C14369 } & \text { TMA-100B } & 23 & 9000 & \$ 8.3 \\ \text { C14328 } & \text { TMA-50A } & 7 & 6000 & 4.1 \\ \text { C14329 } & \text { TMA-100A } & 15 & 6000 & 6.3\end{array}$ $\begin{array}{lllll}\text { C11329 } & \text { TMA-100A } & 15 & 6000 & 6.39 \\ \text { C14330 } & \text { TMA-150A } & 21 & 6000 & 7.67 \\ \text { C14332 } & \text { TMA-501)A* } & 8.8 & 6000 & 7.03\end{array}$ | C14330 | TMA-150A | 21 | 6000 | 7.67 |
| :--- | :--- | :---: | :---: | ---: |
| C14332 | TMA-501)A | $8-8$ | 6000 | 7.03 |
| C14333 | TMA-100I)A* | 11.14 | 6000 | 11.18 | $\begin{array}{lllll}\text { C14544 TMA-1.50) } & 35 & 9000 & 10.87\end{array}$ C14545 TMA-60D13* $15-15$ 9000 11.82 C14546 TMA-50 C $1151112000 \quad 8.63$ *Split stator units.

## Midget Receiving Condensers (C) "SIates.

"SE" types $270^{\circ}$ rotation straight-line frequency plates. 1 " shafts
 For neutralizing 10, 45, 47, etc.; 3000 V.P "NC-600'NeutralizingCondenser Neutralizing condenser for use with
6 L 6 's and similar output tubes. Thumb w adjustment from .5 to Isolantite insulation C14252-Your Cost Each

## Miniature Condensers


each end makes this at oss miclget condenser especially handy where ganging is quired. Steatite base. Conduct ing parts silver plated. No. Type Mmfd. Each
 $\begin{array}{llll}14346 & \text { PSE-50 } & 50 & 2.15 \\ 14347 & \text { PSE-75 } & 75 & \mathbf{2 . 1 5}\end{array}$ $\begin{array}{llrr}14347 & \mathrm{PSE}-75 & 75 & 2.15 \\ 14348 & \mathrm{PSE}-100 & 100 & 2.15\end{array}$
'TMC' Moderate

## Power Units



For use with RK18, RK20. $800,830,203 \mathrm{~A}, 210$, etc Air gap is $.077^{\circ}$; buffed plate edges; aluminum plates and heavy aluminum frame; Isolantite insulation; 3 -hole panel mounting with bolts and spac ers; flanged legs for bise mount ing: ${ }^{1}$ " shafts, 11 . long: over all size: $3^{\circ}{ }^{\circ} 6^{\prime \prime}$ wide, $23^{3} 8^{\circ}$ ligh (except TCN)
Letter $D$ after type denotes split stator

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{gathered} \text { Nat'l No } \\ \text { \& Cap. } \end{gathered}$ | Plates | Peak Yolts | Cost |
| :---: | :---: | :---: | :---: | :---: |
| C14592 | TM(-50 | 7 | 3000 | \$2.81 |
| C14593 | TMC-100 | 13 | 3000 | 3.20 |
| C14594 | TM ('-150 | 21 | 3000 | 3.6 |
| C14596 | TMC-300 | 39 | 3000 | 4.6 |
| C14595 | TMC- | 13-13 | 3000 | 5.27 |
|  | $\begin{gathered} 100 \\ \mathrm{TCN} \end{gathered}$ |  |  |  | (F) Mounted on isolantitite base UM" Ultra Midgets shield can. Shafts extend for ganging. UM11325 has two stators and a single rotor



Low Power Units

"TMS" Aluminum plat and framinum plates sulation; $y_{4}$ shafts, $1^{1}$. . lons; both panel mount ing and 2-hole base mounting; adjustable rear bearing; TMIS units have $.026^{\circ}$ air gap, TMSA units, $065^{\circ}$; al! screws have lock-washers; overall dimensions: $13 \times 22^{3}$ All 100 1 PV., except C14555 and C14556 are 2000 P.V

| Stock No. | Nat'l No . \& Cap. | No. of Plates | Your Cost |
| :---: | :---: | :---: | :---: |
| C14550 | TMS-100 | 9 | \$1.76 |
| C14551 | TMS-150 | 14 | 1.92 |
| C14552 | TMS-250 | 22 | 2.11 |
| C14553 | TMS-50D* | 5-5 | 2.72 |
| $\overline{C 14554}$ | TMS-100D* | 9.9 | 3.20 |
| C14549 | TMS-300 | 27 | 2.56 |
| C14555 | TMSA-35 | 7 | 2.11 |
| C14556 | TMSA-50 | 11 | 2.30 | For nearalizing $203 \mathrm{~A}, 852$ 204A

"NC-800A" Neutralizing CondenserHigh voltage Disc type neutralizing condenser for RCA 800, J5T, JIK.54 and similar tules. Low loss steatite insulation. Has micrometer screw adjustment. Three-hole mounting C14259-Cost

## HAMMARLUND Variable Condensers

"HE/ Micro Condensers
K) Cadmium plated; soldered brass plates: Isolantite insulation: singlehole mounting or base mounting

| No. | Mmid. | Plates | Each |
| :---: | :---: | :---: | :---: |
| C8700 | 17.5 | 5 | \$1.02 |
| C8701 | 35 | 10 | 1.17 |
| C8702 | 50 | 14 | 1.23 |
| C8703 | 100 | 27 | 1.53 |
| C8704 | 110 | 37 | 1.74 |
| C8705 | 30 | 20 | 1.38 |
|  | "HFD" Dual Units |  |  |
| Specs. are given per section. |  |  |  |
| C8706 | 50 | 14 | \$2.82 |
| C8707 | 10) | 27 | 3.18 |
| C8708 | 110 | 37 | 3.60 |
| C8699 | 16 | 11 | 2.76 |
| C8709 | 28.5 | 19 | 3.00 |

## Air-Padding Condensers

(L) Type AP ${ }^{2}$ Isolantite base soldered brass plates; 0.15 air-gap; $11_{10} x^{1,16}{ }_{16}$ siai Screwdriver adjustment, con No. Cap. Mmfd. Each

| No. | Cap. Mmfd. | Each |
| :---: | :---: | :---: |
| C3623 | 3 10 25 | \$1.02 |
| C8624 | 3.9 to 50 | 1.14 |
| C8625 | 4.5 to 75 | 1.26 |
| C8626 | 5.5 to 100 | 1.38 |
| C8743 | 6.5 to 140 | 1.62 |

## NZ-10 Neutralizer

(M) New locking type. One screwdriver riully one diection to adjust, lock parially, final adjust, and final lock 2.3-10 mmf., 3 KV at minimum gap. For single-ended or push-pull tubes with grid-plate cap of 10 mml . or less, such
as $812.811,8005,140$. C8710-Each
h . . . . . . . . . .

Type "MC" Midget

## Units

(N) Cadmium plated; soldered brass plates; Isolantite insulation; heavy aluminum ends single-hole mount; oz gap $0225^{*}$ plates; ${ }^{14}$ " shaft, can be ganged, silver plated Beryllium wiper; 500 -volt a.c. lest.

| No. | IPlates | Cap. Mmid | Each |
| :---: | :---: | :---: | :---: |
| C8503 | 3 | 5.5-20 | \$1.80 |
| C8504 | 5 | 6-35 | 1.86 |
| C8505* | 7 | 6.5-50 | 1.92 |
| C8506 + | 11 | 8-80 | 2.04 |
| C8507* | 11 | 7.3-80 | 2.04 |
| C8508* | 14 | 8.3-10) | 2.16 |
| C8509 $\dagger$ | 14 | 7.5-100 | 2.16 |
| C8510 $\dagger$ | 19 | 9-1 10 | 2.34 |
| C8514* | 19 | 10-1 10 | 2.34 |
| C8511 $\dagger$ | 27 | 10.3-2 $(\%)$ | 2.58 |
| C8512 ${ }^{\text {+ }}$ | 31 | 12-260 | 2.70 |
| C8513 $\dagger$ | 43 | 13.5-320 | 2.94 |
| $\dagger$ Midlin |  |  |  |

## "MCD" Split-Stator

(O) Built on strong isolantite ( base. Shield plate between section. All $3^{3} g^{*}$ behind pane!



## Dual-Spaced Midgets

$$
.0175^{\circ} \text { air gap; Isolantite insula- }
$$tion; single-bole mount

| No. | Type | Mmid |  |
| :---: | :---: | :---: | :---: |
| C8527 | MC2 MX | 20 | \$2 |
| $8468+$ | MC20S | 20 | 4 |
| C8488 |  | 32 | 2.22 |
|  | N | 50 | 2.52 |
| 8502 | MlCl | 100 |  |




## Type "HFA" Condensers

(P) Construction features all parts of cadmium plated brass, $1^{18} \mathrm{ib}^{\circ}$ square Isolantite end plates, 1 shafts, and $100 \%$ soldered construction which eliminates losses due to high resistance contacts. All plates are semi-circular, and $.020^{\circ}$ thick. Shaft extends " 16 ". All rear bearings are single hall thrust. Mounting brackets as shown

| $\begin{aligned} & \text { Stock } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Ilamml'd } \\ & \text { No. } \end{aligned}$ | Per Section <br> Mmfd. No. Plates |  | $\begin{aligned} & \text { Air } \\ & \text { Gap } \end{aligned}$ | Length Ins. | Your Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C7233 | HFA100A | 100 | 19 | .020 ${ }^{\circ}$ | $1{ }^{13}$ | \$1.98 |
| C7234 | HFA110A | 140 | 27 | .020* | 134 | 2.31 |
| C7235 | H1FA1013 | 10 | 3 | .030** | 25/6/ | 1.53 |
| C7236 | IIFA15B | 15 | 3 | .030 | $7 \%$ | 1.62 |
| C7237 | 11FA25B | 25 | 7 | . $030{ }^{\prime \prime}$ | $31 / 8$ | 1.68 |
| C7238 | 11FA50B | 50 | 14 | .030** | 138 | 1.86 |
| c7239 | HFA15E | 15 | 9 | . $070{ }^{\circ}$ | $13 / 8$ | 1.68 |



#  HEADSETS 

CANNON BALL "Chief" All Bakelite Phones
(A) High grade, sensitive phones in molded bakelite housings; leather


## BRUSH Crystal Phones

(B) Range 60 to $10,000 \mathrm{cps}$. High impedance. Light and comfortable. Padded adjustable headband. With 5 ft . cord.
C13924-Your Cost
s. 7.06

## TRIMM Headsets

C. "Dependable" Model: Well made economy model. Bakelite. Chrome-steel magnets.


(a)

©

## Reliance $\mathbf{D x}$ тype Headphones

(A) For DX fans. Highly sensitive. Powerful hi-polar magnets. Feathe weight shells. Adjustable headband. Weight 2 lbs
2000-Ohm Hearlset $\$ 1389$ Your Cost $\$ 3000-\mathrm{Ohm}$ Headset $\$ 1.4$ C13894-Cap $1^{15}$ /1 $^{\circ}$ I.D...... 12c C13895-Diaphragm $17 / 8^{\circ}$ dia. 5 c C13898-Cap $17^{\circ} 8^{\circ}$ I.D........12c C13899-Diaphragm $1^{15 / 8 / 16^{\circ} \text { dia.. } 5 \mathrm{C}}$

## ACME DeLuxe Headphones

Has chrome steel magnets and weighs only 6 ounces complete with wo units, $4{ }^{1}$, foot cord and metal headband
C13904-Double lleadset. 2010 C13905-Single lleadset. 1000 ohms d.c. resistance. $\$ 1.50$ ohms d.c. resistance. $\begin{aligned} & \text { Each................................... }\end{aligned}$ BRANDES "Admiral" Headphones
(A) Compact; efficient; powerful magnets; with 5 ft . cord and adjust13928 clips.
C13928-2000 ohms. Your Cost
$\$ 2.15$
C13929-3060 ohms. Your Cost
$\$ 2.30$
2.75
BRANDES "Superior" Headphones
2000 ohms. Similar to above but with exposed screw terminals.
C13925-Your Cost, Per Set
\$1999
C13936-Bakelite Cap (fits all models). Each
18c
C13935-Aluminum Cap (fits all models). Each
18 c
5
c


(A)
With 6 -ft. cord. With or without through-cord volume control housed in rounded edge plastic shell. Available in three impedances:
Low: 300 ohms; DC resistance 76 ohms; for line impedances up to 50 ohms.
Med.: 4500 ohms; DC resistance 1000 ohms; for line impedances of 200 to $5(0)$ ohms
$\mathrm{Hi}: 9000$ ohms; DC resistance 2000 ohms; for large installations using 500 ohm lines. $\$ 4.4$ C13882-Low: less volume control.
C13883-Low, with volume control C13884-Med., less volume control.
C13885-Med., with volume control
C13886- Hi, less volume control. C13887-Hi, with

## BRUSF "HUSHATONE"


(B)

(B) The HUSHATONE is a small streamlined modern, thoroughly dependable extension loud speaker that will end "radio irritation" in your home. Provides individual listening choice by merely slipping it under bed or sofa pillow or under the puff of a loose pillow-back chair. The HUSHATONE is of molded plastic with at tractive chrome trim. Compact measures only $4^{3} / e^{\circ}$ in diameter and $1^{1}$ is ${ }^{\circ}$ thick. Complete with convenient detachable extension cord. C13911-Your Cost
$\$ 9.55$ 7.06
4.41 4.41


BRUSH Crystal Single Headset (C) \%-ft. cord C13922-Your Cost
$\$ 3.79$

## BRUSH Crystal Lorgnette Phone

 (D) Single phone with chromium and black enameled handle. Extends from $12^{\circ}$ to $17^{\circ}$ 5-ft. cord. Shipping weight 1 lb . $\$ 4 .$. . $8 \mathbf{8 2}$
## TELEX MONOSET

(E) Stethoscope-type. Tenite tubes. Replaceable ear pieces hang above earlobes, not inserted into ear. Light, only 1.2 cx . Comfortable. No mussed hair. Ideal for amateur radio operators or typing from transcription machines. 20010 ohms Excelient fidelity. Thru-line volume control clips to lapel.
C13890-Less volume control,
Your Cost

## Relíance Single Unit Headsets (C) Featherweight shell. Bi-polar magnet. Clock- <br> C13896-1010 ohm single set <br> Your Cost <br> ohm single set <br> $90^{c}$

 cord.C13891-With volume control


## Extension

Cord Connector
(A) Has 2 openings, at either tips. Molded body. $\mathbf{C 1 3 0 5 1 - Y o u r ~ C o s t . ~}$


Headphone Cushions
(B) Soft rubber. Fits all headBhones. C13943 Pair. Your Cost. 10 Pairs for.


## Flat Plug

(D) Ultra-compact tyne, for use where space is limited. Molded bakelite body. $11^{1 h^{\prime \prime}}$ dia $1 / 4$ thick. Companion to the jack box with volume control for hearing-aid pews.
For 1 or 2 phone or speaker cords. Bakelite shell. $23^{3} x^{8 / 4}{ }^{\circ}$ C14974-Black 10 for.
"Stubby" Metal Shell As above but with short metal hell. 21 - overall. - 42 C14959-Each ................................. $\$ 3.75$

## Metal Shell Type

Same with nickeled brass shell. C14970-Each $\$ 4.41$ \&

## Midget Bakelite Plug

Bakelite shell. $214^{\circ}$ overall $\times 9 / 6^{\circ}$ diameter. Solder lug connections C14960-Black. C14963-Red Your Cost 10 For 52.43 R 7

## Speaker Cords

Phone and
(E) Cotton Braid Insulation No. Type Feet Each C13955 Double* $4 \frac{1}{2}, 296$ C13956 Doublet $412 \quad 20$ *Spade tips one end; straight tip. other. $\dagger$ Pin tips both ends.


## TRIMM Outlet Box

 With Volume Control(F) 1000 ohms, for lines up 1050 ohm impedance, or 10,000 ohms for lines up to 500 ohms. C13876-1000 ohms, Brown. C13877-1000 ohms, I vory. C13878- 10,000 ohms, Brown. Any of above,...$\$ 2.35$
Your cost.......
(G) Headphone Adapter With $18^{\circ}$ Cable On fibre panel. $2 \times 2^{\prime \prime}$. For all sets C13942 Your Cost


RADIO CORP., CHICAGO, ILL. ATLANTA, GA


## LINGUAPHONE

## Code Lesson Records

(A) Learn code this easy way at down or speed up your phono as you progress. Will operate on any phonograph or record player. Includes text book and 5 doublefaced $10^{\prime \prime}$ discs (in album). Shpg. wt. 6 lbs.
C21895 -
Your Cost
\$8.82

## Gardiner Model S

(B) Deluxe compact automatic bape sender. Has silent 110
volt a.c. motor. Variable code speed from 4 to 60 words per minute. Only 3 controls: motor switch, contact switch and speed control. Terminals for we with osc. or huzzer. With 10 rolls double perforated tape, Complete postpaid in U.S.A.
C14060
Your Cost
$\$ 20.00$

## Automatic Tape Sender

 Model $J$(C) Compact, easy to operate C) and hixhly accurate. Blank tape is spaced and puncheri, then run through the sender at speeds from 10 to 60 words per minute. For operation on 110 123) volts a.c. Complete with cord and plug. $5 \times .5 \times 3^{\prime \prime}$. Supplied with 5 rolls of blank lape. Shipped postpaid in U.S.A.

