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Dealers-here is a line of Receivers that we especially recommend. They are far above the average in workmanship and performance; and their striking modernistic designs will quickly commend themselves to your customers.

For a limited time we are giving you an extra discount of almost $20 \%$ on the ARKAY Models, just to introduce them . . . By all means take advantage of these prices immediately. The sooner you introduce them to your customers. the greater your sales will be.


## MODEL RKC-4 (AC-DC)

A superb 4 -Tube R . F . serles filament AC -IDC heceiver in an unusually all ractive cabinet size $5 \times \bar{x} \times 10^{\frac{1}{2}}$ inches wide. Modernistic design, richly finished in two-tone walnut with gleaming chrome trimmings, Brings in police calls... Full-flux Quam Dsnainie Speaker Balt bearing Tuning Condenser ... Polsmet Filter Condenser ... Self-eontained flexible Aerial whth may be run under the rug for lowals or out of the win. dow for distance. Series heater line cord nrevents overheating inside cabinct. Following Tungsal Tubes used andl furnished: 1-25\%5, 1-43, 1-6C6, 1-6D6.
Just the Set for those who favar the striking new moternistic designs, and a marvelous bargain. Mide to sell to the Trade at $\$ 11.63$; you get an extra discount of about $19{ }^{\circ} \mathrm{t}$ at our priee. $110-120$ volt A.C? D.C.

14E10977-
Idist Price. \$22.95.
YOUR
PRICE
S1195


4 Tubes


5 Tubes

## ARKAY MODEL RK50

- 5-Tube Superheterodyne
- Broadcasts and Police Calls
- Illminated Vernier Dial Kilocycle Calibration
- Delayed Automatic Volume Control
- Latest Type Tubes

When we say that the MRドAY Model $12 K 50$ is the best looking, best performing, most salable 5-Tube Table Model Superheterodyne we halse ever listed, we express but part of our enthusiasm for this remarkable little Set. At the regular Dealer's price of \$21.13 it is a bargain. . At our present loow Price of only $\$ 15.95$ you satie another 30 whith allows you just that murh more mofit on every sale. Its 5 -Tube Superheterodvne circuit. Tone Control, lyelayed Sutomatic Volume Control. llluminated. vernier driven Dial graduated in kilacycles. $6 \frac{1}{2}$ inch licensed Dynamic

- Dust-proof Chassis All Parts Concealed
- Surging Volume
- Beautiful Tone
- Good Sensitivity
- Keen Selectivity
- Beautifnl Cabinet


## ARKAY MODEL RK60

- Superheterodyne Circuit
- Automatic Volume Control
- Illuminated Vernier Dial Kilocycle Calibration
- Licensed Dynamic Speaker
- Latest Type Bakelite Moulded Sockets
The Arkay Model RK 60 is somewhat larger than the RK 50 and provides the better tone "uality and improvement in overall performance which is to be expected from its larger Speaker, increased baffle area. additional tulse, and slightly greater cost. It employs a six-tube Superheterodyne circuit of the nost advanced design and an 8 inch Utah Dynamic speaker. Four tuned 1 Th K.C. IF stases and three-gang Tuning Condenser provide adequate solectivity for any locality. An extra heaty Power Transformer and over size Condensers insure years of troubledensers insure fears of roublefree service. potput stage to provite a richness of tone that is equalled in none except the finest
- Dust-proof and Safety Chassis
- Equipped with Latest Tubes
- Beautiful, hand-rubbed finished Cabinet
- Covers Broadcast Band and Police Calls
- Chrome Trimmings
console type Receivers. The illuminated inial is vernier drisen and is gratuated in kilocycles. Tone Control and delayed Antomatic Volume Control are incornomaterl. Housed in a beatiful modernistic, two-tone walnut finished cabinet with chrome ring in grill, chrome escutcheon and chrome trimmed knobs. Size $11 \frac{11}{1} \times 8 \frac{33}{4} \times 15$ inches high. Tubes used and suppliert: 1-57, 1-5s, 1-55, 2-45s, and 1-80. (Tungsol). Covers regular broadrast hand and police calls. 5.50 to 1650 K.c. For 110-120 voit 50/60
 A.C. Complete with tubes. Tist i'rice. $\mathbf{\$ 3 9 . 5 0}$.
Your special
$5 \$ 95$ Powerful!



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-But we have quietly introduced a new plan about which we now feel free to tell you
A new test procedure has been adopted, which pro vides for testing incoming merchandise and materials before it is placed in stock. Our experience has shown us that even the most careful mannfacturers sometimes make mistakes. Our "Laboratory Control" on all new merchandise provides a definite check upon fossible mis-marked merchandise, improper val ues or over-rated materials.

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Our Display Room has been remodeled to serve you more efficiently. A new sound instlated demon stration room for Pullic Address Amplitiers and Equipment will aid you to compare and choose the most appropriate system for your installations.
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| 3 E 599 | 21375 | 2.10 | 1.11 |
| 3E690 | 25/4s | 2.65 | 1.40 |
| 3E601 | 272/684 | 1.85, | . 98 |
| 3E602 | 6ais | 2.30 | 1.22 |
| 3E603 | 687- | 2.10 | 1.11 |
| 3E604 | $6^{6} 7$ | 1.91 | 1.00 |
| 3 E605 | 61)7 | 1.75 | . 93 |
| $3 E 606$ | 61:\% | 1.7.5 | . 93 |
| 3E607 | 61\%\% | 1.90 | 1.00 |
| 3E608 | 615 | 1.90 | 1.00 |
|  | 18 Ca | de: ${ }^{14}$ | 1.00 |
| 3E609 | 62\%5/1275 | 1.90 | 1.00 |
| 3E610 | 24s | 3.10 | $\begin{array}{r}1.69 \\ \hline 1.96\end{array}$ |
| 3E612 | 278 | 80 | . 42 |
| 3 E 613 | 35S/515 | 1.40 | . 74 |
| 3 E 614 | 46.41 | 1.10 | . 58 |
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| 3 E 621 | $5 \mathrm{5s}$ | 1.75 | . 93 |
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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3E700 | 01.1 | \$0.60 | 50.32 | $3 E 736$ | 46 | 1.05 | . 82 |
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| 3E703 | $2{ }^{2} 5$ | 1.10 | . 85 | $3 E 739$ | 53 | 1.80 | . 95 |
| 3E704 | $\because \mathrm{AF}$ | 1 (fi) | . 85 | 3E740 |  |  |  |
| 3E705 | 2 A 7 | $2.21)$ | 1.16 | 3E741 | 56 | 1.20 | . 83 |
| $3 E 706$ | 2136 | 2.50 | 1.32 | 3E742 | 57 | 1.65 | . 87 |
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| 3E708 | $5 \% 3$ | 1.511 | . 79 | 3E744 | 59 | 2.01 | 1.06 |
| 3E709 | $6: 7$ | 2.20 | 1.16 | 3 E |  |  |  |
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| 3E723 | 30 | 1.30 | . 69 | 3E759 | AG: | 2.05 | 1.08 |
| 3E724 | 31 | 1.30 | . 69 | 3E760 | (17) | 2.75 1.30 | 1.45 |
| 3E725 | 32 | 1.10 |  | ARCTURUS 2B6 Tube Power Amplifier |  |  |  |
| 3E726 | 33 | 2.10 | 1.11 |  |  |  |  |
| $3 \Sigma 727$ | 34 | 2.15 | 1.14 |  |  |  |  |
| 3E728 | 36 A | 1.50 | . 79 | A super tiode tube with higher power |  |  |  |
| $3 E 729$ $3 E 730$ | 37 A | 1.20 | .63 .77 | output, greatur sensitivits, and lower |  |  |  |
| 3E731 | 39-44 | 1.50 | .79 | mower consummion. Slx watts mower |  |  |  |
| 3E732 | 41 | 1.60 | .85 | sixteren from a mair in mush-pull. |  |  |  |
| 3E733 | $4{ }_{4}^{42}$ | $\underline{1.60}$ | .85 1.32 |  |  |  |  |
| 3E735 | 45 | 2.55 | 1.32 .40 | YOUR P | ICE .... | .... 8 | . 32 |

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USES THE NEW GA7 ELECTRON COUPLED detector-modulator tube in a new highly enticient
irempency conserter sumerheterodsne circuit. Tvo Trenueney comberter sumerheterods'ne circuit. Tho
coils ane supplien to rover the Jmportant short wave coins aye suppied to tover the Important short wave
Hinsthisslnh bands. This converter is designed to Gerate satisfietorily with any type of broud atat
verelver and when so used employs the essantint principles of the superheterodyme system the essential amaing distance and power-timited only by atmosased and the skill of the operator. Close olsservition of tion cirutit shown helow will explain the electrical plate tied tosether supplies reptitied dired plate on your recefier supply. plamis tha added straln elininates the need of a bower transtormer.


Tunes 20-200 Meters on Any Broadcast Receiver
The Short Wave Scout will molernize your prescomections and plug-in cord to 110 volt A.C. quick celling line. Fascinating to operate. A ers. Tuning ranke covers Americant 1'olice calls. meters: with the substitution of an extra coil rovided with the recewer, the short Wave scont clutes the triasmission ehannels of most turne in clutes the transmission ehannels of most tiurone
South Americana and American Relay station.

## You Can Step-Up Your Sales with

 This New Short Wave AdapterDo your rustomers know how simple it is to tion-ant how noterate the cost? month on Short Wave scout sales. You hare the inside track-you have the coniklence of vour of any serte of this mature You can make momy on this busmess antel theres it or it. The ficled has heen pioneered for you. National adivertising lass planted the seed of desire for short wave recephion it the minds of every radio owner and
most people get a big ligek out of it Gash in on this business-it call bring you a mighty good


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Genuine Walnut Veneer Cahinet, $81 / 4$ "x $61 / 2 "$ $41 / 2$ ". Tuning dal, bower swithl. and change Wave rewention. flighent of broadeast or short wave reseption. Highent (tuality workinanship and parts used throughout. This attractive litile coneiver into a world-wide multi-wave radio equal to some of the highest prieed "All-Vave" ratios Short Wave Scout $\mathbf{2 0 - 2 0 0}$ meters when used ith any broadcast receluer Self bowereal opmites from 110 sois ace or 11 C on ertal sultable for short wave recemton 4DIO945-Cnmpiete with RCA-Cumningham



# ONE HUNDRED MILLION Radio Tubes Raytheon 4-pillar Tubes ARE sold for cash 

 will be replaced this yea:. Your share of this As a Raytheon Dealer you get FULL probusiness will probably, account for $50 \%$ of fit You actually make from 10 to 15 peryour sales. The question of wholesale Tube cent more on every Tube you sell because prices is, therefore, a very important one to nothing is added to your cost by the manuYOU. ANY difference in your cost of cach facturer 10 offset his bad-account losses, Tube will make a BIG difference in your elaborate check-up expense, etc., that are year's profit.Many brands of Tubes are now available on consignment only-a system of distribution which, because it is expensive to maintain, compels the manufacturer to charge you more for his Tubes than you would pay were you to buy Tubes of equal quality for CASH.
Raytheon tubies are the best on the market. Each one is fully guaranteed for six months, subject to the usual exceptions of burnouts and breakage.