C14022-
$\$ 16.50$

## 1 C A Deluxe Signa-tone

## (D) An Audio Oscillator, having

 An Audio Oscillator, having continuously variable volume oontrol. A number of phones and keys nay be connected for class room or radio club instruction. Will follow 'bug' at all speeds. Audio notes similar to those of high quality commercial CW stations. ${ }^{71}{ }_{2} \times 41 / 2 \times 1^{\circ}$. Shpg. wi. ${ }^{4}$ contained speaker, for 110 V . AC-1)Yıur Cost, Ea. \$11. 78

## ICA Signatone

(E) For class and radio club use las with earphones or speakers. tinuously variable volume control. Extra terminals for key and phones. For 110 volt AC, DC. C14076
Your Cost
$\$ 8.82$

## IC A Texminal Box

(F) For quick and neat wiring of key and phone jacks mounted in compact case
C14077
Your Cost
$\$ 2.06$

## Code Practice Set

(H) Wodel 450 . Constant fre(17) quency adjustable buzze: and at standlard hand key with $1 / 8^{\circ}$ silver contacts, mounted on a paris plated. Code card included. paris plated. Code card included. C14027-SingleSet $\$ 265$


## Codelhews AND ACCESSORIES

## Code Practice Oscillator

(G) An audio oscillator with a built-in magnetic speaker. Will also operate up to twenty headphones. Internal speaker is automatically cut out of the cir cuit when headphones are inserted. Provided with variable volume control and variable pitch control. Any number of keys may be connected in parallel to the oscillator for group practice. Metal case linished in grey crackle enamel \$12 25

## SRGNAL Model R-68

 Code Practice Set(J) Key and high frequency buzbase. llook hattery to terminals ( $1^{\prime}$. voll cell required, not supplied) and it is ready to operate. Metal code plate 2 liss.
clisout Your Cost $\$ \mathbf{3 . 8 2}$
Type R-60 BUZZER ONLY: Fully adjustable. Has standard resistance ol 2 ohms. Black crystal lacquer finish.
\$1.32

## Constant Tone Buzzex

 Black bakelite brise and cap. Sil ver connacts. Adjustment on vibrator. Resist. 2 ohms. Olerates on $2-111$ 反 $v$. cells orYour Cos
$\$ 1.06$
C20622 $11 /$ V. cells. Ea. . $61 / 2 \mathrm{c}$ C19867-"C" Batt. Ea .....57 5



CHAMPION Code Key
(A) leavy black-wrinkled cast (A) base ${ }^{3}$ " aligned contacts. and chrome-plated key arm, with tension and side play fully adjustable. C14068-
Your Cost
596
Model 300 Practice Key
(B) Has two adjustments. BakeMachined parts in bright linish. Wit 1 lb.
C14041-
Your Cost.
Mod. 305. With metal - 03
C14053Your Cost

## SIGNAL Pxactice Key

 Model R-50(B) Cast base black ripple finish. Com silver contacts. parts able. Shps. wt. 1 lb . c14009
C14009 -
$\$ 1.40$

## Model 310 Manual Key

(C) Heavy die-cast metal bace able bearings, pure silver contacts. For light duty work. Shpg. wt. 1 lb. Without switch. C14051-

## Your Cos

With suitch
Your Cost


## Model 301 Key

(C) Gencral purpose key molded (C) black bakelite base. Well insulated. Adjustable bearings, silver contacts.
C14040.
Your Cost
$\$ 1.76$ As above, with switch.
c14044
Your Cost........ $\$ 28$

## SIGNAL Key

## With Switch

(C) A telegrapla key with switch to close contacts. Lacquered brass base. Shpg. C14017
Your Cost C14005
$\$ 2=0$
$\$ 2$
Model 321 Senior Key
(D) Heavy duty key with pure plated base and key arm. Adjustplate steel bearings; concealed brass connector strip. Shpg. wt.

## C14039

Your Cost
$\$ 2.54$

## Bakelite Key Knobs

 Brilliant black bakelite. Navy knob with disc.C14037- $\qquad$ 184 Flat paddle as used on most speed keys.
C14038
Your Cost
$15^{c}$

## ta $x^{2} \frac{2 x}{9}$

## ©

## Original'' Vibroplex

(E) For communications work C) where speed and perfect Morse are essential. Single lever Two pairs of contact points: one for dols, other for dashes. Unlimited sending possibilities. Polished parts, black base. Complete


## "Champion" Vibroplex

 (F) Inexpensive and has exceptional sending qualities; speed and ease of operation. Single lever, two pairs of contact points (one for dots, one for dashes). Bright tinish parts, black base. Shps. Wh., illss \$9.95
## Model 515 Hi-Speed Key

(G) Heavy duty high speed key. Twosets of $1 / 8$ silver contacts. Metal parts heavily plated. Black wrinkle finish, base is $3 \times 61 / 4 x^{3} 8^{\prime \prime}$.
High quality construction. Less 41 lbs . cord and plukg. Shyg. wt. Cord and plug for abov C14054-Your Cost 88c

## Caxrying Case for Keys

(H) Plush-lined.black morocco fin key. Inside dimensions: $63 \times 33$ 41 ". Shpq. wt. 3 lbs. $\$ 5.50$
C14059-Each...


1
(A)
(B)

$\frac{15}{\frac{1}{4}} \frac{1}{4}$

JOHNSON Thxu-Panel Insulators
(A) Made of white glazed porcelain; non-hygroscopic. Feature great mechanical strength and increased breakdown voltage. Flat mounting surfaces with cushion washers eliminates breakage. All have longest possible leakage path Jack types have terminals permitting connection above as well as below the panel Nickel plated brass hardware furnished. Ideal for use as terminals on high frequency, high voltage and low frequency devices. Jack tops take standard banana plugs

| Stock | Type | Top | Bot. | Panel | Hard- | Your |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | $\mathrm{Ht} \text {. }$ | $\mathrm{Ht}$ | Hole |  |  |
| C16736 | 40 | 11/4' | $1 / 2{ }^{\prime}$ | $1 / 2$ | 10/32 | 18c |
| C16737 | 40J |  | $1_{2}{ }^{\prime}$ | 12" | Jack | 24c |
| C16738 | 42 | $7{ }^{7}$ | 3/8 | 716 | 1032 | 17c |
| C16739 | 42J |  | \% | 7 | Jack | 21c |
| C16740 | 44 |  |  |  | 6/32 | 14 c |
| C16741 | 45 | $13 \%$ | 11. | 916 | 10/32 | 24c |
| C16742 | 45J | $13 / 8{ }^{\circ}$ | 1110 | 916 | Jack | 29 c |

We can supply any Johnson products not listed here, at standard discounts from the list price.

JOHNSON Stand-Off Insulatoxs All-purpose stand offs made of white glazed porcelain. All furnished with nickel-plated hardware as listed below.

| Vo | Type |  | Body | Har | Cost |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | No. | Fig. | Ht . |  | Cost |
| C16746 | 22 | B | 1 ' | 832 | 7 c |
| C16748 | 22J | E | 1 | Jack | 11c |
| C16745 | 20 | B | $1{ }^{19}{ }^{\circ}$ | 10,32 | 10c |
| C16744 | 20J | E | $1{ }^{19} 10$ | Jack | 12c |
| C17024 | 65 | C | 13\% | 10/32 | 15 c |
| C17025 | 66 | D | 23 " | 1/4-20 | 29 c |
| C17026 | 67 | D | $41 / 2$ | 1/4-20 | 47 c |

## JOHNSON Cones

(F)
Made of ultra steatite insuring minimum of loss at high frequencies. Threads are tapped directly into the ceramic. Ideal for mounting condensers, coils, tube sockets and other high frequency apparatus. Complete with mounting hardware

| No. | Ht | B. Dia. | Thread | Each |
| :---: | :---: | :---: | :---: | :---: |
| C17005 | 8 | 88 | 6/32 | 12c |
| C17006 | 1 | $8 / 4$ | 8/32 | 18 c |
| C17007 | $116{ }^{\circ}$ | 16 | 832 | 32 c |
| C17008 | 2 | 13/8' | $10 \cdot 32$ | 44c |

## JOHNSON Lead-In Bushings

For antenna lead-in bushings, panel bushings, and other applications where insulated mounting is required. Feature long leakage paths. Type A made of white glazed porceain, type 13 made of Alsimag 196; provided with all necessary hardware. Suitable for high frequency work. Cushion washers furnished.


## JOHNSON Feedex Spreaders

(J) Silicone impregnated unglazed porcelain. Impervious to moisture. Sheds water. The ideal line spreader for receiver and transmitter lead-ins. Cross section of all sizes is $3,8 \times \frac{1}{2}$
C17027-2" Long. Each . . . . . . . . . . . 9c C17028- ' Long Each C17029-6 $\mathbf{6}^{\prime}$ Long. Each . . . . . . . . . . . . 15c


BIRNBACH Hi-Voltage

## Feed-Thxough

(K) Has high dielectric and me(1) chanical strength. Extra long leakage path. Bottom sleeve tapped. Height $18^{\prime \prime}$ base dia. $2^{\prime \prime}$; meg. hole 114": Hdwe. ${ }^{1 / 4-20}$ C16712Each.

## BIRNBACH X-mitter Lead-in Insulators

(b)Each $2^{83}{ }^{2}$ high of vitrified glazed porcelain. Wit h nickellead and cork washers to make watertight seals.

| No. | Rod | Bushing | Each |
| :--- | ---: | :--- | ---: |
| c17037 | $10^{*}$ | Metal | $\$ 1.03$ |
| C17038 | $15^{\circ}$ | Metal | 1.18 |
| C17039 | $10^{*}$ | Porcelain | 1.32 |

$\begin{array}{llll}\text { C17039 } & 10^{*} & \text { Porcelain } & 1.182 \\ \text { C17040 } & 15^{\circ} & \text { Porcelain } & 1.68\end{array}$

## NATIONAL

## Steatite Stand-Offs

(M) $12 /{ }^{\circ}$ high, $11 / 8^{\circ}$ centers. GS-8 GS-9 nut and bolt hardware; plug. C14486-GS-8. C14486 C14487-GS: 9
C14487-GS-9.
Your Cost Each
544
754

## Steatite Buttons

(N) Simplifies Wiring. Use as binding post, binding post insulator or as stand-off insulator. $S_{8}$ pecial screw locks both sections. C16711. $6 / 32$ stud

Isolantite Plug \& Socket
(O) For use with XR-16 coil forms.
C14614-PB-16 Plug. $27 \boldsymbol{C}$
Your Cost Each .....


## Steatite "Cones"

(P) Small units tapped 8,32 at each end; GS-6 and GS-7

apped $10 / 32$. | tapped | Type | Height | Each |
| :--- | :--- | ---: | ---: |
| C14493 | TS-10 | 31. | 7c |
| C14483 | GS-5 | $1 l^{1}$ | 24c |
| C14484 | GS-6 | $2^{6}$ | 42c |
| C14485 | GS-7 | $3^{\prime}$ | 75c |

## Isolantite Stand-Offs

(R) Metal mounted top and bottom. Shaped for maximum efficiency. Ideal for r.f. choke cores. Tupe Dia Each Ci4479 GS-1 Dia. ${ }_{1}$ Tt, Each C14480 GS-2 C14481 GS-3
C14,
$2,8 \%, ~ 60 c$

$75 c$ | C14482 GS-4 |
| :--- | :--- | :--- |
| C14475 GS-4A |

## Strain Insulator

(S)

A 11 In' $^{\prime \prime}$ glazed porcelain strain tenna guy wires tenna guy wires.
C17175-Your Cost Ea......
$\mathbf{4 0}$

## ICA Stand-Off Insulators

(1) Made of white glazed insulex.
 C16731-18 ${ }^{\circ} 8^{\prime \prime}$ high
$\qquad$ $\begin{array}{r}7 c \\ 9 \mathrm{c} \\ \hline\end{array}$ C16732-184. high 11 c

## MILLEN Stand-Offs

(d) Quartz Q , a hishly polymerR.F. losses. High resistance to voltage breakdown. Fit ted metal tops. Ideal for low-loss forms.


AMPHENOL "912-A"

## Sheets

(W) Similar to 912-B, but poly Low RF loss.

|  |  | Your |
| :---: | :---: | :---: |
| Stock | Overall | Cost |
| No. | Dimensions | Each |
| C8025 | $4 \times 8 x^{19}$ | 16c |
| C8028 | $4 \times 8 x^{3}$, | 20c |
| C8026 | $4 \times 8 \times 1 / 8$ | 24 c |
| C8027 | $4 \times 8 \times 1$. | 39 c |

## AMPHENOL "912-A"

## Polystyxene Rods

(X) Molded from pure polystyrene. $6^{\circ}$ and $12^{\prime \prime}$ lengths for machining special coil forms and Ow loss parts.
 C8076- ${ }^{\text {² }}$ dia. $\mathrm{d} 6^{*}$ L. ..... 15 c



## AMPHENOL "'912-B"'

## Sheets

(W) Strong, clear fiexible material (Acrylic) for high frequency, RF or high-voltage work Does not deteriorate with age and will not discolor. Absorbs little moisture; water content only. $.8 \%$. Can be cut, drilled, machined, etc. Can be shaped when heated.

|  |  | Your |
| :---: | :---: | :---: |
| Stock | Overall | Cost |
| No. | Dimensions | Each |
| C8071 | $6 \times 8 \times{ }^{16}{ }^{\prime \prime}$ | \$0.59 |
| C8072 | $6 \times 8 \times \frac{1}{8}$ | 1.18 |
| C8073 | $6 \times 8 \times{ }^{3}{ }^{3}{ }^{\prime \prime}$ | 1.73 |

## MILLEN

## Feed-Through Bushing

 (V) mall isolantite unit; lead C7999-
## C7999-



AMPHENOL "gl2-A" Tubing
Polystyrene tubes $12^{\prime \prime}$ long with 1 wall thickness. Ideal for coil
forms. Exiremely low KF loss.

|  |  | Your |
| :--- | :---: | ---: |
| Stock | Overall | Cost |
| No. | Diameter | Each |
| C8029 | 5 | 9c |
| C8030 | $3 / 8$ | 11c |
| C8031 | $3 / 8$ | 19c |

## AMPHENOL "912-B" <br> Strips

A synthetic resin having transparency greater than most glass and having good electrical insulation characteristics. Can be shaped (when heated), drilled, cut, etc. Very strong. In strips $\mathbf{1 2}^{\prime}$ Jong transmicsion for Coil supports, mer bases, or binding post or tin jack mounting strips.

| No. | Width | Each |
| :---: | :---: | :---: |
| C8063 | 1.4 | 12c; |
| C8064 | 1 | 18c |
| C8065 | $3 / 4$ | 24C |
| C8066 | 1" | 30 c |

## BAKELITE Tubing

(Y) In natural smooth black. It ${ }^{\circ}$ thick wall. Cut to your length, any size.

| Stock | Out. | Per | Per |
| :---: | :---: | :---: | :---: |
|  | Diam | $n$ Foot |  |
| C13150 |  | 52c | 29 c |
| C13151 | 1/6" | 67 c | 38c. |
| C13152 | $2{ }^{\circ}$ | 83 c | 46c; |
| C13153 | 21/2' | 98 c | $55 ¢$ |
| C13154 | $3{ }^{\circ}$ | \$1.14 | 64. |
| Natural | Tan | Color, | Walf |
| C13129 | $1 / 4$ | 31 c | 18 c |
| C13130 | $3^{\circ}$ | 33 c | 19c |
| C13131 | 12 | 37 c | 21c |
| C13132 | $8 / 4$ | 44 c | $25 \%$ |

## Industrial Tubes

Ignitrons
High-peak-current gas-filled tubes with a mercury pool cathode. Supply heavy current for use in spot or seam we
tating machinery for changing AC to DC.

## Stock <br> 

## Type GL-415 FG-271 <br> FG-235A

Phototubes

| Max. | Your |
| :---: | ---: |
| Amps. | Cost |
| 22.1 | $\$ 42.00$ |
| 56.0 | 70.00 |
| 140.0 | $\mathbf{1 0 5 . 0 0}$ |
| 355.0 | 230.00 |

Gas-filled and high-vacuum types. No grid.



## EIMAC Power Tubes

Famous for their efficiency, long life, and performance.

| Stock |  | Your | Stock |  | Your |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Cost | No. | Type | Cost |
| C24700 | 322500A3 | \$165.00 | C24708 | 35 T | \$ 7.00 |
| C24701 | 4-65A | 14.50 | C24709 | 35TG | 8.00 |
| C24702 | 4-125. | 25.00 | C24710 | 75TL | 10.50 |
| C24703 | 4 X 150 A | 31.00 | C24711 | 75 TII | 10.50 |
| C24704 | 4-250A | 36.00 | C24712 | 100TL | 15.00 |
| C24705 | 4X500A | 85.00 | C24713 | 100 TIL | 15.00 |
| C24706 | 3C21/2 IG | 6.00 | C24714 | 250 TL | 27.50 |
| C24707 | 25 T | 6.00 | C24715 | 250TH | 27.50 |

## HYTRON Tubes

| Stock |  | Your | Stock |  | Your |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Cost | No. | Type | Cost |
| C24740 | OA2 | \$2.30 | C24749 | HY615 | \$2.25 |
| C24741 | OB2 | 2.30 | C24750 | 801 A | 3.00 |
| C24742 | 2 E 25 | 3.95 | C24751 | 807 | 2.30 |
| C24743 | 2 E 30 | 2.25 | C24752 | 816* | 1.25 |
| C24744 | IYY21 | 1.50 | C24753 | 8664 $/ 866$ | 1.75 |
| C24745 | I1Y31Z | 3.95 | C24754 | HY12312 | 4.50 |
| C24746 | HY69 | 3.95 | C24755 | HY1269 | 4.50 |
| C24747 | HY75A | 3.95 | C24756 | $5511 \dagger$ | 3.95 |
| C24748 | HY114B | 2.25 | C24757 | 5516 | 3.95 |
| *iReplac <br> $\dagger$ Replac | s type 866 <br> stypes II | , 40, | 51A, 5 | , and 51Z. | 3.5 |

## HEINTZ and KAUFMAN Gammatrons

|  | Taylo |
| :--- | :--- |
| Stock | Type |
| No. | Type |
| C24721 | T-20 |
| C24722 | TUF-20 |
| C24723 | TZ-20 |
| C24724 | $\mathrm{T}-21$ |
| C24725 | TB 35 |
| C24726 | $\mathrm{T}-40$ |
| C24727 | TZ-40 |


| Stock |  | Your | Stock |  | Your |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Type | Cost | No. | Type | Cost |
| C24763 | 21 | \$ 4.75 | C24767 | 257B | \$24.50 |
| C24764 | 51 | 8.00 | C24768 | 351 C | 24.50 |
| C24765 | 57* | 15.00 | C24769 | $451 \mathrm{H} \dagger$ | 27.50 |
| C24766 | 254 | 13.50 | C24770 | $851 \mathrm{H} \dagger$ | 60.00 |

*New air-cooled beam mentode, 50 watt diss. VHF without neutralization. Very low driving power. Tantalum grid and plate. $\dagger$ High-Mu types (Low-Mu on special order).

## TRANSMITTING AND SPECIAL PURPOSE TUBES

As one of the largest distributors of RCA tubes, we carry a complete stock of transmitting, power, and special purpose types. If the particular type you want is not listed, please write for quotation. RCA tubes



Stock.
Your

1 COA3 V1275 OA1G OB3 V1R90 OC3/VR105
OD3/VR150
1 ? 1 C 21
2 C 40

## $2 C 21$ $2 C$

## 

## 2D21 2 E 21

| GE |  |
| :---: | :---: |
| Stock No. | Your Cost |
| C24566 | \$1.20 |
| C24568 | 1.40 |
| C24569 | 1.20 |
| C24570 | 1.20 |
| C24572 | 13.50 |
| C24573 | 10.30 |
| C24574 | 1.80 |
| C24575 | 5.10 |
| C24576 | 3.50 |
| C24578 | 1.80 |
| C24580 | 12.00 |
| C24582 | 25.00 |
| C24583 | 1.30 |
|  |  |
| . . . | ..... |
| C24588 | 12.00 |
| C24589 | 12.00 |
| C24590 | 3.00 |
| C24591 | 4.25 |
| C24592 | 11.75 |
| C24593 | 2.30 |
| C24595 | 3.50 |
| C24596 | 12.50 |
| C24597 | 3.50 |
| C24598 | 3.50 |
| C24599 | 14.50 |
| C24600 | 12.50 |
| C24601 | 6.25 |
| C24602 | 1.25 |
| C24603 | 9.25 |

G-E monogram tubes are manufactured with the most modern high precision equipment, and are pretested to insure long trouble-free-serv every G -E tube you purchase and install.

| RCA |  |  | G5 |  |
| :---: | :---: | :---: | :---: | :---: |
| Stock | Your |  | Stock | Your |
| No. | Cost | Type | No. | Cost |
| C24836 | \$12.50 | 828 | C24604 | \$12.50 |
| C24837 | 14.75 | 82913 | C24605 | 14.75 |
| C24838 | 10.60 | 832A | C24606 | 10.60 |
| C24839 | 4.15 | 837 | C24607 | 4.15 |
| C24840 | 3.80 | 811 |  |  |
| C24841 | 12.00 | 845 | C24609 | 12.00 |
| C24842 | 1.75 | 8176A | C24610 | 1.75 |
| C24843 | 2.15 | 8188 | C24611 | 2.15 |
| C24844 | 7.50 | 872A | C24612 | 7.50 |
| C24845 | 11.00 | 878 |  |  |
| C24846 | 1.70 | $88!$ | C24614 | 1.70 |
| C24847 | 1.80 | 885 | C24615 | 1.80 |
| C24848 | 3.00 | 917 | C24616 | 3.00 |
| C24849 | 2.60 | 918 | C24617 | 2.60 |
| C24850 | 3.00 | 919 | C24618 | 3.00 |
| C24851 | 3.60 | 920 | C24619 | 3.60 |
| C24852 | 1.75 | 921 | C24620 | 1.75 |
| C24853 | 1.80 | 922 | C24621 | 1.80 |
| C24854 | 1.75 | 923 | C24622 | 1.75 |
| C24855 | 1.85 | 925 |  |  |
| C24856 | 2.50 | 926 |  |  |
| C24857 | 2.50 | 927 | C24625 | 2.50 |
| C24858 | 1.75 | 929 | C24626 | 1.75 |
| C24859 | 1.50 | 930 | C24627 | 1.50 |
| C24860 | 9.25 | 931A | C24628 | 9.25 |
| C24861 | 4.90 | 954 | C24629 | 4.90 |
| C24862 | 3.10 | 955 | C24630 | 3.10 |
| C24863 | 5.45 | 956 | C24631 | 5.45 |
| C24864 | 3.25 | 957 | C24632 | 3.25 |
| C24865 | 5.45 | 958 1 |  |  |
| C24866 | 6.15 | 1603 | C24834 | 6.15 |
| C24867 | 2.60 | 1612 | C24635 | 2.60 |
| C24868 | 6.00 | 1620 | C24636 | 6.00 |
| C24869 | 2.00 | 1622 | C24637 | 2.00 |
| C24870 | 3.50 | 1623 | C24638 | 3.50 |
| C24871 | 3.50 | 1621 | C24639 | 3.50 |
| C24872 | 2.30 | 1625 | C24640 | 2.30 |
| C24873 | 1.60 | 1626 |  |  |
| C24874 | 1.20 | 1629 | C24642 | 1.20 |


| RCA |  |  | 68 |  |
| :---: | :---: | :---: | :---: | :---: |
| Stock | Your |  | Stock | Your |
| No. | Cost | Type | No. | Cost |
| C24875 | \$ 2.70 | 1851 | C24643 | \$ 2.70 |
| C24876 | 1.70 | 2050 | C24644 | 1.70 |
| C24877 | 1.70 | 2051 | C24645 | 1.70 |
| C24878 | 7.00 | 8005 | C24646 | 7.00 |
| C24879 | 14.00 | 8012 A | C24647 | 14.00 |
| C24880 | 9.00 | 8013A | C24648 | 9.00 |
| C24881 | 2.70 | 9001 | C24649 | 2.70 |
| C24882 | 2.15 | 91002 | C24650 | 2.15 |
| C24833 | 2.70 | 9003 | C24651 | 2.70 |
| C24884 | 1.45 | 9006 | C24652 | 1.40 |

## RCA-GE

## Television and

 Cathode Ray TubesPost-war tubes. Incorporate all the recent improvements in materials and design.

| RCA |  |  | GE |  |
| :---: | :---: | :---: | :---: | :---: |
| Stock | Your |  | Stock | Your |
| No. | Cost | Type | No. | Cost |
| C24905 | \$ 9.50 | 2AP1A | C24673 | \$ 9.50 |
| C24906 | 8.75 | 2B1] |  |  |
| C24907 | 13.00 | 3 MPl | C24675 | 13.00 |
| C24908 | 13.25 | 3KP1 |  |  |
| C24909 | 20.50 | $5 \mathrm{BP1}$, | C24677 | 20.50 |
| C24910 | 21.00 | 5CP1A | C24678 | 21.00 |
| C24911 | 27.50 | 5 BP | C24679 | 27.50 |
| C24912 | 67.50 | 5T11 |  |  |
| C24913 | 15.50 | 5U1 ${ }^{\text {U }}$ |  |  |
| C24914 | 24.00 | $7 \mathrm{CP1}$ |  |  |
| C24915 | 27.00 | 7 DP 4 |  |  |
| C24916 | 24.25 | 7 GP 4 |  |  |
| C24917 | 62.50 | $9 \mathrm{AP4}$ |  |  |
| C24918 | 49.50 | 10 BP 4 |  |  |
| C24919 | 75.00 | 12AP4 | C24687 | 75.00 |
| C24920 | 14.00 | 913 |  |  |
| C24921 | 47.50 | 5527 |  |  |

# RACKS•PANELS CABINETS 




Table Racks
 (A) ${ }^{3} 10^{\prime \prime}$ steel with black ripple finish. Mounting holes wide and $12^{\prime \prime}$ deep.
C22102-25* high. Panel space $21 \times 19^{\circ}$. Shipping weight 33 lbs
C22103-32" high. Panel weight 36 lbs. Your Cost
6.76

## Enclosed Steel Racks

(G)
Deluxe type, streamlined. Universally drilled for all standard panels. .tainless steel trimming at top and bottom. Finished in slate gray. Black ripple are $22^{1} 2^{\prime \prime}$ wide, $16^{1} 2^{\text {d }}$ deep. Hinged back. Shipped knucked down, with all hardware. With 2 locks on rear door.

| Stock | Height | Panel | Weight | Your |
| :---: | :---: | :---: | :---: | :---: |
| No. | In. | Space | Lbs. | Cost |
| C22145 | $42^{\prime}$ | $36{ }^{\prime}$ | 100 | $\mathbf{5 2 9 . 4 0}$ |
| C22146 | $66^{1}$, | $61^{\prime \prime}$ | 150 | 39.69 |
| C22148 | $821^{\circ}$ | $77^{\circ}$ | 175 | $\mathbf{4 7 . 0 4}$ |

## Steel Channel Racks

Built of $1 / 8{ }^{\circ}$ steel with spot-welded corners. Finished in ripple black. Designcd for use with standard $19^{*}$ long paneis and are universally drilled for all standard panels. Base is $6^{2}$ deep, $20^{\circ}$ wide. Inoles are tapped for $10-32$ screws. Base is braced to in ure freedom from woble and to keep units in alignment. All heights shown below are overall dimensions. C2150-731/ "high. Wt. 85 lbs. Panel space $713^{3 / 4}$
Youm Cost
C22351-38, high. Wit. 5\% lbs. Panel space 369 Your Cost
s 17.64

## MASONITE and BAKELITE Radio Panels

Masonite: Tempered Masonite, nonmagnetic, sturdy, yet easily worked with ordinary woudwork:nc toots. All panels ${ }^{3}$, thick, finished in Black kipple Bak ifite: Fine grade bakelite, black finish panels, ${ }^{8} 16^{\circ}$ thick. Also suitable for test instru men's, meters, etc.

| Size | MASONITE PANELS |  | $\begin{aligned} & \text { Each } \\ & \$ 0.59 \end{aligned}$ | BAKELITE PANELS |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $7 \times 10^{\circ}$ | \% 1 lb . | C22280. |  | Stock No. | Each |
| $7 \times 12^{\circ}$ | $1{ }^{\text {l }}$. | C22281 | . 65 | C19601 | 1.32 |
| - $\times 14^{\prime}$ | 1 lb . | C22282 | . 73 | C19602 | 1.61 |
| - $\times 18$ | 1 1\%. | C22283 | . 88 | C19603 | 2.41 |
| \%x-1 ${ }^{\text {\% }}$ | 1/2libs. | C22279 | . 97 | C19604 | 2.73 |
| 7x. $1^{\prime \prime}$ | 12 l l bs . |  |  | C19605 | 3.73 |
| ${ }^{5 \times 3} 30^{*}$ | 2 lbs . |  |  | C19608 | 3.97 |

MASONITE Relay Rack Panels

(E)

## I.C.A. Heavy Steel Rack Panels,

1lenvy-duty Black or Gray racks. Available with either black ripple finish or with commercial stategrayrinple. These pancls don't collect dust--and they don t show finger marks. Avail able in 12 standard sizes to mect any recuirements.

| Black | Gray | leight | Weight | Your |
| :---: | :---: | :---: | :---: | :---: |
| No. | No. | 1 l . | Lbs. | Cost |
| C22169 | C22118 | $13 / 3$ | 2 | \$0.65 |
| C22170 | c22119 | $3^{1 / 3}$ | 5 | . 73 |
| C22171 | C22120 | 514 | 7 | . 85 |
| C22160 | C22121 | 7 | 8 | . 91 |
| C22161 | C22122 | 83/4 | 9 | 1.15 |
| C22162 | C22123 | $10^{1 / 2}$ | 10 | 1.29 |
| C22163 | C22124 | 121 | 12 | 1.59 |
| C22164 | C22125 | 14 | 13 | 1.82 |
| C22165 | C22126 | $153 / 4$ | 14 | 2.12 |
| C22166 | C22127 | 1712 | 15 | 2.26 |
| C22167 | C22128 | 191 | 16 | 2.45 |
| C22168 | C22129 | 21 | 17 | 2.76 |

I.C.A. $1 / 16^{\prime \prime}$ Steel PanelsBlack wrinkte finish. For all radio appli-
cations. N

| No. | Size | Wt. | Each |
| ---: | ---: | ---: | ---: |
| C22218 | $7 \times 10^{\circ}$ | 2 lbs. | $\mathbf{5 0 . 4 7}$ |
| C22219 | $7 \times 12^{\circ}$ | 2 bs. | .53 |
| C22220 | $7 \times 14^{\circ}$ | 3 lbs. | .71 |
| C22221 | $7 \times 18^{\circ}$ | 1 lbs. | .88 |



I.C.A. Steel Cabinets for Rack Panels
$\star$ Standard Rack Panel Mounting $\star$ Built-in Louvres-Latch Covers $\star$ Regular Black Ripple Finish
(A) I Ieavy-duty cabinets huilt of ${ }^{1}$ " steel and finished in black ripple. Standard and DeLuxe models. Standard models have square re-enforced corners; spot welded joints. DeLuxe models have neatly rounded corners. Both types are universally drilled to take all standard $19^{\prime \prime}$ rack panels. All have louvres and latch covers. All take chassis 13 , deep.
De Luxe available with slate gray finish on special order.

## Standard Steel Cabinets

| Stock | Cabinet | Panel | Do | Shpg. | Your |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dimensions | Suace | Location | Wt. |  |
| 22194 | $8{ }^{3} \frac{1}{1} \times 19 \times 131 \frac{1}{2}$ | 8 8, $\times 19$ | op Only | 20 lbs . | 35 |
| C22070 | $12^{1} \times 19 \times 13^{1}$ | $12,1 \times 19$ | Top Only | 27 lus. | 10.73 |
| C22193 | $171 \times 12 \times 13$ | $11^{11} \times 19^{\circ}$ | Top \& Rear | 34 lbs . | 13.82 |
| C22192 | $26^{2} \times 19 \times 13{ }^{1}$ | $261,4 \times 19$ | Rear Only | 47 l hs. | 15.14 |
| C22190 | $35 \times 19 \times 1312$ | $35 \times 1$ | Rear Only | 55 lbs . | 18.43 |

## I.C.A. De Luxe Steel Cabinets






## I.C.A. Portable Steel Cabinets



(B)
For housing oscillators, transceivers, test equipBent. Front and back panels are removable Equipped with leather handle. Finished in black ripple

| No. |  |  |
| :---: | :---: | :---: |
| C22273 $12 \times 73 / 4 \times 7^{\circ}$ | Size | $\begin{array}{l}\text { Your } \\ \text { Cost }\end{array}$ |



## I.C.A. DeLuxe Hinged Steel Cabinets

Attractive streamlined cabinets, with full length piano hinged top and removable front panel. Chrome trim moulding and ventilators on side. Finished in slate gray No. II. L. D. Panel For Chassis EachNo chassis.

| No. | II. L. D. | Panel | For Chassis | Each |
| :---: | :---: | :---: | :---: | :---: |
| C22087 | $8 \times 10 \times 8{ }^{\circ}$ | $8 \times 8{ }^{\circ}$ | $7 \times 7 \times 2$ ' | \$4.26 |
| C22088 | $8 \times 12 \times 8{ }^{\circ}$ | $8 \times 10^{\circ}$ | $7 \times 9 \times 2$, | 4.41 |
| C22089 | $8 \times 14 \times 8$ | $8 \times 12^{\circ}$ | $7 \times 13 \times 2$ - | 5. |
| C22091 | $12 \times 20 \times 12^{\circ}$ | $12 \times 18^{\circ}$ | $10 \times 17 \times 3^{\circ}$ | 8. |

## I.C.A. Standárd Minged Steel Cabinets

Similar to above, less chrome trim with ventilating louvres

| Slock |  | Pimen. | Panel |
| :---: | :---: | :---: | :---: |
| No. | Size | Your |  |
| C22200 | $8 \times 10 \times 8^{\circ}$ | $8^{\circ}$ | $8 \times 8^{\circ}$ |
| C22201 | $8 \times 12 \times 8^{\circ}$ | $\$ 2.94$ |  |
| C22202 | $8 \times 14 \times 8^{\circ}$ | $8 \times 10^{\circ}$ | 3.23 |
| C22203 | $12 \times 20 \times 12^{\circ}$ | $8 \times 12^{\circ}$ | 4.12 |

## I.C.A. General Utility Steel Cabinets $\star$ Sheet Steel $\star$ Spot Welded Corners

(D)
Can be used for a multitude of radio and other purposes. All are substantially made of sheet steel, with spot welded re inforced corners. The tops and bottoms are removable: held in place by means of self-tapping screws
that are furnished. Black ripple. that are furnished. Black ripple.
No.
C22209
C22210
C22174
C22175
C22173
C22176
C22177
C22181
C22182

| Size |
| :---: |
| $4 \times 2 \times$ |
| 4x 3x |
| $6 \times 6 \times$ |
| 9x 5 x0 O8 |
|  |  |
|  |
|  |
| $12 \times 7 \times 6^{\prime}$$15 \times 9 \times 7$ |
|  |  |

## Shpg. Wt. Each

 2 lbs. $\quad \$ 0.76$ 2 lbs.3 lbs. 3 lbs. 6 lbs. 7 lbs.
9 ibs. 5 lbs. 10 lbs.
$\begin{array}{r}.82 \\ .91 \\ \hline 147\end{array}$
.91
1.47
1.87
2.26
2.45
2.26
2.45
1.82


ICA Sloping Panel Steel Cabinets
Streamlined cabinets with rounded corners. Compact and rugged. For use as speaker cabinets, oscillat or cases, monitors, tele-talk systems, small receivers, ctc. Both have marine gray ripple finish
C22097-(A) 41 र $\times 41.2 \times 41 \%$ Wt. Each C22098-(ib) $7 \times \times 4,2 \times 4,5 \mathrm{lbs} \quad 2.26$

## ICA Sloping Front Cabinets

(C) Trimmed with red-striped moulding, with slate gray ripple fimish. Front pane removable. Rear with openings for ventilation, leads, etc. Less chassis.
Stock
c20092 H.W.D. Chassis Wt. Cost c20093 8x 8x 8" $7 \times 1 \times 2^{\prime \prime} 6$ Ibs. $\$ 3.88$

 | c22096 $12 \times 18 \times 12^{\prime \prime}$ | $10 \times 17 \times 3^{\prime \prime}$ | 14 lbs. | 7.50 |
| :--- | :--- | :--- | :--- |

## Chrome Handles

(D) A beautiful adornment for any cabinet, amplilier chassis transmitter, etc. With ${ }_{\mathrm{C} 14563}^{\mathrm{mtg}}$ screws. to long. Mig. centers ${ }^{23}{ }^{3 /}$ Your Cost

44


## ICA DeLuxe Meter Cases

(E)
Designed to harmonize with the trend of modern streamlined equipment. Finished in Marine Gray Ripple Enamel and trimmed with red striped Chrome band. For $3^{\prime}$ meters.
 C22081-Same as above with $2^{3} 16^{6}$ meter hole. Your Cost
$\$ 1.32$

## MILLEN Quartz "Q" Sheet



For panels, condenser mıg., insulation, etc. Drils and cutsrapidly. Quartz " $Q$ " is ably low lर.F. loss and high resistance to voltage breakdown. Size: $3 \times 8 \frac{1}{2}: 1,10^{*}$ thick. C8024-Millen No. 55001. Your Cost Ea. 45 C

## Sheaxing Punch

(G)
Cuts any size orid shape hole (square, rectangular, hexagon, etc.), on any size panel or chassis. Only hammer is necessary. Can be used in a punch press. Wt. 5 lbs.

## C15067

Your Cost Each
s9.70


## ICA Standard Amplifier

## Foundation Chassis

(A) Streamlined amplither chassis and covers, with new decorative grille-type ventirolled sleel, finished in black ripple. Covers are $6^{\circ}$ deep and slate gray, presenting a conrastine two tone effect. Chassis are drilled for botiom plates (not supplied) see listing on opposite page. Chassis height $3^{\circ}$. No. Size WL. Each


 C22137 $10 \times 17 \times 9^{\circ} 13$ Ins. $\quad 3.82$ but with chromium molding and handles.


| Super Streamlined Amplifier Chassis |  |  |
| :---: | :---: | :---: |
| (B) New modern streamlined design. Sloping |  |  |
| Front panel is removable and extends $3^{\prime \prime}$ from face of screen top. Finished in marine gray |  |  |
|  |  |  |
| ripple, chrome metal trim. Top cover ${ }^{\text {che }}$ |  |  |
|  |  |  |
| high. Supplied with bottom plates, but less |  |  |
| ${ }^{\text {Stock }}$ N | Chassis Size | Your ${ }_{\text {cost }} \mathbf{5} .88$ |
| C22196 | 10x17x |  |
| C22196 | $13 \times 17 \times 3^{\circ}$ |  |

## ICA Sloping Chassis Units

(C) Deluxe steel amplifier units with sloping fronts on chassis bases. Bases equipped with chrome trimmed handles; top covers ventilators with red striped chrome trim Ventilating louvres on sides and back. Raised Centhen openings on chrome moldinit Rounded corners Narine ,
 $31 / 2^{*}$ high.
O2131 Overall Bottom Wt. Each C22131 $7 \times 17 \times 911^{\prime \prime}, 10 \times 17^{\prime \prime}, 11$ lbs. 56.03 C22134 $10 \times 14 \times 91$, $13 \times 14^{\prime \prime}, 11 \mathrm{lbs}{ }^{6.47}$ $\begin{array}{llllll}C 22147 & 10 \times 17 \times 91 \frac{1}{2} & 13 \times 17^{\circ} & 11 & \mathrm{lbs} . & 6.76\end{array}$

ICA Steel and Aluminum Chassis (D) Have four solid sides, welded corners; Bottom edges flanged in for additional reinforcement, drilled for bottom plates steel chassis. No. 20 gauke, black ripple finished. Aluminum chassis $.055^{\circ}$ thick uninished.

| Size | Steel |  | Aluminum |  |
| :---: | :---: | :---: | :---: | :---: |
| D. 1. |  | Ea. | No. |  |
| $5 \times 9 \mathrm{y}$ | C222 | \$0.67 | C22237 | 50.73 |
| \%x $7 \times 2$ 2* | C22212 | . 82 | ${ }_{C} 2223238$ | . 05 |
| $7 \times 9 \times 2$ \% | C22213 | . 88 | C22239 | 1.06 |
| $7 \times 11 \times 2{ }^{*}$ | c22214 | . 97 | C22243 | 1.14 |
| $7 \times 13 \times 2$ - | c22215 | 1.06 | C22244 | 1.22 |
| $7 \times 15 \times 3$ | c22216 | 1.26 | c22245 | 1.47 |
| $7 \times 17 \times 3^{\text {\% }}$ | C22217 | 1.26 | C22246 | 1.47 |
| $10 \times 12 \times 3{ }^{\text {F }}$ | c22226 | 1.38 | C22247 | 1.64 |
| $10 \times 17 \times 3^{*}$ | C22227 | 1.29 | C22248 | 1.79 |

## ICA Black Ripple Finish Steel Bottom Plates

Bottom plates have holes to match the steel chassis listed :above, and have pressed "bumpers" at the corners.