Perhaps you like thousands of other prudent Radiomen, prefer to buy your tubes outright and pocket this extra 10 to 15 percent profit.

Do you?
Then Raytheon 4-pillar Tubes are the answer. They have every feature that a fastselling, profit-producing Tube must have, including: Quality, Selection, Distinction, National Advertising and BIG TRADE DISCOUNT.
Build confidence in your firm by selling these outstanding high quality tubes.

## The High Quality Line with

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Last. \$2.00. YOUR PRICE
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12763 Half Wave Rectlifer IIst. \$1,20, YOUR PRICE..63\& $2575 \begin{aligned} & \text { Voltage Doubling Rect. } \\ & 3 E 780-01\end{aligned}$ IISt. $\$ 2.00$. YOUR PRICE \$1.06
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Halr Wave Rectifier
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3 E $78-5$ List. S1.50. YOUR PRICE .. $\%$ $\begin{array}{ll}21 & \begin{array}{l}\text { Triode Power Amplifier } \\ 3 E 789- \\ \text { List. } \$ 3.00 . \\ \text { YOUR PRICE } \$ 1.59\end{array}\end{array}$ $\begin{array}{ll}22 & \begin{array}{l}\text { Screen Grid Det. or Amp. } \\ 3 E 790- \\ \text { I.ist. } \$ 2.00, \\ \text { YOUR PRICE } \$ 1.06\end{array}\end{array}$ $24 A$ Screen Grid Det. or Ama. List, $\$ 1.20$. YOUR PRICE .. 634 26 Triode Amalifier List. 65c. YOUR PRICE ... 34d Triode Det. or Amplifler
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36 Screen Grid Det, or Amp. List $\$ 1.50$. YOUR PRICE .. 79 ¢
37 Triode Det. or Amplifier.
List $\$ 1.20$. YOUR PRICE .. 638
38 Pentode Power Amplifler.
List $\$ 1.45$. YOUR PRICE 77

## 3

39 Variable Mu Pentode Amp. 40 Triode Det. or Amallifer
Lisi. $\$ 2.00$. Your Price. $\$ 1.06$
4 Pentode Power Amalifier

$42 \begin{aligned} & \text { Pentode Power Amalifier } \\ & 3 E 806 \text { - }\end{aligned}$
LISt \$1.60. YOUUR PRICE.. 84d
13 Pentode Power Amalifier

Variable Mu Pent. Ama.
44ariable Mu Pent. Ama.
List $\$ 1.50$ Y YOU
Triode Power Amplifier
3E8O9-
List. 75c. YOUR PRICE.... 40 \&
List. 75c. YOUR PRICE.... ${ }^{\text {Dual Purdose Power Amp. }}$
46 DE8IO-
List sil.55. YOUR PRICE .. 82t
Pentode Power Amallfier
3ERI
List $\$ 1.30$. YOUR PRICE.. $69 \boldsymbol{\$ 1}$
List $\$ 1 . \frac{30 . \text { YOUR PRICE .. O9\% }}{\text { Power Amplifler }}$
$48 \quad \begin{aligned} & \text { Power Amplifle } \\ & \text { 3E812- }\end{aligned}$
I.ist $\$ 3.00$. YOUR PRICE $\$ 1.59$

49 Dual Purpose Power Amp,
List $\$ 1.70$. YOUR PRICE. 90 d
Triode Power Amalifier
List $\$ 4.00$. YOUR PRICE $\$ 2.12$
51 $\begin{aligned} & \text { Variable Mu Amallfier } \\ & 3 \mathrm{E} 799-\end{aligned}$
IIst $\$ 1.30$. YOUR PRICE .. 69d

Twin Class B Triode Amp.
List $\$ 1.30$. YOBI7- YOUR PRICE .. $95 \$$
55 Diode Det. \& Triode Amp.
List $\$ 1.60$ YOB YOUR PRICE .. $84 \$$
56 Triode Det. or Amplifier
List $\$ 1.20$. YOUR PRICE . 638

## $57 \begin{aligned} & \text { Pentode } \\ & 3 E 820-\end{aligned}$ <br> List \$1.6.3. YOUR PRICE.. 87f

59 Universal Power Amp.
LIst $\$ 2.00$. YOUR PRICE $\$ 1.06$
$71 \& \quad \begin{aligned} & \text { Triode Power Amolifler } \\ & 3 E 823-\end{aligned}$ L.1st. 75c. YOUR PRICE.... 40f 75 Diode Det. \& Triode Amp.
3E824-
List $\$ 1.60$. YOUR PRICE .. 84$\}$ $\frac{\text { Triode Det. or Amallif }}{}$
 $\left.77 \begin{array}{c}\text { Pentede Det. or Amp. } \\ 3 E 826-1 \\ \text { List } \$ 1.80 \text {. YOUR PRICE . } 95\end{array}\right\}$ 78 Var. Mul Pent. Det. or Amp. List $\$ 1.80$. YOUR PRICE .. 954 $79 \begin{aligned} & \text { Twin } \mathrm{B} \text { Trlode Power Ama. } \\ & 3 \mathrm{E} 828 \text { - }\end{aligned}$ List $\$ 2.60$. YOUR PRICE $\$ 1.37$ Full Wave Rectifier
List. 70c. YOUR PRICE.... 37d 8I Half Wave Rectifler
3E830-
List $\$ 3.50$ YOUR PRICE $\$ 1.85$

82 Full Wave Mercury Rect. $\begin{array}{ll}83 \sqrt{7} & \text { Full Wave Rectifler } \\ \text { 3E832- } \\ \text { LIst } \$ 1.55 \text {. YOUR PRICE .. } 824\end{array}$ List \$1.55. YOUR PRICE ...
84 3E833-
List $\$ 1.75$. YOUR PRICE .. 936
BSiode Det. \& Triode Amp.
List $\$ 1.60$. YOUR PRICE .. 84 Universal Power Amp.
3E835-
List $\$ 1.80$ YOUR PRICE .. $S^{\circ}$ §

V99 $\begin{aligned} & \text { Triode Det. or Amplifier } \\ & 3 E 836-\quad 1\end{aligned}$ List $\$ 2.25$. YOUR PRICE $\$ 1 . \mathbf{1} \boldsymbol{\$}$

BA Full Wave Gaseous Rect.
List $\$ 7.50$, YOUR PRICE $\$ 3.97$
BuII Wave Gaseous Rect.
List $\$ 4.65$. YOUR- PRICE $\$ 2.46$

4SPILAR TU:BES

## Nationally Advertised

 well" never be necessary for you to Tubes-The mill Raytheon 4-pillar dollars that have, and are being spent to impress the public with this exclusive patented feature, have firmly established Raytheons in the minds of Set owners as the standard of quality by which other Tubes are judged. With such tremendous nation-wide publicity and universal public acceptance behind them, Raytheon 4 -pillar Tubes will sell themselves.
## Complete Selection

Raytheon 4-pillar Tubes are made in all types-including spray-shield-to fit any Set. With this line you have a Tube for every customer-no lost sales.

Make $\mathbf{1 0} \%$ to $15 \%$ Bigger Profits There are at least five good reasons why it will pay you to handle Raytheon Tubes exclusively. Here they are:

## The Big Dealer Discount

You can buy them outright-and sav: $10 \%$ to $15 \%$ by paying cash Their quality is of the bestper ect performance with long life. Nationally Advertisedeasiest sold because best known.
Complete Selection-
4-pilar Construction-
the cnly Tube having this patented


## Speclal Spray Shleld

Types for Majestics (SS Indicates Spray Shield) 24S Luts. s.as: your price
$27 S$
LIst. \$0.80.
35S74 C
$55 S$90 C
3E845-69¢
57 ..... 93c
57AS Detector-Amplifer L,t5t 1175936
$58 S$ Vari Mu Pentode $A$
585 3E848- . YOUR PRICE ..... 93C
85AS ..... 93C
$85 S$ Diode Det-Trlode Amp ..... 90 C
$2 A 75$ Detector-Os
2A7S 3E851- YOUR PRICE ..... \$1.22
6 A7S 3 E852- ..... 3E852- ..... \$1.22
6B7S 3E853- 10. YOUR PRICE ..... \$1.11

6F7S ..... List. SI.90. YOUR PRICE ..... | t-0sc |
| :---: |
| $\$ 1.00$ |

 ..... $\$ 1.00$

E856-

List, SI.75. YOUR PRICE
$6 T 5$ 3E858-
List. SI.90. YOUR PRICE93493c69 c


Raytheon Multi-Adapter
Special offer with Order for 25
Assorted Raytheon Tubes

## \$625

## Brings your Tubo Tester

 up-to-date. No indiride Lal adayters noend siuphies at hament politares not arallatie on your oil The Te ster and allows tor testing any number of new tubes that may be brouzht out in the future. It is so ilexible that every possible connection of incerclement arrangement of plate. grids. scruen, rathode van be oulckly made. Etched Dane makes additional charts unnecessary. In leathersize $7 x 01 / 2 \mathrm{~S}^{1}+{ }^{4}$ inches.
3E859-YOUR PRICE
$\$ 7.45$
(If purchased on Tube Deal.)
eal.) - 3.56 .25

## Raytheon \$2.17

 <br> <br> Tool Kit} <br> <br> Tool Kit}
## This is the lieal

 tool Kit for men. Male by one of the the cyta
trys leading tool makers. Cnuck Handen 3 sicrew-drtrer Blades. 5 Socket Wrenches and 3-in-1 Bakelite Balancing wrench. Fitted with neat leatherette roll type case. Fits conconiently finto layitheon carying case.


3E860-YJUR PRICE
(With an orcer for 10 Raytheon Tubes.
Raytheon Carrying Case \$1.06
A rery substan-
tually made leatherette made . ed case measurin ed case measuring 19 inches lorg. 9 Inches wide and $1 / 2$ inehes deep. large enough to hold a full set of tubes and tools. A very handy lem for sitrice calls. Fhished in black with brass fittings.

| ..... $\$ 1.35$ |
| :--- |
| 15 |

3E86I-Each
(With Order for 5 Raythenn Tubes....
\$ (.06)

## Raytheon Rider's Manuals

Here's your shance to get these famous service data hooks at bis sarings. See page 100 for com. plete descrlp:ion.
3E862-YHLUME
YOUR PRICE
\$4.99
(with order for 15 Ravtheons)
3E863-VILUME "\$4.32
YOUR PAICE ..... $\$ \mathbf{\$ 4}$
3E864-VOLUME YOUR
PRICE
\$4.99


## Why Raytheon 4-Pillar Construction is Best

There are more than thirty elements in every Radio Tube, no matter what the make -tiny pieces of wire and delicate bits of metal. When the Tube is made, these fragile elements are properly adjusted at the phant. placed in just the right position to provide the clear, swect-tone reception that the Radio Set was made to give. Any change in the spacing of these plements changes the characteristics of the Tube. inness the original adjustment of these elements is maintained to the thousandths of an inch the Set cannot pertorm the way it should.