## Steel Chassis With Bottom Cover Plates Heavy Duty Type

One piece $1 / /^{\prime \prime}$ steel. All corners reinforced Ends drilled to tit standard mtg. bracket. All black wrinkle finish.

| No. | W. L. D. | Lbs. | Each |
| :--- | ---: | ---: | ---: |
| N22155 | $8 \times 17 \times 2^{\prime}$ | 9 | $\$ 2.53$ |
| C22229 | $8 \times 17 \times 3^{\prime}$ | 10 | 2.79 |
| C22231 | $11 \times 17 \times 2^{\prime \prime}$ | 11 | 2.79 |
| C22156 | $11 \times 173^{\prime \prime}$ | 12 | 3.03 |
| C22230 | $13 \times 17 \times 22^{\prime}$ | 13 | 3.26 |
| C22232 | $13 \times 17 \times 3^{\prime \prime}$ | 14 | 3.53 |

## FOUNOTION CIBIIETSTCHISSIS



## GREENLEE Punches

Driven by screw action, this handy tool quickly cuts clean accurate holes for sockets, plugs, etc., in radio chassis. Only necessary to drill ${ }^{3} 8^{\prime \prime}$ or " hole to fit ${ }^{3}{ }^{\circ}$ capscrew; 84" or larger hole to fit $34^{\circ}$ cap screw. Each size lool consists of the punch, die for supporting the metal and cap screw. Wt. 2 lbs. C15129-1 Complete. C15130- " Complete
C15131-C15132-74, Complete Your Cost Any of Above ... $\mathbf{\$ 1 . 9 4}$ Punches. Your cost 1513. $2 / 5^{2}$ Punches. Each....... 23 4 C15136-1 Complete........ $\mathbf{5 2 . 1 2}$ $\left.\begin{array}{l}\text { C15137-11 } 16^{\circ} \text { Cplt. } \\ \text { C15138-1 } \\ \text { C15139-13 } \\ \text { Cplt } \\ \text { C15lt }\end{array}\right\} \$$ EACH C15140-1.
\$2.25 C15142-13, ${ }^{3}$ Complete . . . . $\$ 2.57$ C15143-11" Complete..... 2.88 C15118-Screw for $1^{\prime \prime}$ to $115^{\circ}$ inclusive. Each Complite......... 55.58 C15147-Screw for 21 " Punch.45c


Blank Metal Chassis Bases
(E) Here's your chance to buy all-purpose radio have reinforced spoi welded corners for extra strength.
Three types available: Electralloy is a non-mag netic zinc. Steel, plated with lead or zinc as available; also Steel with black wrinkle finish.


## ICA Standard Speaker Cabinets

(F) Substantially made from sheet steel, with louvred back cover with slots for wall hang$\begin{array}{lccc}\text { ing. Finished in black ripple enamel. } \\ \text { Stock } & & \text { Size } & \text { Shp } \\ \text { No. } & \text { Spkr. } & \text { Calsinet } & \text { Wt. } \\ \text { C22140 } & 6^{\circ} & 10 \times 1066^{\prime \prime} & 81 \mathrm{~b} \\ \text { C22141 } & 8^{\circ} & 12 \times 12 \times 7^{\circ} & 91 \mathrm{~b} \\ \text { C22142 } & 10^{\circ} & 11 \times 11 \times 8^{\circ} & 151 \mathrm{~b} \\ \text { C22143 } & 12^{\circ} & 16 \times 16 \times 8^{\prime \prime} & 201 \mathrm{~b}\end{array}$

| Stock |  | Size | Shps |
| :---: | :---: | :---: | :---: |
| No. | Spkr. | Calinel | Wt. |
| C22140 | $6^{*}$ | $10 \times 10 \times 6^{\prime \prime}$ | 81 bs |
| C22141 | $8^{\circ}$ | $12 \times 12 \times 7^{\circ}$ | 91 bs |
| C22142 | $10^{\circ}$ | $11 \times 11 \times 8^{\circ}$ | 151 bs |
| C22143 | $12^{\circ}$ | $16 \times 16 \times 8^{\circ}$ | 201 hs |

Your
Cost
$\$ 3.00$


## Fluorescent Kitchen Unit

With this unit fluorescent lighting can be installed instantly in any incandescent type of lixture employing a globe wher This holder. This par icular Kitchen unit is complete with 4* Fitter. No electrical knowledge is necessary-just insert the plug of the adaptor in the shade holder and enjoy modern better lighting instantly
Although listed as a Kitchen unit, this is a superbly designed fixture whereby the average householder can install fluorescent lighting in not only the kitchen, but in the bathroom, hallway and many other nlaces where a soft light is desired. Underwriters' approved materials have been used throughout. Finished in baked-on white plastic "glazenamel." Wired for $110-125$ volts, 60 cycles alternating current only. For ase with two 20 -watt, $21^{\prime}$ fluorescent lamps. Shpg. Wt. 7 lbs . \$m C25551-Your Cost (Less Lanps)
5.70 C25535-White Lamp. Each 68c C25536-Daylight Lamp. Each 68c

## WARD Fluorescent Kitchen Unit



Reautifully designed fluorescent unit for kitchen use. Special interior finish distributes light scientifically through glass shields for maximum illumination. Can be installed instantly in any incandescent type fixture employing 4 diameter holder Unit complete with ring plug on short ring, Fixture is $25^{\circ}$ long. Shipping weight 12 lbs . C2555 - Your Cost.
$\$ 7.35$

## Bed and Utility Lamp



Here is a real fluorescent bed lamp. Soft, cool light that is easy-on-the-eyes. Beautifui llaminerloid with stainless steel. The universal type of nounting brackets at the rear of this lamp enables this unit to be fastened wherever desirable. Alay be easily hooked into the headrest of your bed. Its attractive lines make it suitable for many other applications too, such as: over pictures, bulletin suitable for many other applications too, su
1 las a high efficiency white enameled reflector that gets every bit of light out of the fifteen watt $18^{\circ}$ fluorescent lamy. This fixture is ready or use on $110-125$ volts, 60 cycle alternating current only. Shipg C25552-
C25552-Your Cost (Less Lamp)
$\$ 5.07$
C25496-White 1 luorescent Lamp. Each . $.56 c$
$.56 c$

## All-Steel Industrialite



For high in ensity, local zed lighting of produc tion, assem bly, and inspection lines, over benches, machines tables. Underwriters approved. Has been engineered for flush, chain or stem mounting and has double knockouts at each end for switches or for end to end continuous row mounting. Knockouts along top for stem mounting.
Mlaximum lighting efficiency assured by the use of a pressed steel re flector of "clazenamel." 13allast fully enclosed, and starters easily ac cessible on side of pressed steel housing. For use on 110 volt, 60 cycle AC only. Uses two 40 watt, $48^{\prime \prime}$ lamps. High power factor corrected. Re flector can be easily removed for cleaning without disturbi

C25565-Your Cost (Less Lamps).
$\$ 13.9$
C25539-White Fluorescent Lamp. Each Industrialite Accessories
C25690- U L Approved Cord and Plug Set. 61/2" L.
C25691-Levolier Switch with pull chain



## Tubular Executive

 Desk Lamp*Morocco Brown Finish *U.L. Approved Materials * Convenient Pen Trough Scientifically engineered, this fine unit is built to give maximum light distribution. Combined with the latest in smart, attraclive design o sturdy and substantial materials this fuorescent desk lanıp has a shade and base of one picce pressed steel construction. Gives a miraculously high lighting performance Curved rellecting surface in baked-on white plastic "rlazenamel" con centrates light forward to provide an even and useful light over an entire desk area. Wired exclusively with Underwriters' approved ma eriais. For $110-125$ volts, 60 cycle, alternating current only Uses 1 15 watt, $18^{*}$ type lamp. Shpg. wt. 8 lbs.
C25550-Your Cost (Less Lamp)
C25496-White Fluorescent Lamp. Each
$56 c$
C25497-Daylight Fluorescent Lamp. Each.
56 c

## Circular Executive Desk Lamp



## $\star 32$-Watt Circular Lamp $\star$ More Uniform Light $\star$ Instant Starting

Attractively designed, beautiful bronze finished executive desk lamp Employs new type 32 -watt circula vorescent lamp that starts in tantly without flicker. The circular construction of the lamp gives greater light intensity and more uniform distribution of light over a larger area. This type lamp ner mits the use of a circular shade which enhances the appearance of the lamp. The heavy base makes the lamp perfectly balanced and prevents topheaviness. An attrac ive lamp for offices, homes, lounges, stores, and wherever good light and appearance are desired. For operation on 117 volts 60 cycle alter nating current only. Overall size: $1414^{\circ}$ diameter by $18^{\circ}$ high. Slipe wt. 13 lbs.
C25554 - With Circular Lamp.
Your Cost

## $\$ 22.00$

## COMPCO "Circline Series' Lamps <br> Desk and Table Lamp



Beautifully designed executive lamp for soft. glareless illumintion over the entire desk or table top). Sturdi ly constructed of heavy gauge steel. perfectly balanced by gracefully curved base enclosing the ballast. Complete with 32-watt C'ircline fuorescent tube. Baked on enamel finish in metallic "statuary bronza" $15^{\circ}$ high. Shipping weight $10^{\mathrm{lb}}$. C25557
Your Cost, With Lamp
$\$ 14.11$

## Pin-up Miryor Light

Novel decorative effect as well as fine illumination in homes, thotels and public buildings. F inest quility 8 -inch plate glass murror encircled with soft flattering fluorescent light Uses 12 -inch diameter 32 watt glireless circline. Back of fixture provided with buffers to keep fixture from laying flat on wall, allowing ar circulation between wall and fixture For 110 volt 150 cycle AC only Complete with lamp. Shipping weight 9 lbs.
C25558 -
Your Cost
\$12.20

## Ceiling and Wall Fixture



For the kitchen, bathroom, entrance halls and playroom. Sturdily built, artistically designed fluorescent unit of heavy gauge steel. Cleaming White baked on enamel washable finish - with polished aluminum trim. Uses the new 32 watt glareless circline tube which gives more il circline tube, which gives more ildescent. Diameter 13 wath incanflush on ceiling or wall. For 110 volt 60 cycle AC only. Shpg. wt. 9 lbs. C25556-
Your Cost, With Lamp


## PENWOODCLOCKS

Newly designed and styled Numechron electric clocks provide quiet, trouble-free time keeping without winding, oiling or regulating. A style and color for every need, in the home, ofice or elsewhere. I arge $s_{8}$-inch block numerals. Ilirect reading dials for the hours, minutes and seconds Ruggedly constructed self-starting synchronous motors. precision made mechanisms and gear assemblies for accurate dependable time. Operates on 110 volts, 60 cycle. AC
(A) Commander. Desk model, heautifully styled modern plastic (A) case. Available in Walnut or Ivory finish. Length 73** height 4* denth $4^{4}$. Shpg. wt. 3 lbs
C25450-Walnut.
C25451 Ivory.
\$7.11
(B) Vogue. Attractively styled Kitchen or Wall Clock. Available in B) Ivory finish plastic case. Length $5 \frac{3}{\circ}{ }^{\prime \prime}$, height $51 / 4$ C25452-I vory
Your Cost
$\$ 5.81$
Topper. Desk or table model in non-breakable Cellulose Acetate plastic case. Recessed clock face can be easily read Available in Walnut or Ivory finish. Length $5 \frac{3}{4}$, height $3^{5 / 8}$, depth $37 / 8^{\circ}$. Shpg. wt. 4 lbs .
C25455-Walnut.
C25456-I vory.
Your Cost Each
$\$ 6.46$
(D) Starlet. High quality streamlined plastic case. For desk, table or D) mantel, at homie or at the office. Available in Walnut or lvory finish. Length $5 \frac{1}{2} 2^{\prime \prime}$, height $378^{\prime \prime}$, depih $3^{3} 8^{\prime \prime}$. Shpg. wi. 3 lbs.
C25453- Walnut
Your Cost Each
$\$ 5.81$


AC to DC Conversion Ballasts
(B) 115 V AC 1 -lamp fluorescent fixtures may be used on 115 V ICC by plugging one of these Clarostat ballasts into the 10 power outlet and plugging the inxture power cord into the receptacle in the ballast. Uses a glassinsulated resistor. $3 \frac{5}{5 \times 11^{\prime \prime}}$. Wit. 2 lbs. C13818-195 ohm, for 15 W lamp. Cis819. 144 ohm , for 20 W lamp. $\$ 1.10$

## Portable Fluorescent TOTELITL

## New Development in Portable Lighting!

(A) TOTELITE changes the entire concept of poriahle, self-powered This versatile light has many, skinny beam, but a full flooding light. This versatile light has many applications in the home, garage, office, factory, laboratory, farm, maintenance, installation. sports, watchman, and many other uses. Just the lizht to meet any emergency need. Especially suitable as a trouble light for motorists and truck operators. Economical to use, for the hatteries last approximately 30 hours and the 6 watt Iluorescent tube lasts approximately 1000 hours. Attractive black crackle finished steel case with plastic shield-lens that is nonbreakable and non-shatterable. Finger-tip control switches under handle. Size: $11{ }^{\prime} x^{\prime} x^{\prime \prime}{ }^{\prime}$
List Price (with batteries)
C25553-Complete with batteries
$\$ 10.63$

## CORNELL-DUBILIER Noise Filter

(C)C-D Fluorescent Filter 1F24, 110 volts AC or DC. Mounts inside Case is frounded and leads are shunted across power line. Cylindrical, Case is grounded and leads are shunted across power line. Cylindrical,
$21 / 35$, Shpg. w. 2 lb .

554

## Cioctify furseed



## TORK Commercial Electric Wall Clock Automatic Setting Feature

(E) Something new in a wall clock for stores, banks, schools, factories and warehouses. Large $16^{\circ}$ clock face easily visible from distances of 125 ft . or more. Movement is a rugged self-starting synchronous motor with high precision gear train which includes an entirely new setting feature. Length of cord attached to small ring at bottom of clock eliminates necessity of climbing chairs or desks to reset an out-of-reach clock. Slight pull on ring speeds clock hands to 300 times normal speed for resetting. Large black numerals on white face. Iour and minute hands are black. second hand is red. Heavy spun aluminum case fin ished in washabie baked-on maroon enamel. Dia. $16^{\prime \prime}$ with strong $1 / 4$ bead, depth $234^{\circ}$. Equipped with 6 ft . cord and plug. C25465-Your Cost
s12.37

## SELECTRON Clock

(F)Wake up and go to sleep tunefully with Selectron, the clock that automatically turns your radio on or of at any 15 -minute point Just plug your radio into the back of the clock and set the "Selectron' switch. The "Selectron" will automatically turn on your favorite radio program at the exact time you desire. Selectron can also be used to turn on or off household appliances, such as a Percolator, Heating Pad and night light. Self starting motor, precision engineered mechanism for accurate dependable time keeping. Iloused in betutiful non-shatterable Celanese plastic case. With $6-\mathrm{ft}$. cord and plug. For 110 volt. AC only C25470 Rich Maroon Finish.
C25471-I vory Finish.
Your Cost Each
$\$ 5.25$


## Mazda Fluozescent Lamps

(D)
White" lamps provide a quality of light approximating that of the incandescent lamp. "Daylight" lamps approximate that o dayligh. All supply several times the usable 250 hip out of regula incandescent lamps. Rated life better than 2500 hours Irices Below Include Federal Excise Tax.

| White | Daylight | GE | Dimen. |  |  | Lots |  | Lots |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sti.No. | Stk.No. | No. | L $\times$ D | Watts |  | of | Ea. | of |  |
| C25533 | C25534 | '15 | 9x ${ }^{5}$ | 6 | 50.83 | 7 | \$0.68 | 24 |  |
| C25527 | C25528 | T5 | $12 \mathrm{x}{ }^{\circ} 8^{\circ}$ | 8 | . 94 | 7 | . 77 | 24 | 73 |
| C25496 | C25497 | T8 | 18x1* | 15 | . 68 | 8 | . 56 | 24 | 53 |
| C25525 | C25526 | T12 | $18 \times 1{ }^{1 / 2}$ | 15 | . 83 | 7 | . 68 | 24 | . 64 |
| C25529 | C25530 | T12 | 15×112" | 14 | . 83 | 7 | . 68 | 24 | . 64 |
| C25535 | C25536 | T12 | $21 \times 112$ | 20 | . 83 | 7 | . 68 | 24 | . 64 |
| C25537 | C25538 | T8 | $36 \times 1$ " | 30 | . 83 | 7 | . 68 | 24 | . 64 |
| C25539 | C25540 | T12 | $48 \times 1{ }^{1 /}$ | 40 | 1.10 | 5 | 90 | 24 | . 85 |
| C25531 | C25532 | T17* | 60x21/8* | 100 | 2.54 | 3 | 2.08 | 12 | 1.96 |
| C25541 | C25542 | T10 $\dagger$ | 121/4 ${ }^{\text {Od. }}$ | 32 | 1.93 | 3 | 1.58 | 12 | 9 |

*100-watt lamps have mogul 2 -pin base; all others have standard 2 -pin base. Approx. shipping weights. 6 and 8 -watt-1 ${ }_{2}$ lbs.; $14,15,20-$ watts-2 lbs.; 30 and 40 -watt - $31 / 2 \mathrm{lbs}$.; 100 -wat -8 lbs .
$\dagger$ Circline" circular lamp. Requires special socket. I.D. is $91 / 2 \times 1 / 8^{\circ}$.
Note: When purchasing lamps with any fluorescent flature fisted use ist "Lots of" price instead of single price.