Jolts. jars and vibrations affect ordinary twosupport Tubes and you can never be sure that their oriminal factory adjustment will be retained through the bumps of shipment and handling. to say nothing of vibrations while the set is being used.
Raythcon 4-pillar Tubes on the other hand come to you exactly as they leave the laboratory, Four strong pillars keep the elements in place. maintaining the hair-line accuracy with which they were assembled. And because of their unique construction. they will star that way throughout their long life. IIfeavy vibrations caused by the Dviamic speaker. knocks and bumps incident to store-handing-the slight mishaps that impair and even ruin ordinary Tubes leave Raytheons unaffected.

## Who Uses Raytheons

In huge planes of the great continental transport companies. alert police cars ou watch throughout the conntry, in auto-mobile- Radios and for all othior purposes where the hardost usare must he withstood with unfailing dependability, Raytheon 4 pillar Tubes are extensively used. It is the one Tube that defies abuse the one Tube that outlists all others.

Threfore when a Set owner comes to you for new 'Tubes you can reconmend with cunfidence Raytheons, making not only a satisficd customer. but also a $10 \%$ to $15 \%$ greater mofft for yourself?

## Things to Help You Sell Raytheons

Mans arresting window displays, window streamers. display stands, consumer leaflets. data charts. etc.. are heing issued from time to time to tie up with the Raytheon adbertising campaigns being earried on in the country's leading Radio periodicals. If you can nse this material please advise us when can nge this material pease anise nat whe we
placing your order for Ravtheons and we
will all advertising assistance available.

## Cunningham Radiotron

## Merchandising Aids and Service Helps Successful Servicemen Advertise-

More proft, greater volume, satisfled customers, Adrertising builds confidener. as well as more bustness. Tie your firm name In with Cunningham and protit by the milltons of dollars Cunningham spends on hatlonat advertisimg. gou inereace your customer's confldence in you when you handie robation wected herause
 of suctessful results obtainud on tests by leading

## Other Advertising Material Free

To our customers who are prepared to rarry a reasonable stock of Cunninghanb Tubes and display adrertising helps, we will, upon your reduest, advise li, T. you should be guphled free with the materlat they have avaibable for latger dealers.

## Tube Stickers

Every time you test a tuhe. put on a Cunningham Tube Test sticker. sew up the renewal sale Makes every tute a selling agent for you.
The cost is negligible, the value great. Has The cost is neglipible, the value great. Has swace for date sold, date tested, satinfactory, doubtind and unsitisfactory indications. with 3 -lines (Vour name. address and printed with 3 -lines (lour
clty). Print name plainly.



## Service Billheads

It pays to look the part of a profitable efflcient. up-to-date service organization. If tho serviceman's billiead is a sloppy make-shift aftair It is liable to counteract an orherwise impressive cervice layout. This neat form costs no more than many Inferior billheads. Imprinted with your name, address, city, and telephone number.
D997.
limprinted. 500 for
\$1.00

## Not-At-Home Cards



CE 025 Cunninghan 00
CE 925 -Cunninghan 00.
RE 925 -Iadiotron 00A
LIST PRICE
$\$ 4.00$
01A
CE926-Cunningham 01A RE926 Jadiotron 01A
LIST PRICE
146
CE 904 Cunningham 1A6 RE904-Hadtitron 1A6 LIST PRIGE
\$ 1.75

CE927-Cunningham RE927-Kidiotron
LIST PRICE
$\frac{\ldots . .}{1-V}$
CE93I-Cumninahian 1-V
RE931- Rarllotron 1-V
LIST PRICE
CE900-Cunnincham 2 A 3
RE900 Ratiotron 2A3
LIST PRICE

CE901-Cunnincham 2A5 RE901-Radiotton 2A5
list price
\$1.25
$\$ 2.25$ $\$ 1.50$

LIST PRICE
6A4
CE907-c'unninghant 6A. 4 RE907-Radiotron 6A4 LIST PRICE
$6 A 7$
CE9II-Cunningham 6A7 RE91I-Radiotron 6A7 LIST PRICE
\$2.20

## 6B7

CE918-c'unningham fiB7 RE918-IIadiotron 6B7
LIST PRICE

## RCA Cunningham Radiotron

RCA Cunningham Radiotron Tubes are now available to servicemen and dealers on consignment only. No distributor is permitted to sell these tubes for cash except at full list prices. You pay for the merchandise only after you sell it. Discounts range from $37-5 \%$ to $41-5 \%$. If you are interested we will send you full details upon request. In the event the RCA Radiotron Company. Inc., approves your contract we will establish you as an RCA Cunningham Radiotron dealer and you will be able to obtain an adequate stock of these tubes from us.

Consignment Exceptions
The Radolek Company is authorized to sell for cash or on ans other basis it elerts to Theaters, Sithools, Rrwarasters, Eankineering Latoratories, Governumens. County and Bunivimal Guvernemens. and all Euvernment and pubile instltutions, at a $40 \%$ discount from current hist prices. It mast. however, be aareed to in a contritel provided by us that tubes so etuiment or devices elther owned. cantrolled or used by the mirchiser: or in radio apparatus, equipment or devices (excent receiving apparatus) manufactured by the purchaser for resale. If you can classif, under any ol the exceptions write us for a contract and other details.

CE905-Cunn 6C6
CE 905-Cuninncham
RE905-RC6
RE905-Radiotron $6 \mathrm{C} 6 \mathrm{C} .$.
LIST PRICE ......... $\mathbf{\$ 1 . 2 5}$
CE906 6D6

LIST PRICE.
$\$ 1.25$

RE908-lladlotron 6F7
LIST PRICE
10
CE928-Cunningham 10
RE928-lidilotron 10
LIST PRICE
$\$ 5.00$

CE929 Cunningluan 11
RE929-ladiotron 11
LIST PRICE
\$3.00
CE930-Cunningham 12

$12 Z^{2}$
CE922-Cunninghan 1273


## 19

CE909-Cunninghaı 19
RE909-Itadiotron 19
\$1.50
list price
20
CE933-Cunningham 20
RE933- Ridiotron 20
list price
\$3.00

CE934- c'unninghat 22
RE934-Radiotron 22 \$2000
lest price
$24 A$
CE935- 'unninglam 24 A
RE935-Radiotron 24 Ă
\$1.20
list price

## 2525

CE921-Cunininghain 252
RE92I-Ladiotron 2525
list price
$\$ 2.00$
CE936-Curninclam 26
RE936--kadiotron 26
LIST PRICE

CE937-Cunnin 27

list price
CE938-Cunningham 30 RE938-Radiotron 30
LIST PRICE ........... $\mathbf{\$ 1 . 3 0}$
CE939-(runningham 31
RE939 Raidiotron 31
LIST Price
\$1.30
CE940-Cunntughain 32
RE940-Ratiotron 32
LIST PRICE
$\$ 1.90$
CE941-「ummingham 33
RE941 Riddiotrin 33
list price
\$2.10
CE942-Cunningham 34
$\left.\begin{array}{l}\text { RE942- Randitron } \\ \text { LIST PRICE } \ldots \ldots \ldots\end{array}\right\} \mathbf{\$ 2 . 1 5}$
35
CE943-Cunningham 35
RE943-Radiotron 35
LIST PRICE
\$1.30

CE945-C'unningham 37
RE945 Ractlotron $37 \quad \mathbf{\$ 1 . 2 0}$
LIST PPICE
CE946 runninghan 38
RE946 Raditotron 38
list price
\$1.45

CE947-'unningham 39-4: RE947-Radiotron 39-41 list price

CE948-Cunningham 40
RE 948 --Kadiot ron 40
list price
$\$ 2.00$
CE949 Cunningham ${ }^{41}$ RE949 IGadibtron 41 LIST PRICE

## Fresh Stock <br> and R C A Radiotrons <br> <br> TUBES

 <br> <br> TUBES}
## Tube Agency Consignment Plan

The Radolek Company will be glad to co-operate with al Radio Scrvicemen or Radio Service Organizations so as to enable them to qualify for the RCA Tube Agency. If you have an established RCA Cunningham Radiotron ctientele we want you to write us for your contract.

Only List Prices Specified
We have specified the current list prices on RCA Cunningham and Radiotron tubes. The discount varie: according to the quantity of tubes you are able to use over a puriod of one year.
Qualification Rasis Qualification Rasis
Annual ales in
Cnits
Under 1.000
$1.000-2,500$
$2.500-5.000$

Schedule of Discounts


Your cuntract must be approval before any of the se discounts are anplicable. All contracts stary on the $37 \%$ Basic Rate ard ame adjusted to high Rasic Rate when sales so justity

| $\$ 1.60$ | ${ }_{\text {cosem }}$ |
| :---: | :---: |
|  | 50 |
|  | ${ }_{\text {cter }}^{\substack{\text { cieg } \\ \text { List }}}$ |
| 75C |  |
|  | ${ }^{\text {ceem }}$ |
| \$1.30 |  |
| \$3.00 |  |
| \$1.70 |  |
| ceicle |  |
| $\$ 1.80$ |  |
|  | $\underset{\substack{c \\ \text { cege } \\ \text { Kit }}}{ }$ |
| $\$ 1.20$ |  |
| $\$ 1$ |  |

# OTHERS ASK  

New, Fresh from the Factory
GUARANTEED TO EQUAL CHARACTERISTIC STANDARDS SET BY LEADING MANUFACTURERS

Not a low price Tube; but a guaranteed
First Quality Tube at a LOW PRICE SIX MONTHS GUARANTEE
burnouts and breakage alone are excepted.

(1) $3 E 520$-List. $\$ 4.00$. YOUR PRICE

1) 3 E521-List, $\$ 0.60$. YOUR PRICE
IV 3E522-List, \$1.50. YOUR PRICE

IA 6 3E523-List, \$1.75. YOUR PRICE

TC6 $3 E 524-\mathrm{L} / \mathrm{st}, \$ 2.20$ YOUR PRICE $\qquad$
2A3 3E525-list. $\$ 2.25$.
A-3E526-List, $\$ 1.60$.
2AS YES26-LISt,
2A6 3E527-List. \$1.60.
2A7 3E528-List. $\$ 2.20$.
2A. 7 YOUR PRICE ......
2B6 3E529-List. \$2.50. YOUR PRICE

237 3E530 List. $\$ 2.00$.
-973 3E531-List. \$1.50.
543 YOUR PRICE
6A4/EA $\begin{gathered}\text { YES32-LISt. } \$ 1.60 . \\ \text { YOUR PRICE }\end{gathered}$
$6 A 7 \begin{aligned} & 3 E 533-1 \text { IIst. } \$ 2.20\end{aligned}$
YOUR PRICE
6B7 ${ }^{\text {3E534-LIAst. S2.00. }}$
6B7 YOUR PRICE

Your Discount Over
50 and $10 \%$
Many of the Net Prices Quoted Figure as Low as 60 and $10 \%$ Discount!