## Electrical Noise Suppressor

Eliminates electrical noise from 115 volt $50 / 60$ cycle AC fluorescent fixtures. Leads from filter are shunted across the power line, case is grounded to the fixture by mounting. When fixture is grounded elec$18^{8 / 4}$ "x11/2". Shpg. wt. 1 lb .75

# ELECTRICRL and PCCESSDRIES 



Bakelite Plug
(A) Standard plug. Well C13306-Your cost. 10 for
Midget Cord Connector
(B) Flat two-piece type. Under-C13276-Your Cos 10 for

## Cord Switch

(C) Line cord switches for home ances. Your cost 234

Outlet Box Receptacles (D) Fits standard outle, C13329-Your Cost.

14 10 for.

## Wall Plates

(E) Pressed ripple design. StainC13326 Your Cost...10个

## Power Cord and Plug

 (F) High quality 6 -foot cord with sturdy plug. For replacement on sets, and appliances. 189
## Fitsall Iron Element

(G) For most irons including Ho Genuine India mica Sunbeam Genuine India mica, wired witl
Nichrome riblon wire. 494 C13270 Your Cost

## Cone Elements

(H) For 110 volt electric heaters Your Cost 13305 1000 w. each....72c

## Insulated Staples

(J) For holding inside lead-in No. 5 . Size $x^{5}$ wilong. 124
c15950 Your cost. 24

## Handle Plug

(1K) Made of soft rubber. For all c13301-Your cost......89 10 for.

## Cube Tap

(L) Bakelite. 3 outlets from
c13282 Your cost... $10{ }^{1}$ C13
10

## Current Tap

(M) Straight socket with 2 cal



## Fluorescent Ballasts

(N) High power factor units from 90 to $100 \%$. Normal power factor (N) units from 55 to $63 \%$. All are Underwiters listed. For 105-125 v. 60 cyc . AC

| Stock No. | Type No. | Lamp Watts |  | Wt. | Each | $\begin{aligned} & \text { Lots } \\ & \text { 10/ea. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Normal Power Factor |  |  |  |  |  |  |
| C25616 | 15 B | 15 | $13 \times 13 / 4 \times 414$ | 1 | \$0.70 | 50.63 |
| C25617 | 20 B | 20 | $11.813 \times 414$ | 1 | . 70 | . 63 |
| C25618 | 30 B | 30 | $13 \times 2{ }^{2} \times \times 8$ \% | 3 | 2.25 | 2.03 |
| C25619 | 40 B | 40 | $1{ }^{13}{ }_{8 \times 2} 2^{3}{ }_{16} \times 83 / 4$ | 3 | 2.25 | 2.03 |
| C25620 | 220B | (2) 20 | $1{ }^{13 / 2} \times 1{ }^{23} \times 6 \times 1 / 4$ | 2 | 1.30 | 1.17 |
| High Power Factor |  |  |  |  |  |  |
| C25614 | 3031.8 | 30 | $111{ }_{20} \times 2{ }_{10} \times 143 / 4$ | 4 | 4.60 | 4.14 |
| C25615 | $40 B L P$ | 40 | $11 \times 22^{7} \times 11^{3 / 4}$ | 413 | 4.60 | 4.14 |
| C25605 | 40BL2 | (2) 40 | $111 \times 2{ }^{1} \times 11_{4}$ | 5 | 4.65 | 4.19 |

## Fluorescent Sockets

(P) For T-8 and T-12 lamps. (1) Combination sockets include socket for starter. All are molded of durable heatproof plastic having a high insulating value. T17 sockets include one plain and one combination socket.


## No-Blink Instant Starters

(R) Starter acts in one second or (asss. Eliminates blinking C13825 FS-2NA. For $18^{\circ} 15-\mathrm{W}$., or $24^{\circ} 20$ W. lamps.
C13826-FS. 4 NA. For $36^{\circ} 30-W$., or Your cost each...... 39 . $^{4}$ C13828-FS-6NA. For $60^{\circ} 100-$ Y. larmps.

$$
-2
$$

## Fluorescent Starter

## Switches

(R) C13802 FS.5. For $\mathbf{y}^{\circ} 6$-W. and $12 \cdot$. (R) $\mathrm{y}^{\circ}$
Your
Cost
C13810

294 ${ }^{2} 13810$ FS 2 For $18^{\circ} 15 \mathrm{~W}$; ${ }^{2} 4^{3} 20$ 20 W lamps C13812 WS-4. For $36^{\circ} 30-\mathrm{W}$. $180^{\circ} 40 \mathrm{~W}$ la laps.
Your Cost each
23 C13820-FS-7. For $36^{\circ} 65$ W. ${ }^{\text {lamps. }}$ C13813-FS-6. For $60^{*} 100$-W lamps. lamps. C13827 FS-12. For 12 - 32 -W C13827. FS-12. For
Cour Cost............ 294

## Automatic Starters

## (A) Life time starter, removes de-

 lectivelamp from circuit opis antomatically when lamp C13812- FS-2NB. For $18^{\circ} 15$-W. ${ }^{\text {or } 2.1^{\circ}}{ }^{20}$ 20-W lamps. or $48^{\circ} .10 \mathrm{~W}$. lamps. 45 ¢ C13815-FS 6 NB. For $60^{2} 100-$ Your Cost each.

## PRINCESS All-Chrome Broiler

Cooks quickly and efficiently. Ilolds and saves natural food flavors and vitamins. Alınimum loss of valuable health-giving minerals. 1)ry-bakes potatoes and vegetables.
Polished Chromium finish for long lasting beauty. Smooth surfaces permit cleaning with but a whisk of a damp cloth no rusting or corrosion. Mirror finish reflects random heat rays inside closed cover to realize on elficiency unparalleled in modern broiler design!
Shape and size permit the preparation of roasts, small fowl, sieaks with a minimum of effort and time. Control permits cooking at 400 or 1000 watt heats for maximum economy. Temperature dial built into top section. Provided with vents for uniform air circulation. Heat resistant plastic handles and mounting feet fitted to both top and botwom sections for absolute safety when handling hot unit. Complete with Nickel finished l'er-ma-welded one piece grill. Broiler overall size: D25401-Your Cost...... $\$ 148$
Lots of 6, Each.
\$13.35
Luts of 12, Each. 12.34 C13303- 3 way cord and plug for Broiler.


## GEM Waffle Iron

A waffe iron to satisly the most discriminating eye. Superior design, construction, and eflicient operation combine to make this and eflicient operation combine to make this as one of the best values on the market.
Heavily Chromium plated for everlasting beauty. Circular one-piece, seamless molds. Entireset is finished with mirror smoothstain resisting metal. Easily cleaned, sanitary gleaming surface needs but the swish of a damp cloth to keep it new looking.
Uniform waffle thickness assured by expansion hinkes and easily read built-in thermometer. Tells just when to put in the batter and when to turn off the iron to maintain a constant heat. One piece Chrome plated steel tray type base will not tip or mar table tops. Handles are mahogany finished wood, remain cool even after long periods of operation. Solid and safe internal construction. Fully Underwriters Listed. Heating elements are set in heavy insulating ceramic block. All internal wiring provided with shockproof asbestos insulation. Operates from 115 volts AC or DC. Shpg. wt. 8 lbs. C25402-Your Cost
$\$ 7-5$
Lots of 6, Each.
Lots of 12, Each.

## PRINCESS Electric Stove

A truly portable electric stove for use in Summer Homes. $A$ partments, where space is limited or additional cooking facilities are required. Concentrated, even heat for quicker, cleaner and cooler cooking the year round
One or two burners operating at 400 ), 660 or 750 watts heat is obtained by proper insertion of line plug. Sturdy one piece steel shell forms inverted dome type structure for great strengih and rigidity.
leat is reflected upward by curved internal surfaces into the cooking area to effect greater cconomy of operation. Safe-fully Underwriters Approved. Internal wiring protected by heavy coating of asbestos.
Sides fitted with heat resistant black plastic handles. Table tops are protected by four feet made of the same material. llarmonizes with any color scheme. Top is in highly polished Chromium, the burners dark blue and the body finished in gray crackle enamel. For 110 v. AC-1)C. Shpg. wt. 8 lbs. $\rightarrow \infty$
C25400 Your Cost. $\qquad$ \$6.82
Lots of 6, Each.
$\$ 6.11$
Lots of 12, Each. 5.88

C13302-Two way cord and plug for Wafle Iron or Electric Stove.
Your Cost.


## PACIFIC FM-AM Tuner

An entirely new FM-AM tuner for the average pocket-book. Uses 11 miniature tubes, and rectifer, to achieve High Frequency performance usually found only in much larger and more expensive sets. Covers Broadcast band from 510 KC to 1750 KC and the new FM band from 88 MC to 108 MC .
FM section uses new ratio detector, AVC and IF coils wound on J'olyst ytene forms for highest gain and stability bossible. Designed for use with standard 300 ohm transmission line and dipole antenna.
AN section is an advanced high fidelity superheterodyne circuit incorporating a high gain stage of tuned RF, band expanding promeability tuned iron core IF coils and 10 KC filter to prevent intwference from adjacent channels. For use witheregular single wire broadcast antenna. Inlinite impedance detector. Full Al'C action.
Output is flat within 2 db from 30 to 15,000 Cps, will match any ampliner input impedance. Provicion for phono input at rear of chassis Selection of FM, AM1 or Phono may be made at front panel switch. Tone conttol for use on FM, AM or phono to suit your individ ual taste in tone reproduction. Modern slide rule dial with thut a single tuning control for rule 1 FM and AMA. Built in rolume control, both FM and A.A. Built in rolume control,
self contained jower supply. Chassis is surself contained jower supply, Chassis is sur: faced in altractive gray "rinkle thinish, mersures
$13^{\prime}$ long, $6^{\circ}$ high, and $8^{\circ}$ deep. Shipg. $14.18^{1 / 2}$ Ibs.
Modil. AF-11. Complete, ready to operate, with tuiks, power cord and dial. Less ampliher and amaker.
C22494
Your Cost

## APPROVED ELECT. INST. CO. <br> FM Tuner

## (B)

FM tuner of moderate price but advanced engineering. Front end luning is a patent pending arrangement of three pairs of resonant tuned lines, large diameter for maximum skin conduction. curved on radius for continuous contact by rotatins slides actuated by standard dial drive wheel. and mounted in ceramic. The lines have silver overlay as in the most cositly Army-Navy radar tuners. The contact arms are also silver overlayed, on phosphor bronze, and are mounted on lucite bars. The entire front end is of unit construction with floating mount in the heavy (I6 gauge) cartmiun plated stee chassis. Microphonics are thus held to a mininum. Tuning is very stable: frequency drift is negligible after five minutes. 1Range is 88 to 108 nic 1 mpedance matches a 300 -ohm dipole antenna.
Superheterodyne circuit with standard IF of 10.7 mc . IF transformers are the latest type iron core with ceramic insulation, and provide a 150 kc band width for maximum FMI hdelity. Sensitivity is excellent; only 10 microvolts are required for full limiting, assuring noise free reception. Qutput is full 2 , volts rins at $5(5),(\mathrm{KK})$ ohms, for connection to the usual hish-impedohms, for connection to the usual high-impedance phono inpus in either an dil radio re-
ceiver or an $A \mathrm{~F}$ ampliter. Buitt-in power supply ceiver or an AF ampliter. Built-in power supply
is AC type, exirenuely well interecl; hum level is is AC type, exirencely well ill
70 db below average output.
Tubes: 6AG5 RF, 6J6 converter, two 6SI 17 1F's, 6SH7 limiter. 6AL5 discriminator, 7Y: rectifuer, 6 55 tuning eve. Cabinet is hand rublk walnut yeneer, $13^{\circ}$ wirle, $93^{\circ}$ high, $10^{\circ}$ deep. Sliderule dial, $6^{\circ}$ pointer travet. Complete with tubes, for 115 volts, 60 cycle 1 AC . Shpg. wt. 1., lbs.
C22491-Your Cost
\$59.50


## CONCORD FM Tuner

(A) An inexpensive "one-chassis" FMI tuner to (A) be attached to any broadcast radio recciver or P.A. amplifier for receiving FAI programs in the new 88 to 108 megacycle laand. Tone quatity and volume 18 limitedionly by the performance of the broadcast recemer or 1, A. amplitier with which the tuner is useri. Tfords the added pleasure of FM to those who alreatly have AM radios. Foolproof, efticient and easy to attach. Small size, neat appearance. May be placed in record compartment of combination receivers. 1 las built-in antema for strong local reception plus connections for dipole. It tas large $\mathbf{1 0}^{\circ}$ e6 $6^{\circ}$ ) illuminated clock-type dial with eany-to-read numerals.

Tuhes: 12BF6 Converter, 12316 lst IF. 1213.16 2nd 11, 12 ML $:$ Det., 3.31 I Rect. Ts. controls, tuning and ofi on. Cationet is walrut emeer, $x$ wide, derels, he high. Complete with tulse and insiructions for the smple connection to broadeast hand rectiver or amp
philer. Shpg. wt. 8 lbs . For 11.1 AC or IDC. pliter. Shp
C22490-
Your Cost, Each
\$23.95

BROWNING


## MEISSNER



> an automatic bass compensation circuit to match the base character- istic of the human ear. AM coverage 527 to 1630 kc . $88-108 \mathrm{mc}$
Sensitivity is such that less than 10 mierovolts are required to produce standard output. AM selectivity is variable "o "I3road" for high fodt lity or "Sharp" for selection between adjacent channel stations. AF output is 8 vols at high-impedance and. 75 volts at. 3 ) shm (xitput. Ium level is 60 db below output. I'hono input terminals are provided so that the tuner and its ampliter may le used with a record player or changer Any antenna with a single lead in wire can be used for 1.1 signals The FM section is designed for use withsathdard FM antenna ;(k)-ohm transmission line. Tulse complement of the AM-FMI uner is: sow 3 IRI
 G. 1.5 detector for the $A M$ section. For the $F M 1$ section; 616.5 RF ampliter; 6 C ' oscillator; $61(: 5$ converter ? liA( $\%$ IF amplifiers 11). 7

 for rectifier.
Chassis is $165^{4} \times 10^{1}$ " requires $1^{1}{ }^{\prime \prime}$ additional inetween chassis and panel) Net weight 19: lbs. "nit complere with tulses. "cutcheron plate and slice rule dat $2 x\rangle=$ opening. Dial catibration 1.31 in kileacycle $F A 1$ in channel numbers (200) 10300 ). For 11.5 volt $\%, 5(1-60$ cycles, $A C$. C22499
Your Cost
$\$ 147.00$
C22498-Black wrinkle cabinet. Dimensions $18{ }_{4} \times 11_{4}^{8} \times 9^{\circ}$. Net weight l2 ihs.

## Your eost

C22497 Black wrinkle cabinet panel only. Dimensions $18 \times 8 \mathrm{~s} / \mathrm{s}$ Net
$\$ 2.35$

# thaM GEAR 

## SONAR Model VFX 680 All Band Exciter

(A) Complete Narrow Band Frequency Modulated phone and CW解 to crystal control. By varying the $V_{i} \mathrm{X}$ control, any type cut cry tal becontes "rubberized
VIOO operates in the 160 meter band with frequency range from 1565 KC to $20(k) \mathrm{KC}$. Variable frequency shift is from 30 KC on 80 meters to 480 KC on 6 meters. Frequency range covers the $80,40,20,11,10,6$, 2 meter bands as well as the new proposed 1.5 meter band. Power output 4 to 6 wats. Monitor circuits for CW and NBI'M phone with output jacks on front panel. Deviation indicator is self-contained cathode ray tuning indicator. External reliy control provided for remote operation. CW and break-in operation permitted on the same frequency without shutting off the oscillator.
Plug-in coils give two-band operation on one set of coils. 40-20 meter bands coil set supplied with exciter. 8 tube circuit including VR and rectifier. Any type high impedance crystal or dynamic microphone with output between -48 and -52 dh may be used. Front panel finished in smooth gray baked enamel with red and white screening. Complete with tubes and one set of coils but less crystal. For use on $110-125$ volts $50-60$ cycle AC. Size $51.4 \times 19 \times 81 / 2^{\prime \prime}$. Shpg. wt. 30 lbs.

## C21007-

C10430-10 meter coil
C10431-15 meter coil
C10432-20 meter coil

C10433-40 meter coil C10434- 80 meter coil
(A)

(B)

## SONAR Model XE-10 Narrow Band FM Exciter

(B) An ideal unit to convert any type transmitter in the 6,10 . or 11 lowest frequencies allowed by the FCC for amateur use of FMI. The exciter also has an output in the 40 meter laand, using an 80 meter crystal.
Complete instructions for connection and use are furnished with the equipment. Easily connected into your crystal socket or the grid circuit of a VFO. Eliminates the use of speech amplifiers. modulator and thei power supplies and permits the tinal to be used as a highly eflicient class C stage. Increases the power output and reduces the input power consumption. Unit has 3 watts output at 7 Mc . Link couples to transmitter. Entire unit contained in a neat ventilated cabinet. that makes a handsome addition to any Ham shack
Any AM receiver can be used for reception by tuning slightly out of resonance, because the deviation is only 2 to 3 KC . Contains microphone amplifier, crystal osciliator, buffer modulator, and a 115 volt 60 cycle AC power supply. Miodulation and tuning controls. transinit receive toggle switch, pilot light, crystal socket, and mićrophone jack are mounted on the front panel. Tuning meter jack and the transmission line connector are mounted at rear of cabinet
Unit is complete with tubes, but less crystals. In gray cabinet $9^{5} ; x$ $7 \times 5{ }^{\prime \prime}$. Shpg. vt. 12 lbs.
C21006
Your Cost
$\$ 39.45$

## SONAR Model MB-611 Transmitter



(C)Small compact transmitter for 10 and 11 meter operation. Uses any type power supply. Can be in stalled in any vehicle, boat or airplane. Also used for ixed station, or as driver for high power final. Employs exclusive Sonar Phase Modulato with direct crystal control. VFO may be used in place of Crystal. Input for hi-impedance crystal or dynamic mike having output of -52 db or better. Tuning condensers are the screwdriver set type, with locking nuts for stable operation Dual indicator for RF tuning and deviation. Frequency deviation adjustable from 2 to 3 KC . Will match any type antenna or transmission line. Power output ap-
prox. 22.5 watts. Supplied with 10 and 11 meter out puts. Available with 6 meter output. Requires nower supply of between 250 and 600 volts DC at 100 mills from vibrator, dynamotor, or AC supply. Power consumption is 2.6 amps in Stand-by and from 10 to 20 amps in Transmit from any standard 6 volt battery In gray case $101 / 2 \times 7 \times 5^{\circ}$. Shpg. wt. 20 ibs. Complete with tubes but less crystal and power supply. Also available for 6 meter operation on special order c21019-
$\$ 72.45$

## MILLEN 50-Watt Transmitter-Exciter

(D)
For standard rack. Requires up to 750 v at $250 \mathrm{ma},-45 \mathrm{v}$ and 6.3 v at 1.8 amps Osc. is Tri-tet for $2 x$ or $4 x$ crystal freq., or by short-circuiting cathode tank, output is fundamental. Drives 807 which is eit her straight amplifier or doubler. Therefore several possible combinations of coils and crystals pro duce same output. and 25 to 50 or more wat ts can be had in 4 bands by proper choice of crystal freq. The $0-200$ ma meter may be switched to read plate current of either stage.