## GOLD




## ONFIDENCE Tube Tester

## Four Simple Operations-Four Straight Sockets



We guarantee that the operation of this tester|
is so simple. the instructions so clear that your is so simple. the instructions so clear that your
customer can accurateiv test his own tubes after you guide him in testing the first tube.
Let your wife or clerk sell tubes for you. With the Confldence Straight Four Tube Tester, they can serve your customers just as well on tube testing as you can. How many sales can be made while you are out on calls?-How many tube sales were last because the tester in your store was too complicated for anyone besides yourself to operate? Fivery tube in the Radalek Tube Chart may be tested without adapters in this instrument. After adjusting the line voltage with slider 4, observe the three numbers onposite the tube type on the table in the IId of the tester. Adjust the three sliders to their correct positions and insert the tube in the socket it fits. The meter indicates GOOD or BAD. A cathode heater leakage test is made while the tube is hot. Other shorts indicate on the ruby jewel adjacent to the meter.

Adapters are not necessary with the Confidence 8traight Four Tube Tester. Every tube employed in standard radio receivers for the past six years can be tested quickly and sccurately feature of Confidence Tube Testers incorporated In this model is the 01A tube used as a balfwave motitier for the meter when measuring $A$. C line voltage on the 1).C. $1 \mathrm{mil} .31 /$ in $\mathrm{D}^{\prime}$ Argonval ineter The tube is in gervice only when the line roitase button is pressed. Two sorkets are provided for testing $91 / 2$ and 6 volt pllot llothts. A six volt bulb may be left in the $2 \frac{1}{2}$ solt socket as a pllot for the tester. 'rovislon is made under the panel for wiring for about 30 different clreuits which might someday be necessary if new tubes are announced. Size of case $10^{\prime \prime} \times 15$ " $161 / 4^{\prime \prime}$ with blid hinge cover.
1E2540-C on P I dence
Straight Four Tube Tester.
YOUR
PRICE



## 

See Explanatory Note，Bottom of Page VI

| See Explanatory Note，Bottom of Page VI |  |  |  |  |  |  | $\begin{aligned} & 8: 8 \\ & \text { 忽 } \end{aligned}$ |  |  | 䨘 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bottom <br> View of <br> Sockete | Tube Circult Dlagram | Type | ILIst | Purpose |  |  |  |  |  |  |  |  |  |  |  |  |
| $x^{2}-6$ |  | 55 | 81.60 | Diode Lo－Mu Triode | ${ }_{\mathrm{A} . \mathrm{C}}^{2.5}$ | 1 | 250 | 8 |  |  | －20 | $\begin{aligned} & 2500 \\ & 3 / 2 \\ & \text { Watt } \end{aligned}$ | 8.3 | 20000 | 350 | 2.9 |
|  | $\frac{1}{\infty}$ | 56 | 1.20 | Improved | ${ }^{2.5} \mathrm{C}$ | 1 | 250 | 5 |  |  | －13．5 | $1 \begin{aligned} & 2700 \\ & 1 \text { Watt } \end{aligned}$ | 13.8 |  |  | 3.5 |
|  | $\left.\sup _{\pi}=\frac{1}{n}\right)^{n} 56$ | 57 | 1.65 | HLMu．Det． R．F．and Osc． | $\begin{array}{r} 2.5 \\ \mathrm{~A} . \mathrm{C} \end{array}$ | 1 | 250 | 2 | 100 | 0.5 | －3 | $\begin{gathered} 1200 \\ 1 \text { Watt } \end{gathered}$ | 1500 |  |  | 3.5 |
| $5\left(966^{30}\right)^{36} 6$ | $s_{x \rightarrow \infty}^{s u m}=5$ | 58 | 1.65 | Var．－Mer R．F．Ampr | $\begin{gathered} 2.5 \\ \mathrm{~A} . \\ \hline \end{gathered}$ | 1 | 250 | 8.2 | 100 | 2 | － 3 | $3294$ | 1280 |  |  | 2.75 |
| $56$ |  | 59 | 2.00 | 3 Grid <br> Triode <br> Pantede | $\begin{array}{r} 2.5 \\ \mathrm{~A} . \\ \hline \end{array}$ | 2 | $\begin{array}{\|l\|} 250 \\ 250 \\ 400 \\ \hline \end{array}$ | $\begin{aligned} & 35 \\ & 26 \end{aligned}$ | 250 9 <br> As Triode  |  | －18 | $\begin{array}{r} 408 \\ 1150 \end{array}$ | $\begin{gathered} 100 \\ 6 \end{gathered}$ | 6000 | $\begin{array}{r} 3000 \\ 1250 \\ 20000 \end{array}$ | 2.5 |
|  |  |  |  |  |  |  |  |  |  |  | －28 |  |  | 5000 |  |  |
|  |  |  |  |  |  |  |  |  | Class＂B＂ |  |  |  |  | 6000 |  |  |
| $56(\sqrt{9})^{6}$ | $c=x^{2} s c$ | 64 | 1.70 | Nat．Un．Tetrode Substitute type 36 In Paraliel | $\begin{array}{r} 6.3 \\ \mathrm{~A} . \mathrm{C} \end{array}$ | 0.4 | 135 | 3 | 67.5 | 3 | －1．5 | $1 /{ }^{2.50}{ }^{W a t t}$ | 370 |  |  | 2.8 |
| $5\left(-0^{2} 60-6\right.$ | $6=\underbrace{2} s c$ | 65 | 1.60 | A．F．Amp． Substitute type 36 in Parallel | 6．3． <br> A． <br> D． | 0.4 | 135 | 3.5 |  |  | － 9 | $3_{2}^{2570} \text { Watt }$ | 9 |  |  | 3 |
| $\rho^{6}\left(\begin{array}{c} 2^{2} \\ 3 \end{array} 0^{2}\right) \kappa$ | $c=$ | 67 | 1.30 | Det．－Amp． Substitute type 37 In Parallel | $\begin{aligned} & 6.3 \\ & \mathbf{A} \cdot \mathbf{C} \end{aligned}$ | 0.4 | 135 | 5 | 67.5 | 3 | －15 | $\begin{gathered} 1870 \\ \text { 3/6 Watt } \end{gathered}$ | 320 |  |  | 2.7 |
| $56\left(0^{6} 0^{6} 0^{6}\right.$ | $=\theta^{5}-56$ | 68 | 1.55 | Output Pentode Substitute type 38 In Parallel | $\begin{array}{r} 6.3 \\ \text { A.C. } \\ \text { D. } \\ \hline \end{array}$ | 0.4 | 135 | 14 | 135 | 3 | －13．5 | $\begin{gathered} 795 \\ 1 \text { Watt } \end{gathered}$ | 90 | 7500 | 650 | 3.14 |
| $\left.0^{6} 0^{5}\right)^{6}$ | $c=\infty_{x}^{\infty} 5 c$ | 63 |  | Spec．HI－Mu． Detector | $\begin{aligned} & \hline 6.3 \\ & \text { A. } \mathrm{C} \\ & \hline \end{aligned}$ | 0.3 | 180 | 4.5 |  |  | － 3 | $\text { 1/3 } \stackrel{666}{\text { Watt }}$ | 30 |  |  | 2.1 |
|  | $\infty_{\infty}^{n}$ | 714 | .75 | Pwr．Amp． Triode | $\stackrel{5}{\mathbf{A} . C}$ | ． 25 | 180 | 20 |  |  | －43 | $\begin{gathered} 2150 \\ 2{ }^{2} \mathrm{Watt} \end{gathered}$ | 3 | 4800 | 790 | 2.3 |
|  |  | 75 | 1.60 | Double Diode HI－Mu Trlode | $\begin{aligned} & \mathbf{A}_{\mathbf{6}}^{\mathbf{D}} \mathrm{C} \\ & \hline \end{aligned}$ | 0.3 | 250 | 0.8 |  |  | －2． | $y^{2500}{ }^{25 t t}$ | 100 |  |  | 2.1 |
| $56\left(-0^{254}\right)^{540} 6$ | $\left.\sup _{x}^{5}=\frac{1}{6}\right)^{56}$ | $\pi$ | 1.80 | $\begin{aligned} & \text { Ml-Mu R. F. } \\ & \text { Pontode } \end{aligned}$ | $\begin{array}{r} 6.3 \\ \text { A. } \\ \text { D. } \\ \hline \end{array}$ | 0.3 | 250 | 2.3 | 100 | 0.6 | － 3 | $\begin{gathered} 1035 \\ 3 \end{gathered}$ | 1500 |  |  | 2.1 |
| $56$ | $\left.\stackrel{c}{c}_{s u p}^{-1}+\right)^{2} s c$ | 78 | 1.80 | Var．Mu．R．F． Puntode | $\begin{aligned} & 6.3 \\ & \text { A. } \mathrm{C} \text {. } \end{aligned}$ | 0.3 | 250 | 7 | 100 | 2 | －3 | $3 / 2 \stackrel{334}{\text { Watt }}$ | 1160 |  |  | 2.4 |
| $6$ | ${ }_{c}^{c} x^{p_{1}}$ | 75 | 2.60 |  | $\frac{6.3}{\mathbf{A . 3}} \mathbf{\text { D. }}$ | 0.6 | 180 | 7.5 |  |  | Class |  |  | 7000 | 5500 | 9.3 |
|  |  | 85 | 1.60 | $\begin{aligned} & \text { AvC Dlode } \\ & \text { Triode } \end{aligned}$ | $\begin{aligned} & \mathbf{6 . 3} \\ & \mathbf{A} \cdot \mathbf{C} \end{aligned}$ | 0.3 | 250 | 8 |  |  | －20 | $\begin{aligned} & 2500 \\ & 1 \mathrm{Watt} \end{aligned}$ | 8.3 | 20000 | 350 | 2.1 |
|  | $s x_{x}=-56$ | 87 | 1.65 | R．F．Pentede Same as 57A | $\begin{gathered} \text { A.3 } \\ \text { A.C. } \end{gathered}$ | 0.4 | 250 | 2 | 100 | 1 | － 3 | $1000$ | 1250 |  |  | 2.8 |
| $56\left(26^{502} 6\right.$ | $c_{k}^{s u}=\sqrt{6}-s 6$ | 8 \％ | 1.65 | Var．Mu．R．F． Pentode Same as 58A |  | 0.4 | 250 | 8.2 | 100 | 3 | － 3 | $3 / 2{ }^{270} \text { Wंatt }$ | 1280 |  |  | 3 |
|  | $\left.x_{x}^{s u p}=\right)^{2}$ | 83 | 1.80 | －As a Triode or Pentode | $\begin{array}{r} 6.3 \\ \text { A. } \mathrm{C} \\ \text { D. } \mathrm{C} \\ \hline \end{array}$ | 0.4 | $\begin{aligned} & 250 \\ & 250 \end{aligned}$ | $\begin{aligned} & 32 \\ & 32 \end{aligned}$ | 250 | 5.5 | $\begin{aligned} & -31 \\ & -25 \end{aligned}$ | $\begin{aligned} & \quad 970 \\ & \quad 666 \\ & 1 \text { Watt } \end{aligned}$ | $\begin{aligned} & 4.7 \\ & 125 \end{aligned}$ | $\begin{aligned} & 5.500 \\ & 6750 \end{aligned}$ | $\begin{aligned} & 350 \\ & 340 \end{aligned}$ | $\begin{aligned} & \mathbf{3} \\ & \mathbf{3} \end{aligned}$ |
| $502_{296)^{500}} 6$ | $\text { sup }=\frac{1}{6}$ | 85 | 1.80 | －As a Class＂B＂ Amplifier | $\begin{aligned} & 6.3 \\ & \mathbf{A} \cdot \mathbf{C} \end{aligned}$ | 0.4 | 180 |  |  |  | 0 |  |  | 9400 | 3500 | 6 |
|  | $\omega^{1}$ | UV99 UX9s | $\begin{aligned} & 2.25 \\ & 1.50 \end{aligned}$ | Gor．Purpose Same as 299 | $\begin{array}{r} 3.3 \\ \mathbf{D} . \mathbf{C} \end{array}$ | 0.06 | 90 | 2.5 |  |  | －4．5 | $\begin{aligned} & \text { "C" } \\ & \text { Batt. } \end{aligned}$ | 6.6 |  |  | 5.3 |