Shpg. wt. 15 lbs. Millen No. 908(N), with 10


## New MEISSNER Signal Shifter-ECO or Xtal

(E)
$6 \backslash 6$ osc. 807 doubler amp. Turret band change. Eye-tube key and tuning indicator. Staliilized osc. screen voltage. 6 watts output. Vernier dials. Couples to most any circuit. Signal Shifter in cabinet $1.3{ }^{13} 10 \times 13 \% \mathrm{x}$ 83 - "', with tubes (including VR), less power supply sub-chassis, less coils. Shpg. wt. approx. 23 lbs Your Cost
\$66.50

## STANCOR ST-202-A 125-Watt Transmitter Kit



(F)
Build your own compact desk-type transmitter to cover the 80. 40, 20, 15, 11, and 1 meter bands, crystal controlled. CW, but an or FM easily added. You get cabine with built-in chassis, marked panel and bot tom plate, plus all circuit and construction components. 115 v , 60 cy power supply fur nishes 350 vdc. 1000 vdc, variable hias, and filament voltages including taps for your choice of PA tubes. You even get a prefabricated cabled harness for neat under chassis appearance. All phases of construction and operation are fully covered by detailed in struction manual. The only extras needed are ma meter, 5 tubes, crystals, and a set of standard PA tank-coil plug-ins.

Power supply sub-chassis, with two 513's, for $115 \mathrm{v}, 60 \mathrm{cy}$. Shpg. wt. approx. 15 ibs.
C21023-- $\$ 13.00$

## Stock No. Coil Strip

 C10392 1.5 meters C10393 10,11 meters C10394 6 meter $\$ 4.00$| Stock No. Coil Strip | Stock No. Coil Strip |  |
| :---: | :---: | :---: |
| $\mathbf{C 1 0 3 8 9}$ | 80 meters | C10392 |
| C15 meters |  |  |
| C10390 | 40 meters | C10393 10, 11 meters |
| C10391 | 20 meters | C10394 |
| Shpg. 6 t. 2 theters |  |  |

Novel band-switching exciter circuit with band-switch coil assembly and one tuning capacitor. Inter and intra-band flexibility with extreme simplicity of adjust nent and control. Adjustable link coil antenna coupling. Simultancous screen keying of both exciter tubes for clean signals. Break-in exciter tubes for clean signals. Break-in $35 \mathrm{TG}, 1 \mathrm{~K} 54,5514$, 811 , or 812 . (Wide-range neutralizer provided.)
Uses Barker and Williamson 150 watt var. link coils listed elsewhere in this catalog Cabinet $141_{16} \times 9 \times 13^{3} / 16^{*}$. Shpg. wt. 55 liss.
C21020
Your Cost
s92.80

SPERTI Two-Way Hand-Held Radio
 Operates on I41-118 Mc (2 Meter band). Not surplus equipment, but a brand new exclusive design. Only high quality, new components are used anywhere $n 1$ the construction. Ideal for transmitter hunts, held days, ham fects,
Excellent results obtained during antenna adjustments and tests by two-way contact between luldstrength measuring equipment and antenna prsitions.
May be used as an auxiliary or emergency transmitter. May also be used as a complete permanent fixed station. Test result: 12 mile line-of-sight communication. Average performance 3 miles over flat or slightly rolling country.
40 hours intermittent $B$-battery life. Quick change. Instant-starting filaments save A batteries stwo 2 flashlight cells).
Engineered for performance, designed for efficiency and priced for comnetition. Maximum performance in the smailest possible size and cight. Gond for boats. Push-to-talk. Instantaneous break-in. Set at actory "1thin band limits, stays in band unless tampered with. Sliderule dial. Tuning can be locked. Retractible folding dipole antenna. Connect to a high antenna to increase coverage enormously. Staible os cillator and receiver, negligible shift. Size $10 \times 3 \times 2^{*}$. Shpg. itt. 5 lbs. c22450 - With tubes, less batteries. Your Cost
C20627-B Bat. (2 required). Each

## HY-Q 75 Xmitter Kit <br> \section*{For $11 / 4$ and 2 Meters}

Linear oscillator, 135 to 250 mc . 1.1 watts CW, 11 W. phone. Chart for quick location of ham bands, no cut and try. Easily assembled. Fancy plumbing and tricky parts prefabricated. Micrometric tuning by adjustable lead screw. Silrer plated tank circuit, silverplated multi-hinger contacts on precision machineत shorting bar.

> | lontains specual R1. chokes and |
| :--- |

## BUD

## 75-Watt Plug-In Coils

## All coils are air-wound

 with enameled copper wie and mount
n 5 prong tube sockets. The con venuent ceramic mounting base heeps the coil a safe distance from the chassis when the coil socket is mounted on the chassis. Center link coils have fixed center link末ith main winding center tapped. End link coils have lixed end link and are not center tapued. Variable link coils have adjustable center link with main winding center tapped

Center End Yari. Cap. Your Link limk Link Band Mff Cost C $10635 \mathrm{C} 10641 \mathrm{C} 1060380 \mathrm{M} 75 \$ 1.32$ C10636 C10642 C10604 4011 $50 \quad 1.32$ $\begin{array}{llll}\mathrm{C} 10637 \mathrm{C} 10643 \mathrm{C} 10605 & 2011 & 33 & 1.32\end{array}$ C10646 C10647 C10648 15 NI 331.32 | C10638 C10644 C10606 | 10 M |
| :--- | :--- |
| 28 | $\ddagger$ | C10639 C10645

$\$ 21$ urafd. for variable link coil.
 JOINSON Srsing Clip

For inductor coils of all kinds. Will take wire from 20 to 10 gauge. Lock screw adjustment. Each.
$7^{\text {c }}$
Heat Radiating Grid and Plate Caps
Use at terminals of x mitting tubes Protecis glass.
C14377-For 1 HK - 24
14378-For 32-T,IK-54 35c ea. C14381 For 101 1. 807
C14388-For 866, T-125

clange. P'ictorial wiring diagram and instruction manual with each c21002
C21002-Kit
Your Cost
$\$ 9.95$ C23001-Assembled . .511 .95 C24747-11 - 75 A tube... 3.95

## AMPIENOL Minjaiure Polystyrene Forms

 and Sockets

Undrilled. $34^{\circ}$ dia., $19 / 6_{6}^{\circ}$ long. Permanent mounting form has raised hole in center for self tapping screw. Sochets for plug in iypes also fit Myiron Bantam Jr.

C11577-Permanent 104 C9628 5 Cost C13161 5 Cong Form ..... 28 c C9629 5 Contact Socket. . 24c C13162-6 Contact Socket....24c
NATIONAL Grid Clips

(A)


Type A. Easily removed. Tinned grip end for soldering.
No. Type Tubes Dia. Each C14434 Stand. Glass ${ }^{3}$ : 3 C C14565 Metal (octal) 1/: 3c C14841, X miting C14598-Type B. Ceramic safety grip ", dia. for 866, T20, 805.
Your Cost Each...... 244 C14599-Ceramic as above but

## NATIONAL

## Hi-Frequency Coils

Iligh Q permeability tuned RF coils, tune 1 ith capacitics from
100 to 10 micro-micro farads. In100 to 10 micro-micro farads. IRductive winding replaceable AR2 tunes from 7 mmc to 200 mc . C14382 AR-2 Your Cost . 51.71 C14383-AR-5 Your Cost.. 1.46

## Hi-Frequency Coil Form

 XR-50 nermeability tuned coil form. Winding length $11{ }^{\prime \prime}$ "dia C14384 Your Cost..... $\$ 1.01$
# AMATEUR RADIO EQUIPMENT 

## RME VHF-152-A Converter



For 2, 6 and 10 Meters, 28-29.7,50 5t, $111-1.8$ Nc. Wide-range re ceiving facilities at low cost and with minimum equipment. Uses the estrenmely efficient double conver sion $\$ y s t e m$ when connected to your receiver. Image rejection ratio 5 db. Siability at 50 mc is better than in most receivers at 5 me because of new engincering clesign, VR-150 regulation, and temp. slabilization in VIIF oscillator circuits. Low noise level. Sensitivity 2 microvolts on all bands. Miniature tuhes. Lineup is: 6 AK 5 RF , f 1 L 6 m mixer, 6 J 6 oscillator. Power supply uses 5) 3 CT and VR-150.
Tuning dial is black with raised white numerals. Scale is $7^{\circ}$ dia. with wide spreading of the calibrations. Separate scille for each of the 3 bands, calibrated in Mc. Entire dial is illuminated indirectly for maxi mum readability and minimum glire. The tuning nechanism is an allgear planetary drive with no cubles, pulleys, or levers. "Out-Ir." switch transfers the receiver from the converter to antenna. Converter has provisions for 4 separate antennas, one for the receiver frequencies, and separate input circuits for each of the convirter ranges, each designed especially for a particular VIIJ range. Shielded cable is furnished for connection io the recuiver. Complete with tubes, ready for operation on $110 / 120$ volt, 50 t 60 cjcles.
C21013-Model VHF-152 Converter
Your Cost
$\$ 86.60$

## RME DB-22A Preselector 540 Kc to 44 Mc



## Nen, completely redt innerl for

 greater elictericy. dds ithated circhis and 2 6 labio minnsure tulaen ahe:ad of the R1 1 ine un + un pres ent rectuti (,ibstan ndous in rain is : $\%$ dby throughout the range. lmage ratio is, si dis at 28 mc . Completely solves the problem of mainpletely solves the problem of main-
taining contact on 10 meters. Complete with prower supply using a 6. 4 rectifier. Inpui circuit for matched doublet plus a single wire tos ground. jer nuts high-galin matchinv to any antenna. Output for 150) (., $)$ ohms, direce connection to antenna posis of receiver. Intenna change-over switch on panel couples reci iver dircelly to antennat when unit is not being used. Range is covered in four bands. Smooth phanetary tuning mechanism with plenty of drive ratio. It $^{\prime}$ dia. dial scale, dull black background, white numerals, indirectly illuminated. Gain control independent of receiver.
Housed in an attractive, clean-cut cabinct styled in the same lines and two-tone gray crackle inish as the RME 4.5 Receiver. Coniplete with tubes and output connecting cable, ready for operation from $110 / 120$ rolt, 50 (i) cycle source. Dimensions: $11^{\prime \prime}$ high, $12^{\prime \prime}$ wide, $11^{\prime \prime}$ deep. Shpg. we. 21 lbs.
C21012 Your Cost
\$66.00

## SPECIAL VALUE! <br> Smooth Coil Forms



MELLEN Plate Caps
Steatite covered cap. for urins
miting tulse.
Type $86 \overline{6}$ etc.
C8055-Your Cost Each 2, 4
C8056-36002, 21 c 36011, Extra tight. Snap action top button to release grip.
Your Cost Each
Your Cost Each............60c
C3053- 3 s $8^{\circ}$ dia . . . . . . . . 60c

Reliance
Ribbed Coil Forms


These coil forms are of high quality lowloss I3akelite, and are ribbed for air spaced winding. They have hnurled flanges for facilty in lrandling, and grooves for wave band index. Eight rilis.

[^0]
## National: Supreme RME Cquipment <br> National: Supreme RME Cquipment



NATIONAL NC-57 Receiver
Go "International with National." The latest product of National's long-standing reputation in the communications field. Provides reception of I'hone and CW signals over the entire frequency spectrum of 550 KC to 56 MC in five bands. Features a built-in power supply, heavy duty PM speaker and maximum flexibility of operation on all bands thru use of front panel mounted controls
RF amplifter, converter, and CW oscillator circuits include voltage regulation to insure a high order of stability on both CW and 1 'hone regulation to insure a high order of stability on both CW and 1 hone reception. Nine tubes including voltage regulator and rectilier. A
separate band-spread dial, provides pin-point sharp tuning and acseparate band-spread dial, provides pin-point sharp tuning and ac-
curate callibration on all bands facilitates tuning to any diesired frequente calibration on all easily.
Antenna terminals provide for connecting single wire, doublet, or co-ax antenna lead-in, and a socket is provided for connecting an external " $S$ " meter.
Iloused in an attractive modern caloinet finished in smooth gray enamel, $11^{1}{ }_{2}{ }^{\circ}$ wide, $1184^{\prime \prime}$ deep, $8,4^{"}$ high. Operates on $105-120$ volts, $50-60$ cycles AC , with a socket at the rear provided to permit battery operation and/or the connection of an external relay or B plus switch. Shpg. wt. 33 lbs. Complete with tubes.
C21266
Your Cost

## SUPREME Model AF-100 Transmitter <br> * AM NBFM CW ICW <br> t Complete Metering <br> * Inter-Locl Protection <br> * Single Dial Tuning of Exciter and Multiplier

Complete, compact and inexpensive transmitter for desk top operation. Covers all the frequencies from 10 thru 80 meters. ( $H$, ICW, $A M 1$ or NBFM uvaliable at the (lip of a switch. An exceptionally winble VFO is followed by slug-tumed buffer and doubler stages, ganjed toget her with the VFO. Provision made for selection of two predetermined crystal frequencims, Thandswitching throushout except in output stare where plug in coils are used. NBFM deviation adjustable from () to plus and minus $1 . \mathrm{K}^{\circ}$
Meterine of all $\omega$ hntial circuits plus pilot light indicators give operating chaticteristics and condition at all time. (scillator keying for ing chaticteristics and condition at all time facillator keying for feceiver ditabline during transmission. Nierophone and key jacks readily acce sible at the front panel. Operator is protected against hifh voltage thech by automatic intetloch switches when the salmet is apen d. Twenty tubes used, includiteg voltare resulat ors and rectifiers. Fins 1 ues a 31 os and the modulator a mant of 807 's. Operates from power source of $110-117$ volts at $50-(\mathrm{Fl}$ cy cles. I'ower
 Commete with cubes and coils but less hey, mike and crystals.

## C21025-

Your Cost.
$\$ 550.00$

## RME-84 Receiver

New low cost sujperhet with complete coverage from 510 kc through 14 mc. IDesign and construction are in accordance with RMIE's past itandards. No. "low priced, averaye component," are used anywhere in this set. There is no omission of controls, necessary for the reception of either phone or CW signals. Power supply built in for 115 volt , 60 cycle $A C$ power source, and a sochet is provided for battery connection, made feasible by the use of low-drain Loctal tubes. Tube lineup is: 7137 RF , 7 S 7 converter, two $7 \mathrm{ll}, \mathrm{IF}$ 's, 7 K 7 det. $/ 1 \mathrm{st} \mathrm{AF}$. ficic; output, 7 K 7 noise limiter $13100,5 \mathrm{~B} 3 \mathrm{GT}$ rectifier. Loctals were chosen not only for their low drain, but also because of their efficiency at high frequencies.
Isandspreasl on any setting of the main dial is provided by a vernier clial wheh has 2 2 divi ions on the "d se of a 31 , diameter disc. Scale makes hive complete revolutions for the $180^{\circ}$ diameter disc. Scule mares live complete revolutions for the $180^{\circ}$ rotation of the tuning capacitor Tuning mechanism is a plan tary-drive system,
sprin laded to eliminate all back lash. The overall calibrat ion is held spring-londed to eliminate all back lash. Come overall calibrat ion is held to within ont-tenth of ont per cent. Complete w
contained spaker. $18 \times 9 ; 8 \times 9 \% \mathrm{i}^{\text {. }}$. Shpg. wt. 35 lbs .

## c21011

Your Cost
\$98.70

## RME-45 Receiver

The outgrowth of a long series of fine instruments, built for practical, all-coverage phone and CW radio recrption. One of the outstanding features is "CAI-O-MATIC" automatic tuning and calibration of the scale, accomplished by an ingenious mechanism developed by RME. Once the receiver leaves the test room absolutely no further calibration adjustments need be made. In consequence, all calibration points, main and bandspread, are determined automatically as tuning proceeds. No dials to reset, no padders to be readjusted, and no recheck points to obverve. A single, smooth as velvet, dial is used for tuning, and the circular bandspread scale is greart $5: 1$ to the main scale. All controls streamlined, handy and convenient. The band coverage is 550 kc to 3.3 mc in six binds wish overlap. Tube lineup is: $7 \mathrm{~B}, \mathrm{RF}$, 550 kc to 33 mc in six binds with overlap. Tube lineup is: $7 \mathrm{~B}, \mathrm{RF}$ output, $7 A 6$ automatic noisi limiter, 80 rectifier. Loctals used because output, 7 A 6 automatic noise limiter, 80 rectifier. Lactals used because
of their low drain, high efficiency, and long life. The use of finest compoltents and a sturdy double-space tuning capacitor in the o-cillator section hold frequency drift to an absolute minimum. Both relay control and break in connections are provided at the rear of the classis. 5 -position crysital eelectivity switch. DB meter calibrated in steps of 6 db per R reading beginning at zero on up to 48 db for I 29 and up to 96 db ( 18 db above R9)
Size: $22^{1 /}{ }^{\circ} \mathrm{L}$., $12^{\prime \prime} \mathrm{W}^{\prime}, 11^{\prime} \mathrm{H}$. Shpg. wt. 56 lbs . Complete with tubes and Spsaker in Matching Cabinet.
C21010.
Your Cost

## HAMMARLUND HQ-129-X

This is truly the llams receiver with the professional touch. Long years of llammarlund engineering have resulted in an extremely fine tuning unit. Antenna effects at entirely different frequencies are quickly adjusted by the antenna compensator, noise is kept to a low level compared with the desired signal.
Main tuning dial is accurately calibrated for each of the six bands. These bands are broken down as follows: $540-1320 \mathrm{kc}$., $1320-3200 \mathrm{kc}$, $3200-57(0) \mathrm{kc}$., $5700-10.000 \mathrm{kc}$., 10.18 mc ., and $18-31 \mathrm{mc}$. In addition to the calibrated band spread dial which covers four amateur bands there is also an arbitrary scale provided for any bands becoming available at a later date
Tube line-up: 6SS7 RF amplifier, 6 K 8 converter, 6SS7 first IF amplifier, 6SS7 second IF amplifier, 6SS7 third 1F amplifier, 6116 second detector, AVC and noise limiter, 6SN7GT/G first AF and S-meter, 6V6GT /G audio output, 6SJ7 beat frequency oscillator, 5UlG full wave rectifier and OC3/VR105 voltage regulator. Antenna input int pedance of 400 ohms provides for the use of single wire antenna or balanced transmission line. Audio output of approximately 3 watts undistorted. S-meter mounted between the main dial and band spread dial calibrated 1 to 9 in steps of approximately 6 DB. Six position Crystal filter. New serie type noise limiter provides better limiting and has less effect on modulation, 115 volts, 60 cycles. $13^{1} \mathrm{x}$ $20^{5} 6 \mathrm{xl11} \mathrm{a}^{\prime}$. Shipping weight 52 lbs. Complete. with tubes, less speaker.