# DAYFADTUBE PERFORMANCE METER <br> Performs Six Basic Functions with One Instrument 

## Universal Tube Performance Meter，Signal Generator and Output Meter． <br> Neutralizing and Balancing Unit－Comparative Set Efficiency Tester．

 in connections for all following uses： ns mondensers As Comparison Ettlicienes Tester：similar comparison Efflcieney Tester：similar sets can artually be compared to detect difference modulated As Neutralizer．Che weutmatization signal permits excellent neutralization， Makes location of lonse connections wire is wigaled．Checks efflclency of A．V．C．circuits．Also compares new and old tubes in actual service by difference in total gain．

## Universal Tube Performance

 MeterHas abllity to test any tube em－ ployed in a radio set．The Perform－ ance Meter generates a modulated signal at radio－frequency，thus testing a recolver under actual operating con－ ditions．By substituting one new tube at a time in the radio under test．the increased reading on the out－ put meter is proof of the need for mathes．spectal scales－N iculty in explaining action to your customer．No complicated tube socket dapters required when used with volt－ohmmeter，radio troubles can te
located．The rectifler typer capactey
coupled output meter with a variable shunt control may be employed separ． ately．
SPECIFICATIONS： $100 \%$ shielded cast aluminum case finished in durable crackle－lacquer，contains batteries， tube．output meter，colls，and control Non－remorable Linorraphed Danel Non－removable blndina pasts．In structions for operation and location tubes included on all types of power for ham 30 tube．Burgess No 5126， 2214 volt battery， 2 No． 222 Burgess two cell flashltght batteries Back plate mav he remosed for installation of mav he


## Radolek TUBE CHART <br> With E／as Resistor Deta and Total Power Con－ sumption of all standord American miado Redio <br> Page IV Recelving Set Tubes．

| See Explana | tory Note， B | torm | P Pa | V1 |  |  |  | 呂 | 盛 | T |  |  | $\frac{g}{8}$ |  |  | 느을 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bottom <br> Vlew of Sockets | Tube Circuit Dlagram | Type | LLst | Purpose |  | $\frac{\text { 岂思 }}{\substack{E \\ E}}$ | $\begin{aligned} & \text { \$思 } \\ & \text { 号 } \end{aligned}$ | 电寻 |  |  |  |  | 空完 |  |  |  |
| $\cdots\left(\begin{array}{l}0 \\ 0 \\ 0 \\ 0\end{array} 0^{2}\right)^{6} N$ |  | 181 | \＄1．90 | Sparton Power Tube Top Heater | $\stackrel{3}{\text { A. }} \text { C. }$ | 1.75 | 180 | 20 |  |  | －32 | $\begin{gathered} 1600 \\ 2 \text { Watt } \end{gathered}$ | 5 | 7000 | 1500 | 7 |
| $\rho 2\left(0^{60}\right)^{6} \cos$ |  | 146 | 1.25 | Mixer．－Osc． Same as 15 | ${ }^{2} . \mathrm{C}$ | 0.06 | 180 | 1.3 | $\begin{gathered} 67.5 \\ \text { Anole } \\ 135 \end{gathered}$ | $\text { Grid } 2$ $2.3$ | －3 | $\begin{gathered} 1037 \\ \text { 1/s Watt } \end{gathered}$ |  |  |  | 1.5 |
|  | $+\frac{1}{\infty}$ | 243 | 2.25 | Multi．Filament Class＂A＂ | $\begin{aligned} & 2.5 \\ & \text { A.C. } \end{aligned}$ | 2.5 | $\begin{aligned} & 250 \\ & 300 \end{aligned}$ | $\begin{aligned} & 60 \\ & 40 \end{aligned}$ | Push- | I］ depend | $\begin{gathered} -45 \\ -62 \\ \text { ent } \mathrm{Fi} \end{gathered}$ | $\begin{gathered} 750 \\ 10 \text { Watt } \\ \text { Blas. P-P } \end{gathered}$ | 4.2 4.2 <br> Outrut | $\begin{aligned} & 2500 \\ & 5000 \\ & 3000 \end{aligned}$ | $\begin{array}{r} 3500 \\ 10000 \\ 15000 \end{array}$ | 10 |
| $p\left(e^{2} j^{6 \prime}\right)^{64} 64$ |  | 1 C 6 | 2.20 | Heptode Converter | ${ }_{1}^{2} . \mathrm{C} .$ | ． 13 | 180 | 2.8 | 67.5 | 0.1 | － 3 |  |  |  |  |  |
|  |  | 245 | 1.60 | Pentede Output Same as 95 and PZ．H | $\text { A. } \mathbf{2 . 5}$ | 1.75 | 250 | 34 | 250 | 6.5 | －16．5 | $4 \text { W07 }$ | 220 | 7000 | 3000 | 5 |
| $p_{1}^{p_{1}^{6}}\left(i^{p}-6\right.$ |  | 246 | 1.60 | Deuble Diede Hi－Mu Trlede | $\begin{gathered} 2.5 \\ \text { A. } \\ \hline \end{gathered}$ | 0.8 | 250 | 0.8 |  |  | － 2 | $\begin{gathered} 2500 \\ 1 / 5 \text { Watt } \end{gathered}$ | 50 |  |  | 4.5 |
|  |  | 247 | 2.20 | Mixer．Oec． Converter | $\begin{aligned} & 2.5 \\ & \mathrm{~A} . \mathbf{C} \\ & \mathrm{D} . \mathrm{C} \end{aligned}$ | 0.8 | 250 | 3.5 | $\begin{gathered} 100 \\ \text { Anode } \\ 200 \end{gathered}$ | 2.2 Grid 52 4 | － 3 | $\begin{aligned} & 300 \\ & 3 / 5 \text { Watt } \end{aligned}$ |  |  |  | 3 |
|  | a, | 2B6 | 2.50 | Doube A－F Amp． Values for Output Sec． | $\begin{gathered} 2.5 \\ \text { A. } \mathbf{C} \end{gathered}$ | 2.25 | 250 | 40 |  |  | $\begin{gathered} -24 \\ +2.5 \end{gathered}$ | $\begin{gathered} 8000 \\ 540 \\ 3 / 5 \& 5 \mathrm{~W} . \end{gathered}$ | 18 | 5000 | 4000 | 10 |
|  | $\rho_{1}^{c}=\sin ^{\rho} \rho_{2}$ | 287 | 2.00 | AVC Owo－diode Pentode | $\begin{aligned} & 2.5 \\ & \text { A. } \\ & \text { D. } \\ & \text { C. } \end{aligned}$ | 0.8 | 250 | 9 | 126 | 2.3 | － 3 | $\begin{gathered} 266 \\ 1 / 5 \text { Watt } \end{gathered}$ | 730 |  |  | 2.5 |
| $\rho\left(i_{0}^{2} s_{0}^{p} \kappa\right.$ | $\rho \rightarrow \infty$ | 25 | 2.65 | Majestic Ouo－Diode | $\text { A. } 2 .$ | 1.75 | 20 | 11 | With | Speclal | dapter | batliute |  |  |  | 4.4 |
|  | $x \rightarrow+\infty$ | 45 | 2.65 | Majestlc Duediode | $\begin{array}{r} 2.5 \\ \mathbf{A . C} \end{array}$ | 1 | 20 | 11 |  |  |  |  |  |  |  |  |
|  |  | 644 | 1.60 | Pentode Pwr． Output <br> Sarne as La | $\begin{aligned} & 6.3 \\ & \text { A. C. } \\ & \text { B. } \end{aligned}$ | 0.3 | 180 | 22 | 180 | 3.3 | －12 | $2 \stackrel{463}{\text { Watt }}$ | 100 | 8000 | 1400 | 3.3 |
|  |  | 6 A7 | 2.20 | Mixer Osclllater | $\begin{aligned} & 6.3 \\ & \text { A. } \mathbf{C} \\ & \mathbf{D} . \mathbf{C} \end{aligned}$ | 0.3 | 250 | 3.5 | $\begin{gathered} 100 \\ \text { Anode } \\ 200 \end{gathered}$ | 2.2 | $-3$ | $\stackrel{525}{1 / 5 \text { Watt }}$ |  |  |  | 3 |
|  | $\rho_{1}^{c}=a^{\infty}$ | 687 | 2.00 | Dlode Pentede | $\begin{aligned} & 6.3 \\ & \text { A. } \mathrm{C} \\ & \mathrm{D} . \mathrm{C} \end{aligned}$ | 0.3 | 250 | 9 | 125 | 2.3 | － 3 | $\underset{1 / 5 \text { Watt }}{265}$ | 730 |  |  | 2.5 |
|  | $\text { sup+e }+56$ | 6 C 6 | 1.25 | Var－Mu R．F． Pentede | $\begin{aligned} & 6.3 \\ & \text { A. } \mathrm{C} \\ & \mathrm{D} . \mathrm{C} \end{aligned}$ | 0.3 | 250 | 2.3 | 100 | 1 | － 3 | 910 1／5Watt | 1500 |  |  | 2.5 |
| $56 \%^{H_{3}} \rho_{2}$ |  | $6 \mathrm{C7}$ | 1.90 | AVC Diede <br> Triode | $\begin{gathered} 6.3 \\ \text { A.C. } \\ \text { B. } \end{gathered}$ | 0.3 | 250 | 5.5 |  |  | － 9 | $\begin{gathered} 1635 \\ \text { 3/2Watt } \end{gathered}$ | 20 |  |  | 2.7 |
|  | $s u p=1$ | 606 | 1.25 | Var．Mu R．F． Pentede | $\begin{gathered} 6.3 \\ \text { A. } \\ \text { I). } \end{gathered}$ | 0.3 | 250 | 7.5 | 100 | 1.75 | － 3 | $\begin{gathered} 324 \\ 1 / 2 / W_{a t t} \end{gathered}$ | 1160 |  |  | 2.7 |
|  | $\frac{s u p+e}{x}=56$ | 607 | 1.75 | R．F．Pentode | $\begin{aligned} & 6.3 \\ & \text { A. } \\ & \text { I). } \end{aligned}$ | 0.3 | 250 | 2.3 | 100 | 1 | － 3 | $\stackrel{910}{15 W \text { att }}$ | 1500 |  |  | 2.2 |
|  |  | CE7 | 1.75 | R．F．Pentode | $\begin{aligned} & 6.3 \\ & \text { A. C. } \end{aligned}$ | 0.3 | 250 | 7.5 | 100 | 1.75 | － 3 | $\underset{3 / 24}{324}$ | 1160 |  |  | 2.4 |
|  |  | $6 F 7$ | 1.90 | Mixer，Oec． Triode Pentede | $\begin{aligned} & 6.3 \\ & \text { A.C. } \\ & \text { D. } . \end{aligned}$ | 0.3 | 250 | 6.5 | 100 | 1.5 | － 3 | $375$ <br> 3／2Watt | 900 |  |  | 2.4 |
|  |  | 12A5 | 2.10 | Double Holater Pentede | $\begin{aligned} & 12.6 \\ & \text { A.C. } \end{aligned}$ | 0.3 | 180 | 40 | 180 | 8 | －27 | $5 \text { Watt }$ |  | 4500 | 2800 | 8.7 |