## C21035

Your Cost
$\$ 177.30$
C21036 - Matching Speaker in Cabinet

## HAMMARLUND SUPER-PRO

For the amateur or commercial operator who wants the best available performance in communications receivers, the Super-Pro is an outstanding selection in the field of fine receivers. Selectivity, sensitivity, sirnal-to-noise and signal to-inuage values obtainable in this receiver are due to 2 stages of tuned R1F amplification and 3 stages of IF amplification. The IF amplifer features variable band-width which is controllable from the panel. The crystal filter circuit, patented by Hammarlund, has 6 switch positions: 3 for phone reception, two for CW and one for "off." AVC is applied to the 2 RF stages and also to two of the IF amplitiers.
Tuning range is 510 KC to 30 mc ., in five bands, the 3 highest of which have bandepread provided on an arbitrary scale of 100 divisions. Model SI'- 160 SX cover* 1.25 to 40 mc . and has bandspread on all five bands. The $S$ meter on the'e receivers is calibrated from 1 to 9 at approx. 9 (b) per st(0). with external adjustment. Separate heavy duty power supply, standard model, operates on 115 v ., 60 cycle a.c.
Mariel SIPS-1(N)-N, complete with tubes, power supply, and speaker in matching cabinet.
C21037
Your Cost
\$398.25

## HAMMARLUND Foux-11 Modulator

Designed especially for use with the new Hammarlund Model Four-20 transmitter. The output impedance is $8,0(\%)$ ohms. The push-pull audio output stage is capable of delivering eleven watts of power output at less than live per cent distortion.
Careful design has resulted in an audio response that fits the needs of amateurs who are particularly interested in clear crisp speech that will pierce overcrowded and terrifically QRMD bands. Substantially flat between 200 and $30(u)$ cycles. Ouality as well as conservatively rated parts are used throughout. If it is desired to increase power at a later date, this modulator moy be used as a very efficient driver unit.
Modulator and transmitter below-are in cabinets similar in appearance and size. The front panel contains a standiard microphone jack, gain control on-off switch. pilot light and convenient fuse outlet. The input imperlance is suitable for any high impedance microphone. Tube line-up: 6SL 7GT first and second audio amplifier. 605 phase inverter \%C5LT's in push pull audio output and a 5U. $G \mathrm{GT}$ rectifier. Size: $81^{*} \times 10^{1}$ "x $91_{2}$. Shipping wt. 45 lbs . Power source $105-120$ vol ts, $50-60$ cycles A.C. Complete with tubes.

## c21048-

$\$ 72.50$

## HAMMARLUND Model Four- 20 Transmitter

Complete self-contained crystal controlled CW unit designed especially for the radio amateur. Conservative output of twenty watts available for the radio amateur. Conservative output of twenty watts available
on the $3 .-7-11$ and 28 MC amateur bands. 3.5 MC crystals only are on the 3.r-7- and asery as a doubler tubes and band switching provide outnecessary as a teries of doubler tubes and band switching provide output in the bands mentioned. Plug-in coils used in the plate circuit of the power amplifier stage only. An output coupling arrangement with
an adjustable tap is a new feature on these plug-in coils. Any iman adjustable tap is a new feature on these plug-in coils. Any im-
pedance between 90 and 6010 ohms may be matched to the transmitter. A pedance between 0 and 6010 ohms may be matched to the transmitter. telegraph keying. If phone operation is anticipated the Hammarlund Four-11 modulator described above, provides an excellent companion unit. MONO-sequence tuning ellables the enperator to tune four circuits to four difterent but harmonically related frequencies by meansof a single control. The stajes are sharply tuned, resulting in hichly efficient circuits. A constant load is kerst on the oscillator stage at all times throurh the use of a special rowisfor net worla The front panel includes a milliammeter and suritching arransement so that any of the RF tubes may
 807 power ampliter and . 1 ic.reri $91 \%$ Shippine wt. lir Powe con-umption approximately 150 watts at 110120 voltt. A 10 cycte 1 C . Complete with tubes and ten meter output coil, but lesh crystil.

## C21049

Your Cost
$\$ 120.00$
C9967-20 meter output coil
C9968-1() mi ter out puit wil 2.70
c9969-80 meter outpul coil

## Hammarlund

 Receivers. Iransmitters

# hallicrafters Communications Receivers 

## HALLICRAFTERS Model S-38

This new Hallicrafters Model $\$$ - 38 is the finest receiver value ever offered in the low price field. The unusually fine styling makes this an ideal receiver for use in any room in the horne. In addition its super-sensitivity makes it an excellent receiver for communications service.
Four bands are covered: 540 to $1,680 \mathrm{KC}, 1,650$ to $5,200 \mathrm{KC}, 4,750$ to $15,(5 \times \mathrm{K}) \mathrm{KC}$ and 12,000 to $32,4(16) \mathrm{KC}$. The main dial is calibrated in megacycles. All controls are clearly marked and include the folloving: Noise Limiter, Band Switch, BFO, BFO I'itch, Speaker 'l'hone Switch and Standiby Switch. Ileadphone jacks and antenna terminals are provided at the rear of the cabinet. Steel cabinet is finished in satin eray. and the speaker grill in the cabinet top is of airodized steel. 1.6 watts of audio output is available which is more than ample for all receiver requirements.
Electrical bandspread dial permits separation of stations for communication or station logging purposes. Tubes required: 12SA7 Convirter, 12 SK 7 IF Amplifer, 12SQ7 BFO-Automatic Noise Limiter, 12SQ 1 2nd Detector- 11 C -1st Audio Amplifier, 35L.6GT 2nd 4 udio Amplifier and a 3525 GT rectifier. Operates on $105-120$ volis, 40 eit cycles AC or $10.5-120$ volts DC. Nay be used on $220-250$ volts AC or 1 C with the 220 -volt line cord converter listed below. Receiver includes built-in PM dynamic speaker. Overall size: $127_{8}{ }^{*}$ wide, $71_{0}{ }^{\circ}$ high, $8: 8^{\prime \prime}$ deep. Shipping wt. 14 lbs.
C21081-Model S-38 Receiver, with tubes.
Your Cost
$\$ 47.50$
C5245-220-volt Line Cord Converter. Your Cost

## HALLICRAFTERS S-47

An ultra-new radio receiver designed to fill a long-felt need. Numerona applications in the home, schools, offices and public institutions where a superior installation is needed. Overall frectuency coverage is from $5 \%$ to $1,120 \mathrm{KC}, 5.9$ to 18.2 MC , band spread tuning for Foreign reception of 9 to 12 MC , 15 to 18 MC , plus new FM Band of 88 to 108 MC . Wide vision slide rule dial accurately calibrated for close tuning. Five push buttons each for FM and AM tuning. Fourteen tubes plus rectihet. Output stage uses two 6V6GT's, provides 12 watts of audio. AM responce flat from 30 to $7,510 \mathrm{cps}$, $\mathbf{F M}$ flat from 30 to 15,04 (4) cp . Stparate bass and treble tone controls. Phono connection at the rear of chassis. Autonatic Frequency Control "locks-in" receiver to FM station selected-assures minimum drift and maximum accuracy in tuning. " 1 irodized" steel top swings open on full length hinge. Receiver designed for tuse on $105-125$ volts, 50 - 60 cycles AC. Any speaker with itnpedance of 500-600 ohms, such as R-42 shown below, may be used. $20^{\circ}$ wide, $1014^{*}$ high, $18^{\circ}$ deep. Shipping weight 65 lbs.
C21067 Model S-47 with tubes.
\$200.00
Your Cost
c21068-Model S-47C same as above but less cabinet.
Your Cost.
$\$ 189.50$

## HALLICRAFTERS SX-42

In a new receiver that is really new, Ilallicrafters sets a new hiolh standard in performance and mechanical design. AN signals may bo standard in performance and mechanical design. AMi signals may bo received over the entire range of the receiver; FM signals on the two
bands covering $2 \%$ to 110 mc . Iligh fidelity reception is ascured by then eicontially flal audio response, 60 to 15,000 cycles, and an undistorted output of 8 watts.
Controls of the receiver are in logical order for maximum convenience. Color corling of controls simplifes the problem of general family usage. Small red dots indicate settings for standard broadcast; green soie are used for FM. The main tuning knob has a precision vernier scale trhind a small window in the main dial housing. The main tuning dial is calibrated in megacycles and is marked for the new FMI band. The handspread dial is calibrated for the $3.5,7,14,28$ and 50 mc . The handspread dial is calibrated for the $3 . .5$, 14,28 and 50 mc amateur bands. An additional scate is provided for logging. The small knolss permits either of the two tuning knobs to be rotated while the other is held in place.
Circuit features of the receiver are the split-stator tuning condenser used on the 3 higher irequency bands, making possible high stage gain, 6-position crystal filter and phase control, all-range BFO for CW reception, and the dual IF amplifier system which is intomatically switched from 155 kc . to 10.7 mc . as the band selector reaches the higher frequency bands. Antenna terminals are for either single-wire (broadcast band) or doublet antenna. The audio system has output: impedances of 500 and 50100 ohms. A phone jack is supplied on the front panel; a connector is on the rear of the chassis for phonofront panel; a connector is on the rear of the chassis for phonograph pickup input. Miniature tubes, temprrature compensated oscilator, two stages of Rerior performanceatVIIF. The circuit includes 15 tubes. An interestuperior performance atiVIF. The circuit includes 1 is tubes. An interesting accessory to the receiver is an adjustable base with which the and accuracy of dial settings.

## HALLICRAFTERS Matching Speaker

The R-12 Speaker (illustrated) represents one the greatest innovations in spaher design in recent years. Meretolore, bisee reflex reproduction has been a vailable only in large, space consuming cabinet speaker". This is the first speaker of its size to ofier the wide range fidelity of kass reflex. Highly functional dexign has resulted in the fine performing, smart appearing speaker unit which may be used with performing, smave apping $500 / 600$ ohm output terminals. A switch is available on the speaker cabinet for switching from high fidelity to communications reception.
C21070-SX-12 Receiver, Iess speaker and base.
Your Cost.
$\$ 275.00$
C21069-SX-42U Receiver. Same as SX -42 but for operation on 110 ,
$130,150,220$, or 250 volts. 60 cycle AC. Each.
$\$ 287.50$ C21072-R-12 Bass Reflex Speaker, Table Type. Each C21071 B-42 Adjustable Base. Each.

HALLICRAFTER "Skyrider" Panoramic Adaptor
$\star$ Avoid QRM $\quad \star$ Spot Replies to Your CQ's $\star$ See What You Hear!
The Hallicrafters "Skyrider" I'anoramic Idaptor enables you to see holes in busy bands as well as the signal characterist ics of your own and other stations. Ielps locate your sked and avoid ORM. Locates stations whose exact frequencies are not known. Provides instantaneous signal strength ( S ) meter readings for CW and l'hone. Assists in making arljustiments of transmitters and antennas. Indicate's moclulation percentage. frequency deviation, FM signals, audio distortion of carrier, carrifer shift and splatter, spurious parasilics, carrier hum level, key clicks, noise and frequency drift of your own as well as other transmitters.
Eaty, simple connections to all receivers with an IF frequency of from 1.1 ) to 170 KC . Contains four simple operating controls and does not affect the operation of your receiver. Clear sharp panoramic does nol affect the operation of your receiver. Clear sharp in wormally picture 15 pror
lighted iowm.
In sturdis black wrinkle finished steel cabinet, with high quality componentr assuring long trouble free life. Ilx9d́sx ${ }^{\circ}$. Complete with oquerating instructions, tubes and connecting leads. Shpg. wt. 16 libs.

## C21000

$\$ 49.50$

## HALLICRAFTERS HT-18 Exciter

## Directly Calibrated Variable Master Oscillator

Thin complerely new exciter unit is the hottest item available for the modeth amateur. A "must" for modernizing your transmiter. P'ower output from $\{.5$ watts at 3.5 MC to mot less thatn $2 .$, waits at 29.1 Mc . 1) ill is dhrectly calibrated in seven ranges to all the anlateur bands from Dit is dhectly calibrated in seven ranges to alle on all ranges. Built-in , 10 , NiC. Narrow Band FM available on ail ranges. Provision [pt-implier for high impedance crystal or dynamic mikes. Provision mode for waillator keying in break-in operation. Three crystal sockets provided for spot frequency operation. Tuning is extremely easy, overal stability is excellent. Drift is negligible. FAI deviation plus and minus 1200 cpsin on frequencies. Audio frequency response flat from $1(x)$ to 5(Mh) cps. Check switch for beating oscillator against incoming signals without putting entire transmitter on the air. l'anel controls include tuning, band selector, operation selector, deviation selector, On/Off AC, On Off plate, and Om/Off check switch. 6 tub including two voltage regulators plus 5 Y 3 ; T rectitier. For use on 10 ;)- 125 volis, $50-60$ vycles 4 C . Size: $12 \% \times 7 \times 7 \% \%^{\circ}$. Shpg, wt. 25 lbs . Complete with tubes, but less crysials.
C21074
Your Cost
$\$ 110.00$

## HALLICRAFTERS HT-17 10 Watt CW Transmitter

Completely new. A high quality, low price transmitter or exciter for a hieh pherer final amplitier. Companion piece to the $\mathrm{S}-38$ receiver for a low cast ham shack. CW only, but has connections for addition of external mondulator. Stylized and finished in the latest Hallicrafter motif. 80 , 111,20 , and 10 meter bands.
Ready to plug into 105-125 volt, $50-60$ cycle power source. I Pi output net muches any antenna. Top hinged for easy changing of coils and crystal. 3 tube circuit with 807 final. Pilot lamp tuning indicator can crystal. 3 tube circuit with so7 inal. Plot lamp luning andiata cost. be replared by the SM-17 plate ma meter if desired, at extra cost.
Complet vith tubes but less coil sets and crystals. Dimensions: Complate vith tubes but less

## C21076

Your Cost.
$\$ 69.50$
C21077 SM-17 Meter. Your Cost.........
$\$ 6.50$

| C10296 | \$3.50 | C10298-20 meters. . . $\$ 7.00$ |
| :---: | :---: | :---: |
| C10297 | 3.50 | C10299-10 meters. . . 7.00 |

## HALIICRAFTER HT-9 100 Watt Phone CW Transmitter

A medium powered transmitter designed for maximum flexibility and omwenience. Completely self-contained. Requires only a mike or key, antenna, asc Iive (Nec. and Bufer coils and crystals may be plugged into the exciter
 sertion a one time and seliched by the font-pane band liwal coul and romuming band switching procedure is to replace the imal conl and revejust the tinal tank luning capacitor. Coil sets avalkble from stock five tive 80, 10,20, and 10 meter bands. Others on specine order. Three ma moters to read cathonde current of exciter or modulator, puwer ampliter grid current, and power amplither plate curient. Frequency re ponse flat within 3 db from 100 to 5100 cycles. Input for any mediumlevel high imp. mike. $1(\mathrm{~K}) \mathrm{W}$ on $\mathrm{CW}, 75 \mathrm{~W}$ on Phone. $100 \%$ mod. with low ditortion. Built-in harmonic suppressor. Antenna coil matches 10 (ha) ohms resistive. 14 tubes with 814 as final. Built on heavy cadmium plated steel chassis. Steel cabinet finished in gray enamel. Has heavy rubber mounting feet, ventilating openings top and sides and hinged (op) with interlock switch under the lid. Dimensions: 291, $x$ $121, \times 201 \%$ Shpg. wt. 125 lbs. Complete with tubes but less crystals and coil sets.
C21346
$\$ 350.00$
Coil Sets for Above
C10287-80 meters. . $\$ 10.85 \quad$ C10286-20 meters. . . $\$ 15.50$ C10285-40 meters . . 11.75 C10288-10 meters.. 16.50


XIT 1 (Ieft) I send tru soldering Equipment and Rawfo J'art; shew jou bus to do Radio colde in . he wi to mount asal cortnect Radio parl tical espersenc.

## VETERANS

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## KIT 2 (left) Early in my

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KIT 4 You get parts to build Power hick; make changes whiu huve you caperietrict with pachs of many kinds; learn to correct power pach troubles

KIT6 5 Sup huild this Receit which brines in lowil and ditant litition and pives y.u more perience to you win
sucess in Radio.

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blanks sent on request). Please write in ink, legibly, and not more than ONE item to a line. Nlake sure you write the exact stock number and that the price is the one quoted for the item you want. Specify how we shitl inake shipment by checking the preferred sciuare "Parcel l'ost", "Express". etc. We shall follow your instructions, but will change them wherever we are sure that such a change is to your better interest. Please keep all corresjx)ndence or remarks relative to your order on a separate sheet of paper. Make sure you include sufficient postage; all overpayments promptly refunded (if overpayment is under 10c, we will credit your account). NOTE: In many instances, it is impossible 10 show shipping weights. In practically al! cases, each article seate sure to in lude sufficient each article We will credit soure inslude suflicient payments

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We buy for cash and sell for cish; this explains our low jrice policy. We do not carry credit accounts. and we pass on to our customers all savings affected by the elimination of costly providine a deprsit of at le:ast $20^{\circ} \circ$ acconıpanies your order. C.O.I). parcels niay be shipped Your order. $O$. Di pircels may be shipped to U.S. territories. On small orders, remittance in full saves you extra costs.

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On foreign orders we require pavment in the United States by irrevocible and confirmed letter of credit against documents, or $50 \%$ deposit with order, balance sight draft against 8 L. All quotations F.O.B. our warehouse, with slight additional charge for export packing. Orders up to \$25.00 payable in full in advance, including postage. All remittances payable in U. S. funds.

## 2\% TRANSPORTATION ALLOWANCE

On mail orders of $\$ 25,(0)$ or more, we allow you to deduct 2 from the total as transportation allowance, with the following exceptions: All Concord and National Co. products; all items sold under Fair Tr' de regulations; all items marked "Shipped Postpaid"

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If you find it necessary to return any merchandise for adjustments, please write in advance stating the following: reason for return-when and where purchased-number of sales slip (if purchased over the counter). If yourshipment is received damaged, obtain a report from the postmaster or express agent and mail it justment matier; do not add remarks to a nd justment matter; do not ander remarks io a new order for parts. Do not inciude moneyin the package you return. insure, and write your name and address on all packages and iletters.

## FINAL PRICES

Prices shown in this catalog are net. All discounts have been deducted, including $2 \%$ discounts for cash. Prices are subject to change without notice; we give custoners the benelit of all reductions taking place after the catalog is published.

POSTPAID ITEMS
Items marked "Shippied Post paid" do not require postage. l'ost paid it ems refer only to shipments made within the 18 states of the only (does not include U. S. possessions)

SENDING MONEY
The safest and best way to send money is by: American Express; Post Office or Telegraph Money Order; bank drafts; firm chechs: stamps. remit cash, send by registered mall only. in the United States for 6c. Parcel post ship- 10 in . wide jand 5 in. high measures 65 in in ments to any zone must not exceed 70 pounds. length and girth combined (length 35 in., plus The limit of size on all parcel post packages is twice 10 in. width, plus twice 5 irt. height, equals 100 inches in length and girth combined, at 65 in.).