＂p＂Means A Baldwin Phone


Only with a sensitive balanced armature Genuine Nathaniel baldwin Phone can exact zero hum position of the Potter Condenser Test bridge． The Baldwln does not deteri－ orate on $\mathbf{A}$ ．C．testing where ordinary headphones would
lose their magnetism and lose their
sensitivity．
3E2359－
YOUR PRICE

# Universal Condenser Tester＿Measures All Type Condensers 

## Electrolytic－Paper－Mica

From ． 0001 to 30 MId．
A Capacity Bridge For Quickly and This Cendenser Tester is the most Accurately measuring the capacity of accurate low priced capacly measuring all types of esndensers．Mica paper．device on the market．You will find or electrolytic type condensers－all it as useful as your ohmmeter．For capaclties without excessive leakake may be balanced against a reststance－ capacity net work in the Pottar Con－ denser Tester．Uses any Prequency－ any voltase．up to 120．avallable from commerctal A．C．lines．A sensitive headphone or high resistance ${ }^{A}$ ．C．C．
voltmeter should be used in the customary position of a galvanometer in the bridge circult．（ $P^{*}$ in the diagram．）When measuring a condenser，the range and potentiometer knobs are adjusted untll ne hum is
heard in the headphone．The Capacity is then read directly on the scale indicated by the 4 point multiplier switch．Its Easy．Its Fast

# Radolek TUBE CHART <br> WIth Blas Res／stor Data and Total Powar Con－ sumpirion of all sfand Recelving Sof Tubes． 

| See Explanatory Note，Bottom of Page VI |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bottom View of Sockets | Tube Circuit Dlagran | Type | I．stst | Purpose |  |  |  |  |  |  |  |  |  |  |  |  |
| （3） | $=a_{x}^{2}$ | $\begin{aligned} & 401 \\ & \text { and } \\ & \text { and } \end{aligned}$ | \＄4．00 | Kellog O＇v＇rhead Heater Triode | $\stackrel{3}{\text { A．}} \mathbf{C}$ ． | 1 | 180 | 6 |  |  | $-13.5$ | $3_{2}^{2250} \text { Watt }$ | 8.7 | 14000 |  | 4 |
| $\left(\begin{array}{l} 9 \\ 3 \\ 12 \end{array}\right)^{6}$ | $\theta^{\circ}$ | 4828 | 1.65 | Sparton P－P A．F．Triede | A．${ }^{5}$ ． | 1.25 | 250 | 18 |  |  | －32．5 | 1805 <br> 4 Watt | 5 | 4500 | 1400 | 9.5 |
| $\left(\frac{2}{3} i^{6}\right)^{6}$ | $\theta$ | 483 | 1.65 | $\begin{aligned} & \text { Sparton } \\ & \text { P-P A. F. } \end{aligned}$ Triode | ${ }^{5}$ ．C． | 1.35 | 250 | 25.3 |  |  | －40．5 | $\begin{gathered} 1580 \\ 2 \text { Watt } \end{gathered}$ | 3.3 | 3900 | 1600 | 10 |
| $5^{6}$ |  | 485 | 1.45 | Sparton Triode Quick Heater Replacing 484 | $\mathbf{A}^{3} \mathbf{C}$ | 1.25 | 90 | 5 |  |  | －3 | $36{ }^{600} \text { Watt }$ | 12.5 |  |  | 4 |
| $5$ | ${ }_{x}^{\infty}$ | 486 | 4.10 | Sparton <br> Spectal Triade Triede | D．${ }^{3}$ c． | ． 25 | ¢0 | 3 |  |  | － 3 | $31000$ | 12.5 |  |  | 1.5 |
| $\left(\begin{array}{l} 2, \\ 0 \\ 0 \end{array}\right)^{-1}$ | $\theta^{\circ}$ | 586 | 4.00 | Sparton Pwr． Output Same as 50 | ${ }^{7.5}{ }^{\text {P }}$ ． | 1.25 | 4.50 | 55 |  |  | －80 | ${ }_{10}^{14.50}$ | 3.8 | 4350 | 4600 | 14 |
| $\binom{2^{2} i}{106}^{6}$ | $\left.\cdot \frac{1}{\infty}\right)^{2}$ | 364 | 2.10 | For Portable Osclilator and Preamplifiers | D．${ }^{1.1}$ | ． 25 | 135 | 3.5 |  |  | －9 | $\begin{gathered} 2575 \\ \text { or }{ }^{\circ}{ }^{\circ}{ }^{\prime \prime} \\ \text { Bat1. } \end{gathered}$ | 8.2 |  |  | ． 3 |
| $56$ |  | AE |  | Tetrode Hi－Mu Output | $\begin{aligned} & 12.8 \\ & \text { A. } \mathbf{C} \end{aligned}$ | 0.3 | 100 | 8.5 | 100 | 1．75 | $-13.5$ | $1 \begin{aligned} & 1330 \\ & 1 \text { Watt } \end{aligned}$ | 20 | 13500 | 400 | 4.5 |
| $5\left(\frac{1}{2}: 5\right) s$ | 葸 | GA | 2.75 | Arcturus Special Pentode | $\begin{aligned} & \mathrm{A}^{5} \mathrm{C} \\ & \mathrm{D} \cdot \mathrm{C} \end{aligned}$ | ． 25 | 180 | 25 | 180 | 7.5 | －10 | $\begin{aligned} & { }_{1}^{307} \text { Watt } \end{aligned}$ | 60 | 7000 | 800 | 5.5 |
| $\circ\left(0^{\circ}\right.$ | $\sigma^{(1)}$ | KR5 |  | Kenrad Pwr．Output Pentode | $\begin{array}{r} \hline 6.3 \\ \text { A. C. } \\ \hline \end{array}$ | 0.3 | 165 | 17 | 165 | 3.5 | －11 | ${ }_{2}^{537}$ | 100 | 8000 | 1200 | 2.4 |
|  | $\left.\beta_{p_{2}}^{6}=\frac{1}{6}\right)^{2}$ | KR20 | 3.00 | $\begin{aligned} & \text { Avc } \\ & \text { Detector } \end{aligned}$ | ${ }_{\mathbf{A} . \mathbf{C} .5}^{\mathbf{2 .}}$ | 1 | 250 | 3.5 |  |  |  |  | 14 | ．${ }^{\text {Meg }}$ |  | 3 |
| $2\left(\left(\sigma_{5}^{2}\right)^{2} c\right.$ |  | KR22 | 2.00 | $\begin{aligned} & \text { AvC } \\ & \text { Detector } \end{aligned}$ | $\begin{array}{r} 8.3 \\ \text { A: } \mathrm{C} \end{array}$ | 0.4 | 250 | 3.5 |  |  |  |  | 14 | ． 1 Meg |  | 3 |
|  | $\sigma_{a}^{2}-56$ | KR25 |  | Pentode Output | $\begin{aligned} & 2.5 \\ & \mathrm{~A} . \mathrm{C} \end{aligned}$ | 1.75 | 250 | 34 | 250 | 6.5 | －16．5 | ${ }_{4}^{407}$ Watt | 220 | 9000 | 3000 | 7.8 |
| $5$ | $\therefore \theta^{2}$ | LA | 2.75 | Pwr．Pentode Substitute 6A4 | $\begin{array}{r} \hline 6.3 \\ \text { A. C. } \\ \text { D. } \mathbf{C} \\ \hline \end{array}$ | 0.3 | 165 | 17 | 165 | 3.5 | －11 | $2 \mathrm{4} 7 \mathrm{att}$ | 100 | 8000 | 1200 | 3 |
| $5(-3)^{6}$ | $\hat{B}^{1}-s$ | PZ | 1.30 | Arcturus Number for Type 47 | ${ }_{\text {A．}}^{2.5}$ | 1.5 | 250 | 32.5 | 250 | 7.2 | －16．5 | $4{ }^{410}$ | 95 | 7000 | 3000 | 7 |
| $56$ | $\therefore=x^{2}-56$ | PZH | 1.60 | Arcturus <br> Number <br> for Type 2A5 | $\begin{aligned} & 2.5 \\ & \mathrm{~A}_{\mathrm{D} . \mathrm{C}} \mathrm{C} . \end{aligned}$ | 2 | 250 | 33.5 | 250 | 8 | －16．5 | ${ }_{5}^{400}$ Watt | 100 | 7000 | 3500 | 8.5 |
| $\left(\begin{array}{c} 8 \\ 3 \\ 3 \\ i \end{array}\right)^{6}$ | $-\frac{1}{\infty}$ | WDII | 3.00 | $\begin{aligned} & \text { Early } \\ & \text { Batt. Sets } \end{aligned}$ | D．${ }^{1}$ C． | ． 25 | 135 | 3 |  |  | －9 | "C" | 6.5 |  |  | ． 3 |
| $\left(33^{3}\right)^{6}$ | $\cdot \Theta^{\circ}$ | W×12 | 3.00 | $\begin{aligned} & \text { Gen. Purpose } \\ & \begin{array}{l} \text { Trioder } \\ \text { Sub, } 854 \end{array} \\ & \hline \end{aligned}$ | D．${ }^{1.1}$ C． | ． 25 | 135 | 3 |  |  | －9 | Bate． | 6.6 |  |  | ． 3 |
| ${ }^{\circ}\left(\frac{5}{3}\right)^{-k}$ | $\underbrace{\infty}$ | WUN | 3.00 | Twin Grid AVC．Det． | $\begin{gathered} 2.5 \\ \text { A. } \mathrm{C} \\ \mathrm{D} . \\ \hline \end{gathered}$ | 1 | 250 | 7 |  |  | －16．5 | $3 y_{2}^{236} \text { Watt }$ | 9.25 |  |  | 3 |
| $50^{\circ}$ | $c=x_{\infty}^{+}-c$ | WUNA | 3.00 | $\begin{aligned} & \text { For Auto } \\ & \text { Sots } \end{aligned}$ | $\begin{array}{r} \text { B.3. } \\ \text { A. } \mathrm{C} \\ \mathrm{D} . \mathrm{C} . \\ \hline \end{array}$ | 0.4 | 250 | 7 |  |  | $-16.5$ | $33_{\text {Watt }}^{236}$ | 9.25 |  |  | 2.5 |



## Radolek Tube Chart [Rectifier Tubes]

| Botton <br> Vlew of Suckets | Tube Circult Dlagram | Tyue | List | Purlowe |  |  |  |  |  | Elkon 5,000 Hour "B"' Rectifier <br> Replates rectifier tube in "B" Eliminator. lyry, solid, rugeed selp healing. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\left(\frac{2}{3}+\right)^{k}$ | $\frac{1}{\infty}$ | 1 | \$1.25 | Half Wave M-V Rect. | 6.3 | 0.3 | 350 | 50 | 1.89 | Writh this sturdy 5.000 hour Fikon FBH and the change is made. Not affected aly aredilental surges or orerloads. No |
|  | $+\frac{ \pm}{\infty}$ | I-V | 1.50 | Half Wave HI-Vac Rectifier | 6.3 | 0.3 | 350 | 30 | 1.89 | adjustments reguired. Shipg. wt., 1/2 lb. <br> 3E85-For " $B$ " Eliminators usink |
| $\left(\begin{array}{c} 0 \\ 3 \\ 3 \end{array}\right)^{p}$ |  | 83 | . 70 | Full Wave Rectifier | 5 | 2 | 350 | 125 | 11 | $\begin{aligned} & \text { We e. © } \\ & \text { DJy Yist } 56.00 \text {. } \end{aligned}$ |
|  |  | 80m | 1.55 | Kenrad F. W. m. V. Rect. Sub. 83 | 5 | 2 | 42.5 | 125 | 10 | Genuine Raytheon Rectifier Tubes |
|  | (1) | 81 | 3.50 | Half Wave Rectifer | 7.5 | 1.25 | 700 | 85 | 10 | Long Life. No Filament. Greater economy and reserve bower: |
| $\left(\begin{array}{c} 2 \\ 3 \\ i \end{array}\right)$ | $\square^{\circ}$ | 81m |  | Kenrad M.V. Half Wave Rectifier | 7.5 | 1.25 | 7.50 | 85 | 0.4 | enough to run a lo-tube set. Uninterrupted service. No liqutds. Utilizes both halves of the al- |
|  |  | 82 | 1.20 | Full-Wave M-V Rect. | 2.5 | 3 | 500 | 125 | 7.5 | ternatink current for rectitication, except in Ble halit wave model. Stock |
| $\left(\begin{array}{c} 2 \\ 3 \\ 2 \end{array}\right)^{2}$ |  | 83 | 1.5\% | Full-Wave M-V Rect. | 5 | 3 | 500 | 250 | 15 |  |
| $\rho\binom{3}{0} x$ | $\sqrt[9]{\sqrt{8}}{ }^{\circ}$ | 84 | 1.75 | Full-Wave M-V Rect. | 6.3 | 5 | 225 | 50 | 3.2 | [U\| U| $3 \mathrm{E838} \quad 13 \mathrm{~A}$ |
|  |  | 523 | 1.50 | Full-Wave Rectifier | 5 | 3 | 500 | 250 | 15 | Genuine KELLOGG A. C. Tubes <br> The original tod connection radio tube designed 10 operate on alter- |
|  | $\frac{1}{2}^{2}$ | 623 | 1.25 | Full-Wave Rectifier | 6.3 | 0.3 | 350 | 50 | 1.89 | nating current. Ojerates directly from house lighting eurrent with sted down transformer. (Gufet opera- |
| $\operatorname{Act} 0^{20} 5^{\alpha}$ | $\left.\times \frac{1}{\infty}\right)^{p}$ | 625 | 1.90 | Double Fll. Full-Wave Rectlifier | 6.3 | 0.8 | 230 | 60 | 5.04 | Has excellent tone quality. Ex- <br> tremely rugged construction insures <br> lone life and satisfactory service. |
|  | $\cdots \frac{1}{\infty}$ | 1223 | 1.20 | Half Wave Rectlifer | 12.6 | 0.3 | 230 | 60 | 3.78 | Shpg. wt., each about 1 lbs. 3E875-Type 401. |
|  | $\underbrace{2}_{2})^{n_{1}^{\prime}}$ | 1225 | 1.90 | Full-Wave Rectilier | 12.6 | 0.3 | 225 | 60 |  | list, \$4.00. <br> your price ........ \$2.33 3E876-Tyue 403. |
|  | $x_{2}-n_{1}^{p_{1}}$ | 2525 | 2.00 | Full-Wave Rectifier | 2.5 | 0.3 | 125 | (10) |  | $\begin{aligned} & \text { List, } \$ 5.00 \\ & \text { YOUR PRICE } \ldots . . . . . \text { \$2.94 } \\ & \hline \end{aligned}$ |
|  | $\left(\frac{1}{\Delta}\right)^{p}$ | 866 | 9.00 | Half-Wave Rectifler | 2.5 | 5 | 7500 | ${ }^{6} 00$ | 12.5 | Kellogg McCoullough Type Tubes |
| $\rho\left(\begin{array}{c} 0 \\ -0 \\ 0 \end{array}\right)^{\circ}$ | ${ }^{p}\left(\frac{1}{\infty}\right)^{p}$ | 986 | 1.65 | Full-Wave <br> M.V. Rectifier | 5 | 0.5 | 510 | 200 | 2.5 | Sante type as used in many sparton. Kellogg and other sett. Excellent quality and a real value. |
|  | $\infty^{2}$ | AD | 1.50 | Rectifier <br> For Auto Sets | 0.3 | 0.3 | 350 | 50 | 1.89 | 3E877-Type 401 Tubes. <br> I.ist Irice. $\$ 4.00$. <br> YOUR <br> PRICE <br> S 156 |
| $\left(\begin{array}{l} -2 \\ 3 \\ 3 \\ 0 \end{array}\right)^{p}$ | $\rightarrow$ | AF | 1.80 | Spec. Arcturus Rectifier Substitute 82 | 2.5 | 3 | 500 | 12.5 | 7.5 |  |
| $\left(\begin{array}{r} 3 \\ 3 \\ 0 \end{array}\right)^{p}$ | - | AG | 2.05 | Arcturis <br> Type 83 | 2.5 | 3 | 500 | 250 | 7.5 |  |
|  |  | 874 | 4.90 | Voltage Regulator | Operatin <br> Otartinz <br> Operat 1 |  |  | $\begin{aligned} & 90 \text { Volt } \\ & i 25 \text { Volt } \\ & 10-50 \mathrm{~N} \end{aligned}$ |  | Excellent guality guaranteed tuies. Wonderfal values at our prises. |
| $\left(\begin{array}{c}-2 \\ 3 \\ 3\end{array}\right)$ |  | BA | 7.50 | Full Wave Rectifor | Has no <br> Fil'mnt | slax. <br> Volt <br> Max. <br> Max. |  | (RMS ut 350 ut 300 | $\begin{aligned} & 350 \\ & \text { Molts. } \end{aligned}$ | You will find them very baths. factory lor all work. 3E880-Tyve 210. 3E881-Tyde 250. |
|  |  | BH | 4.65 | Full Wave Rectifer | Has no Fil'mnt |  | $\begin{aligned} & \text { C. Volt } \\ & \text { ner pla } \\ & \text { C. Out } \\ & \text { C. Out } \end{aligned}$ |  | 350 <br> I.A. Volts. | 3E882-Type <br> PRICE. EACH IN LOTS OF <br> TEN, EACH ............ $\$ 1.08$ |

## EXPLANATORY NOTE

## for Radolek Tube Charts

Watt rating recommended for bias resistor values is high enough to carry the A.C. component of the plate circuit. All bias resistors should be bypassed by sufficient capacity to handle $75 \%$ of the A.C. component.

Approximate total power consumption of tubes is given to aid Servicemen in selecting the proper replacement power transformer according to the load the transformer must handle. Usually $15 \%$ extra is allowed for power consumed by voltage divider bleeder circuits. Radolek Transformers are rated in safe load capacities

## Universal Speaker Tester



For Aligning Dynamic and Magnetic Speaker Pernits exact centering of any dynamic sueaker rolce coll of any magnetic speaker armature, while in motion! Actuates wife coll or armature at 60 cycle pulsation which bermits use of smating shims to secure projer allgment of cone. Operates on 60 cycle $105-120$ solt. A. C. Supplites rectified D. C. to any dynamic speaker field coil hasing more than 250 ohms resistance. A ten watt bilot bulb in serles with the A. C. Ifne supsly indirates open voice enfil pircuits or intermittant shorting of a rolce coll. Tester is subplied in a genuine walnut portable carrsing case with metal handle and clasp.
 YOUR PRICE.