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| Weight In Pounds | Local | First 8 Second to 150 Mi . | $\begin{aligned} & \text { Third } \\ & 150 \text { to } \\ & 300 \mathrm{Mi} . \end{aligned}$ | $\begin{aligned} & \text { Fourth } \\ & 300 \text { to } \\ & 600 \mathrm{Mi} . \end{aligned}$ | $\begin{aligned} & \text { Fifth } \\ & 6(0) \text { to } \\ & 10(0) \mathrm{MIi} . \end{aligned}$ | $\begin{aligned} & \text { Sixth } \\ & 1000 \text { to } \\ & 1.100 \mathrm{Mi} . \end{aligned}$ | Seventh 1 (10) to 18(4) Mi. | Eighth Over 1800 Mi |
| 1 | SO 08 | S0 09 | S0) 10 | \$0.11 | \$0. 12 | \$0.13 | 8015 | \$0) 16 |
| 2 | . 09 | .11 | . 12 | . 15 | . 18 | . 20 | 2 | 27 |
| 3 | 09 | 12 | . 11 | . 18 | . 23 | 27 | 33 | 38 |
| 4 | 10 | 13 | 16 | . 22 | 28 | 31 | . 12 | 19 |
| 5 | .10 | . 11 | 18 | 25 | . 31 | .11 | 52 | . $\mathrm{ll}_{1}$ |
| 6 | . 11 | 15 | 2) | . 29 | .39 | . 48 | 61 | 79 |
| 7 | 11 | 16 | 22 | 32 | .41 | . 56 | 70 | $8: 1$ |
| 8 | . 12 | 17 | 21 | .36 | . 50 | (i3 | 79 | 9. |
| 9 | 12 | 18 | .26 | . 39 | 56 | . 70 | 89 | 1 1\% |
| 10 | 13 | 19 | 28 | . 13 | . 61 | . 77 | 98 | 117 |
| 11 | 13 | 20 | . 30 | . 16 | . 66 | 81 | 107 | 129 |
| 12 | . 14 | 22 | . 32 | 50 | 72 | 92 | 116 | $1.11)$ |
| 13 | . 14 | 23 | . 31 | 51 | 77 | ()9 | 126 | 1.11 |
| 14 | 15 | 21 | .36 | 58 | 82 | 106 | 1.35 | $13^{\prime \prime}$ |
| 15 | 15 | 25 | . 38 | 131 | . 89 | 1.13 | 111 | 1.74 |
| 16 | 16 | 26 | . 10 | . 6.5 | 91 | 121 | 153 | 18.7 |
| 17 | 16 | 27 | .42 | . 68 | . 99 | 1.28 | 113.3 | 197 |
| 18 | 17 | 28 | . 41 | . 72 | 1.05 | 1.3 .5 | 172 | 208 |
| 19 | . 17 | 29 | .16 | . 75 | 110 | 112 | 181 | 216 |
| 20 | . 18 | 30 | . 18 | . 79 | 1.15 | 119 | 191 | 2.31 |

For Each
Added lb.
$\qquad$

## EXPRESS CHARGES

Express Charges are determined by the weight of the shipment and distance of Destination Orice from Originating Office. The following chart will enable you to estimate charges.

| Maximum Distance |  |  |  | 50 Mi . | 150 Mi . | 00) Mi. | . 200 Mi . | 750 Mi . | 1000 Mi. | 1.300 Mt . | $20(0) \mathrm{Mi}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cost up |  |  | Lbs. | \$0.25 | 80.25 | \$0.30 | \$0.35 | \$0. 45 | 80.45 | (3) (3) | 806 |
| « | ${ }_{4}$ | 10 | « | . 30 | 30 | . 40 | 50 | 65 | 159 | 92 | 115 |
| ${ }^{\sim}$ | $\stackrel{\square}{4}$ | 15 | \% | . 30 | 34 | . 47 | 59 | . 76 | 88 | $1: 33$ | $1 \mathrm{fi6}^{-}$ |
| 4 | 4 | 20 | « | . 36 | . 12 | . 59 | 75 | 97 | 11.1 | 1.74 | 219 |
| " | 4 | 25 | ${ }_{6}$ | . 42 | . 50 | 71 | 92 | 1.19 | 110 | 215 | $2 \div 3$ |
| $\ldots$ | " | 35 | $\cdots$ | . 55 | 66 | 95 | 1.21 | 16.3 | 1.91 | 297 | 3 76 |
| * | ${ }^{\circ}$ | 45 | * | . 68 | 82 | 1.19 | 157 | 2 (1)6 | 213 | 379 | $181{ }^{-}$ |
| * | $\stackrel{ }{4}$ | 55 | * | . 80 | 98 | 111 | 189 | 250 | 295 | 161 | 585 |
| " | * | 70 | " | 99 | 122 | 180 | 238 | 315 | 372 | 581 | $74{ }^{-}$ |
| 4 | " | 85 | $\cdots$ | 118 | 1.46 | 216 | 287 | 380 | 450 | 7.07 | 8.9 |
| « | * | 100 | « | 127 | 160 | 212 | 325 | 135 | 517 | $8 \cdot 30$ | 1015 |

## INSURANCE

Parcel Post and Express insurance rates are SHIP MUST BE INSURED.

Valuation Parcel Post
Up $10 \$ 5.00$
$\$ 5.01$ - 25.00
$25.01-\quad 50.00$
$50.01-200.00$
Express
Up to $\$ 50.00$
$\$ 5.0(0)-1.0(0.01)$
For each additional $\$ 100.00$ value or portion thereof, charge is $\$ 0.10$.

## EXPRESS \& EREIGHT

Express and freight shipments are sent transportation cluarges collect. If your station has no agent, please send sufficient money to cover transportation. Charges are the same either way. All over-payments are promptly refunded.

## C.O.D. SHIPMENTS

Iransportation charges on C.O.D. parcels are slightly higher than those seth prepaid. C.O.D. charkes in addition to the regular postage cost are as follows tincluding insurance
Extra Charge

Up to $\$ 5.00$
$5.01-\quad 2.0 .(\mathrm{K})$
$25.01-50(\mathrm{~K})$
$50.01-100(\mathrm{~K})$
$50.01-100 .(\mathrm{n})$
$100.01-1.00 .(\mathrm{n})$
$150.01-300(0)$
Post Otfice also charges an extra small money order fee on each C.O.D. parcel. Save these fees by remitting in full.
NOTE:
Equipment built or ordered especially to meet customers requirements not subject to exchange. credit or be accompanied by a deposit.

Article (A) Adapters Auto.
Beam
F.M. Dipole Insulators.
Loon.
Transmitting Aerial Accesori. 128, 129
AEROVOX
Alarm System...
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Antenna Coils

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## NATIONAL NC-46

ceneal coterfire receiver. Professional anypat ance. All the latest Itaturi- for smoxith easy control the long clear-veion dial his the IF \& bloping front Band spread dal for necurate loggine. .will ke con inuous through 30 mc in thand. The hand suread dial moride ol dial div ision in the 80 -meter bant, 0 in the $4(1)$ meter band, 56 in the 20 meter band, and 40 in the 10 meter band.
I eatures include a noise limiter with automatic threshold control, ( $W$ o-cillator, eprarate IFF and AF rain contrel, and amplilid ankd de layed AYC. The pu-h-pull sucio ontput tite deliver apporesmmaty vatis loth the strai ht-line-frequency tuning capacion and the eparate band-spread capacitor use an incrtia-type drive. Provision i made for either headphone or speaker.
Circuit consists of a 6 K 8 converter, two 6SG7 IF stages, 6116 detector/ limiter, "S5\% AlC ampliter, 6SJ7 BFO, 6SC7 phase inverter, two $25 \mathrm{~L} x$; $T$ out put, and 25 Z . rectifier. Sensitivity approximately 5 microvo'ts for 50 milliwatt output over entire range. Output with AlC varies lesa than $\pm 1$ db with inputs ranging from 10 to 100,000 microvolts. Dimensions: 9. "x173 $\times 12^{3}{ }^{*}$. Shpg. w 1 . CO lbs. $105-130$ vol ts AC or DC C21259-Morlel NC-46, Complete with tubes. Less $\$ 97$. 5 C21258- Matching Speaker in Cabinet. Your Cost

## NATIONAL NC-173

For both Amateur and Commercial use. 11-tube superhet plus rectifier and plus YR for both CW and Phone stability. 1 TRF, separate slabilized $11 F$ oce, 1 sid det., 21 1F's, diode 2nd det., AF limiter, AVC ampli1ker, stabilized $13 \mathrm{~F}^{\circ} \mathrm{C}, 2$, $1 F$ starres. 510 kc 31 mc plus $48-56 \mathrm{mc}$. Separate handspre:d turning knob and dial for the $80,40,20,10$, and 5 -meter amateur band.
Sy parate ${ }^{\text {I }}$ 'C amplifier permits using AVC on both phone and CW New highly eflective wide range crystal 1F filter $x$ ith adjustable band wilth is new "d unlenction" noi i limiter circuit is equally efficient on either ( $W$ or phone, has panel mounted threshold control. The " $S^{\prime}$ meter, connected in the AVC circuil, is calibrated 1-9 "S" units and dow's not require adjustment. Can be used on both phone and CW signals. Conventional audio tone contrul. Headphone and pick up jacks are located on front panel. 35 watts audio output at 8 or (h) ohms for sueaker operation. Receiser housed in attractive modern metal cabinet limished in smooth gray. The speaker in a matching table model cabinet, is the I'M field type with 8 ohm impedance. Complete with tubs-s and instructions. Shpg. wt. 70 lbs. C21254. Table Model Receiver.
C21256-Rack Mounting Receiver.
Your Cost, either
$\$ 179.50$
C21255-Table Model Speaker
C21257-Kack Mounting Speaker.
Your Cost, tither
\$10.00

## NATIONAL NC-2-40D

One of the finest communications receivers ever made, 490 ke nic continuous. Knob on the front panel moves 6 calibrated coil ralifis into porition below the tuning capacitor and plugs them into the circuit, thus assuring very short leads, I uning control has (x):1 atio, but dial can be spun rapidly for fast tuning.
Superhet circuit uses 11 tuhes plus rectifier. 1 RF, separate $11 F$ one, of new design for extreme stability, lst det., $21 F \prime$, 2 nd det. limiter, ALC, $13 \mathrm{FO}, \mathrm{AF}$ amp., phase inverter, push-pull 6 V 's which deliver 8 wats, and rectilier. The MF osc. design eliminates detunngy effects of KF gain control and motorboating or fluttering on strong signals RF and 1 F circuits use polystyrene coil forms. Iadding and trimmine cajacitors are air dielectric. Signal: image better than su db at in meters. line shift from 100 to 120 volts produces less than 1 kc detuning at 30 mc . Crystal filter has exceptionally wide selectivity range for ure on both Phone and CW.
Operates on either $110 / 120$ volt or $220 / 240$ volt, $50 / 60$ cycle source Switch in primary of plate transformer permits use of either voltage. Shipping weight 95 lbs.
C21261-Model NC-2-40D, Complete with tubes, $\$ 225.0$
C21262-10 inch speaker mounted in separate cabinet spocially de
signed to harmonize with the receiver's trim lines..... \$16. 4.4

## NATIONAL HRO-7

Ultra-modern version of the famous HRO Communications Rect ivers. 11 tubes plut the new miniature type 0.12 voltage regulator for estreme o cillator stabilaty. New miniature 6C: high-frequency of cillator. "1 wo RF. ampliters, two 15 amplifers. Wide-range adjustable selectivity With 6 position switch for crystal n!ter opreration. Naximum nand siread on the amateur bands. New automatic double-action adjustable thre hold noise limiter. IIigh signal-to-noise ratio, high image rejection high sensitivity. These are just a few of the features of this litent addition to the IIRO line.
Although normally supplied with plug-in coil sets for $1.73(\mathrm{mc}$, will coret ratio rance. communications, marine, and broadcant land irequercies by the addition of coil sets for 304.2$) \mathrm{kc}$ and $(8(1-1 ;(5)$ he. in aractary Connector sochel is provided for heater voltagt, 13, 1F output, $A V C$ voltage, and $A F$ input, to accommodate a wicic varints of acce or its uch as a NI3 FM discriminator, ciystal calibrator, etc. 1 ront panel contains tone control. AF output stage uses 6V6C'T/G
L'imensions: $19{ }^{\circ} \times 10^{1} \mathrm{n}, \times 1218^{\circ}$. Shpg. wt. 55 l 1 s .
C21253-HRO7T, Table model, complete with tubes and four tets of
 C2L252- $-11 C R$ Speaker to match HRO-7T.
Your Cost
C21265 I'ower Supply No. 697.
Your Cost


## HALLICRAFTERS Model SX-43

Designed to give the discriminating amateur the performance of his dreams at full trequency coverage . . . to give his family superb AM and FM reception . . . in Hallicrafters richest and most professional looking cabinet and panel . . . and all at a medium price.
Frequency coverage is 540 KC to $44 \mathrm{MC}, \mathrm{AM}$ or $\mathrm{CW}, 44$ to 55 MC , AM, wide-band FM or narrow-band FM and 88 to 108 MC on AM or wide-band FM. Electrical bandspread with separate dial far the 80,40 . 20 and 10 meter bands. Complete and convenient panel conirols pro vide for Xtal filher with phasing control, 4 degrees of selectivity, BFO pitch control, phono jack and switch. " S " meter, Noise limiter, lone control and Receive/Standby switch.

TUBES: 1-6BA6 RF amplifier; 1-7F8 converter-oscillator; 1-6SG7 1st IF amplifier 1-6SH7 2nd IF amplifier and second cenverter, band 5 AM ; 1-6SH7.3rd IF amplifier ( 10.7 Mc .) ; $1-6 \mathrm{H} 6 \mathrm{AM}$ detector and noise limiter; 1 - 6 ALL 5 FM detector; 1 - 6 SQ 7 1st AF amplifier; 1 - 615 beat irequency oscillator or second converter oscillator, band 5 ; 1 - 6 V 6 audio output tube; 1 - 5 Y3 rectitier.
Temperature compensated. 3 watts output flat from 70 to $8,000 \mathrm{cps}$. 300 ohms anteana input impedance. Speaker terminals for 5,000 and 500 ohms outputs to match R-44 Bass Rellex speaker. Dimensions: $181 / 2^{\prime} \times 87 / /^{\prime \prime} \times 13^{\prime}$. Sbpg. wt. 45 lbs . For $105-125$ volts, $50 / 60$ cyc.

## r:21064-

Yu... Cost
$\$ 169.50$
Model SX-43 U. For $110,130,150,220,250$ volts, $25 / 60$ cyc. $\$ 178.05$
519.50

Model R-44 Basz-Reflex Speaker. For use with SX-43
$\mathbf{C 2 2 0 6 6}$ Your Cost

## HALLICRAF'TERS Model S-40A

A completely new conception of receiver keauty and styling with circuit design keatures never beione available in this price class. The steel cabinet is attractively tinished in rich satin buack with satin chrome trim and hinged "Airodized" top. Dials and controls color-coded in red for Broadcast-band reception by the entire famuly.

Frequency $540 \mathrm{KC}-43 \mathrm{MC}$ with ianstia-flywheel tuning and separate electrical bandspread dial. RF section uses the same perm-tuned "Microset" coils and temperature compensation as in the most expensive models. The advanced superihet circuit furnishes $21 / 2$ watta of audio power to the internal PM speaker.
Nine Tuber: 1-6SG7 RF amplifier; 1-5SA7 converter; 1-6SK7 1st IF amplifier; 1-6SK7 2nd IF amplifiec; 1-6SQ7 2nd detector and 1st audio amplifier; 1-6F6G autpnt audio amplifier; 1-6H6 automatic noise limiter and gas qate; 1-635GT beat frequency oscillator; 1-80 rectifier.

Front panel jack for phones. Sacket is pavided for connection of the external Model SM-40 "S"-metur. Panel controle provide for 3-position tone selection, CW with ad ustable pitch. AVC or MVC. Automatic Noise Limiter, Standby/Rece ve and RF Sensitivity. Dimensions: $181 / 2^{*}$ x9'x11". Shog. wt. 33 lbs . For $105 \cdot 125$ volts, $50-60$ oyc.

## C21094-

Your Cost
$\$ 89.50$
Model S-40 U Universal. 110, 130, 150, 220, 250 volts, 25 to 60 cyc. C21085-Yeur Cast
SM-40 External S-meter. $53 / /^{\prime \prime} \times 4^{4} x 41 / 2^{\circ}$. Sbpg. wt. 3 lbs . C21086-Your Cost.
$\$ 16.00$



## the Concoid" "llasleifioce" FM-AM Phono-radio WITH AUTOMATIC RECORD CHANGER



Everything you could possibly desire in a tine Radio-Phonograph Combination is yours in this magnificent instrument. Only Concord-with its unrivaled resources-could make so outstanding an AM-FM Automatic Phonograph-Radio Combination a reality. Here is true luxury at a moderate price.
THE DISTINGUISEED CABINET: A luxurious mahogany console. Lustrous, handrubbed finish adds richness and beauty to any home. Distinctive Regency styling. Has convenient "slide away" drawer for automatic record changer with handsome burnished brass hardware. Cabinet has convenient storage space for records and albums.
AM-FM BROADCASTS: Receives new High Fidelity FM (Frequency Modulation) stations- 88 to 108 megacyclesas well as Standard broadcasts 540 to 1700 kilocycles. Amazingly powerful 11 tube (including rectifier) superheterodyne, with advanced circuit design, provides 15 tube performance. Remarkable sensitivity and selectivity. Has large "slide rule" dial, full range bass-treble tone control and improved automatic volume control.
ADVANCED MM RECEPTION: Newest FM Ratio Detector circuit assures ease of tuning, low noise level, free. dom from AM interference and ample gain. An outdoor
aerial is unnecessary in most locations for perifect $M_{1}$ reception.

## AUTOMATIC PHONOGRAPH: Precision automatic rec-

 ord changer plays ten $12^{\prime \prime}$ or twelve $10^{*}$ records at one sitting. Has "floating Point ${ }^{n}$ needle. Rides gently on your records, yet reproduces with utmost fidelity.HIGH FIDELITY REPRODUCTION: Powerful 13 watt push-pull amplifier, with large $10^{\circ} \mathrm{PM}$ speaker provides true High Fidelity reproduction of both recordings and radio broadcasts. Gives full benefit of FM quality.
NEWEST TUBES: Powerful, efficient circuit uses $1-$ 6BA6 FM, RF Amplifier, 1 - 7 Q 7 AM Oscillator, Mixer, 1-7AH7' IF Amplifier, 1 -7AG7 FM Detector driver, 1 7A6 FM Detector, 1-7F8 FM Oscillator, Mixer, 1-7C6 AM Detector, Audio amplifier, 1-7F7 Audio amplifier, Inverter, 2-7C5 Push-Pull amplifiers, 1-5Y3 Rectifier.
To the smallest detail-this great AM-FM Phono-Combination is an achievement. Now-you have the opportunity to own, and enjoy for years ahead, this unparalleled combination. . . at a price that makes it truly a miracle value.
Model 1-1101. Concord 1: tube (including rectifier) FMAM Console Phono-Radio Combination with Automatic Record Changer with Built-in Loop Antenna for Standard Broadcasts and Folded Dipole antenna for FM Broadcasts. For operation on $105 / 125$ volts AC; $50 / 60$ cycles. Size: $341 / 4^{\prime x} \times 331 / 8^{\prime \prime} \times 16^{1 / 2}$. Shpg. wt. 100 lbs.

## Your Cost

\$189.50


[^0]:    Medium Size
    

    Small Size
    Undilled. 13 " dia. "high. C9988- i Prong Each
    C9989-5-Prong I Each 23 c
    C9990-6-1 rong