## Sub－Panel Tube Sockets



With Tube Locating Ring
Used as standard equinment by
many of the largest set manufac－
turers．Strong．sturdy，durable
lanimated construction．Ton en－

serted insuated with positice locating ring．Trabe on the bakelite，prevent－ ing warning and loss of tension．Contacts self－aligning．assuring a grin Dositive contact on each tube yrong，at all times．

Midget Size

## ters． $1 \% / 4$

With mountins holes $11 / 2$ inch cen－


## Analyzer Multiple Tube Sockets

## With Moulded Ears

 sible applications．Mounts above or below panel．

3D6730．N－5－6
30，6730．Na．Ald 456：requires 140＂centers．Recolves 6 prong tubes．Fllament circuits com－ mon－all other isolated－ 9 contracts．
3D6731．NE．Ald 456E；same as
alove but requires
Mounting holes 1 th＂／e penters．
3D6732．Na－Ald 457；Recelves ype 47， 5 prone pentode and type ${ }^{3} 597$ drong pentode．Cathode of＂ 59
 panel hole．Mounting centers $139^{\prime \prime}$ 306733 ．Na．Ald 457E．Same as abore but requires＂ $1 \%$＂panel hole Mounting holes 1 好＂centers． ist Price，50c．
YOUR PRICE，EACH


Compact Sockets Moulded black lakelite．
Gulding proove for tube
 prongs．
gulckly
inserted．
Paber bect contact on each prong． Center hole for screw eter exacty fits inside siandard tube fect downward for wiring helow base

| Stuek｜Na－ald｜ | Price｜Ten |
| :--- | :--- | :--- | :--- | :--- | :--- |



> | No． |
| :---: |
| 484 |
| 485 |
| 486 |
| 487 |
| 487 |

> Prongs SE6745
3E6746
SE6747
3E6748
$3 E 6749$
3E6748
3E6749

Multiposition Bakelite Sockets
Made of molded Bakelite with tube locating groove rlug of spring steel Re⿻uires less space thon with rlug of sdring steel．Requires less space than the in 1 s s ＂hole）Very easy to mount For use in mat erial not ove en＂thick．


Universal Adapter Plate
Tube Shield Base
 Replacing Any Size Wafer
Socket
 The flange on the top of the socket gecurely
binds the shield base to the chassis without the use of any rivets hole $f$ or the lus projection on the shield $b$ as $s$ ing hole centers from $11 / 2 "$ to $2 "$ ．the socket．Made of a cadmiun plated Socket can be rotated in adapter base rust proof metal．Fits all standard for wiring． YOUR PRICE EACH
$\dot{F N} \underset{\sim}{2}$
$3 E 6724-S h l e l d ~ b a s e ~ o n l y . ~ 2, ~$


Screws Lin Screws Down
Moulded black bakelite．Guiding groose for prongs．Long wining con－ tacts．Supnlied with binding posts for
connections．Screws can be reversed connections．Screws can be reversed ing holes with


Excellent quality moulded sockets used in many factory bulit analyzers and tube checkers．Wimely used to re sions．Naves space．Each socket has many different dos－
 306734 ．Na－Ald 567A．Receives circle）tubes．Has seven contacts．Ke
quires 1 ft＂pane！hole．Mounting holes 1 高＂centers．Seven contacts． 306735 ．Na．Ald 567EA．Same as above but requires
Mounting hole $1 \frac{1}{4}$ ．＂
centers．
306736 ． 7 Naid 7 477．Recelves
 prong
quires
small
1


 Mounting holes 1 tb ＂centera．

Laboratory Sockets With Plug－in Binding Post Jacks
Each terminal has convenient jack－tod binding post for plus－ blnding wire under knurled nut．Mands solder terminals at
each contact．Each contaet has new standard IB．M．A．
numbering．Moldel Bakelite． numbering．Soldel Bakelite．


## Multiple Compact Sockets

## $8=$ 0

Socket diam
Ideal where space 1 is as for below panel connecting and making adapters． center for No．

3E6738－Receives 4． 5 and 6 prong tubes．$\frac{\mathrm{Na}-\mathrm{Ald} \mathrm{d}}{\mathrm{S}=\mathrm{N}, 456 \mathrm{~B} \text { ．}}$
3E6739－Receires 5,6 and small size 7 prong tubes．
List lpice 50 ．
Your PRICE
Llist rice，sour PRICE
29¢

te Sockets Isolant
moulded quartz materlal of very high in tles． especially effec
frequencies. Positive contacts. Mount-

$$
\begin{aligned}
& \text { Irequencies. Positive contacts. Mou } \\
& \text { ing holes have } 1 \text { 碞 inch centers. }
\end{aligned}
$$

$$
\begin{array}{|l|l|}
\hline \text { Stuck } & \text { Prongs } \\
\text { Number } & \\
\hline
\end{array}
$$

db

## TVU Heavy Duty

Rubber Handle Plugs
ahle, molded rublier. 1.liable an untreakable Bakelite molded plus: and are serurely kripued liy tho rub her handle. Particularly dewisned fot use with amplifiers and all sorts pullic address equitment aro shock conditlons. Lons rubber handles the cord from the connecting socket Whout cansing bircakage or shorts. plug is $2^{1 / 6 "}$ long and the lons barulle. bhag is $3^{12}{ }^{\prime \prime \prime}$ lonk measurink froin thes.



Bakelite Cable Plugs
3E6166-5 prong
3E6167-6 protik
3E6168
pronk $3 E 6169$
HOUR PRICE
YOL 3E6I70 YOUR PRICE

324 Stronk and neat. Body $\mathbf{2}^{1}$ inches long. Jase lock
incher lightly into b

Mike and Phono Adapters
5-6 and 7
Prongs
3E6180- F Prone
3E6181-f Pronk
3E6182-7 Prons
3E6183-7 Prone
List Price, $\$ 1.00$.
YOUR PRICE in connertion with microphone thes sumply the necessary current for operation of the mierophone. phonograp

## Wafer Adapters

W'ifh Lug Taps
Twn clises of bakelite rlieten together.
lloles punched for tube prongs. In earh lug inserted between consers and is led to and brojects from edje of adapters. Permits tapping into any clreult of tube for testing or obtaining current. lecuds not used can be cut off.
3C6145-4 prong.) List Fach 50e. 3C6 46 -5 prong $\quad$ YOUR PRICE $3 C 6: 47-6$
$3 C 6148-7$
Drong. 0 Each 12 C



Analyzer Plugs and Adapters



974DSA


Alden Latch-Lock Type
7 Prong Plug-8 Conductor Cable analyzers quipment bal bakelite $\qquad$ bodd
with
$\qquad$

## and

 0

9770SA
 two grid ronnections at top. Equipped with speeial lately for locking adapters to blug.
907 WLCAP Kit
The 907 WlCAP
Jatest develoment in 3E8083-Kit consists of a analyzer arcessory. The spe: of 8 wire cable and 4 adant sorket elfminate the neressit: of thaking iny addithonal connections. I'se this kit in rhe nensitructions of your own anold one.
$3 E 8082$-kit consists of 8 wire vable. 8 pronk cabl
plug. 8 prong panel socket kembled and wired List Prime $\$ 6.50 . \$ 3.82$
YOUR PRICE Molded Bakelite 8 Hole Socket 3E6756
$\qquad$ PRICE

## F

 3 imtact In center. Moulded bikelite (Large size) circle. List Prire. 50YOUR PRICE

##  <br> 

 For 906WL—6 Prong Plugs 3E6074-9650S.-To tit plus to 3E6075-9640S. To fit whe to hole sorkets. 3E6076-9670S.-T0 tit plug to 7 hole (.85" harge size) sockets. 3 E607 7 In"e" small size) socketshat 1 'rice ${ }^{75 \mathrm{~s}}$
YOUR PRICE

424

## Analyzer Plug and Adapter Kits



With Wired Adapters $308070-\mathrm{Plug}$ and 4 wired adapter: rill sen rid monnecter. No sable includerl. Lint. $\$ 2.85$.
YOUR PRICE.......

## Molded Bakelite Bodie

 Consists of seren-prong (large) BakeIite analyzer plog with detarhable threaded handle and four adapter 4 smatl 7 prong radio receiver sonket. Used for renlacement of old adanter plugs in obsolete set analyzers and inassembly of plew point to boint or set assembly
analyzer

## With Unwired Adapters

 $3 E 807$ 1-Flug $\begin{gathered}\text { and } \\ \text { unwired } \\ \text { hudiates }\end{gathered}$ It'" hight). "onsists of gether, that can be sepaif desired. Complete with scrien grid connector. No cable included. YOUR PRICEY
Quotations on this

PRICES REDUCED! List l'rice. 75ic.
YOUR PRICE. EACH ...... $4 \boldsymbol{4}$ \&

For Latch Type 7 Prong Plugs $3 E 8018-9740 S A$. 7 to 4. 3E8O: 7-9730SA.-: ${ }^{3}$ to 5 . 6.


## Readrite Analyzer Plug Analyzer Piugg through top to control the litth for holding Adapter*  A spring pires a deition as rod is turneti. Has fibrong small size  $308025-L i s t r$ YOUR PRICE $\$ 1.75$. EACH

Associate Adapters 308026 16is to engage latch in above plug.
3D8027-10ifis Adapter. Same, for small $\quad$-brong sucket.
308028 fi3l. Adayter. Same. for 308029 -bila Adauter. Same, for

Speaker and Analyzer Plugs

## Finger Grip Type

 ap covers connections, and unserews from body

Male Plugs Without Cords 3C6059-1 mrong
$3 C 6060 \quad 5 \mathrm{prong}$
306061
308030 : prong (Medium)
List 3 ,
YOUR PRICE

## Male Plugs With $36{ }^{\prime \prime}$ <br> Cords

3 C 6062 prong
$3 C 6063$
3 B
3064 prong
3
3

3080327 prow (Medtum)
$308033-7$ pronk (small)
YOUR PRICE
Female Plugs Without
$3 \mathrm{CEO65}$ For 4 nrimg phags.
3 3 6067 For $f$ prone pling
308034 F prong (Medium)
List. 40 s .
Flat Speaker Plugs


6
EACH
TEN FORR......... 5 5
Take up minimum stafe. Bakelite body. Cable leads solder Into hollow
prongs. $\xrightarrow{\text { prongs. }}$ Standard Male Speaker Plugs $3 \mathrm{C} 6053-4$ prong
$3 \mathrm{C} 654-5$ prong $3 \mathrm{C} 6054-5$ prong
$3 \mathrm{C} 6055-6$ prung $3 C 6055-6$ prong.
$308036-7$ prong

12C
EACH
TEN FOR...si.io
Bakelle cap anit hase screw apart in bellow prongs of hase and aro
Cable Connector Plugs
3C6110 Four Hole

306037 - Seren 11010
3E8038-Scren H O10
EACH 234

$\frac{\text { Speaker Cord Test Set }}{}$


Wakelite Male fittine one end. female fitting mposjte end. font cable. "ha sis may be texted out of cabinet with pxifision to speaker in cabinet
3C6 $41-4$ promg. 4 mulurtor.
 3E6143-9 prong. 6 conductor 3E6 43 cisprix. condinctor $3 E 614$
YOUR
PRICE, EACH
59C


Sultable for test sets. cord connec lions, connecting cords to sorkets. lemporary wiring-in of tuhes. etc. Sturdy monlded bakelite shell. roomy, making for easy connectonent of holes and prongs. Prices for two $p$
306092
3060935 eircuit.
19C

17

## New Tube Adapters

Composite Adapter 9C7

T
6
is
F

6 prong tubes. Botton is larke size 7 prong revamping

like the Jewen No. 194 and Supreme Diagnometers. Use a combination large and small 7 prong socket in analyzer pane and then with this adanter you will one socket.
3E8040-I.ist. 60c
YOUR PRICE
35¢
Alden 975DW Adapters
For Testing Type '59 Tube in
Type 24 Analyzer Sockets


Enables any analyzer which can test type ' 24 tube circuits to test 7 prong tube circuits. Twin adanters connected hole tow and 7 prong bise ( 59 type - 85" pin (ircle), other adapter has 5 wront base. I.1st, $\$ 2.40$. \$1. 11
3E6035-Your Price Alden 975DSW Adapters Same as 975 DW Adapters except for fastener. I.ist. $\$ 2.40$.
$\mathbf{3 E 6 0 3 4}$-Your Price For TestingType'33,'46,'47 PZ Tubes in 4 prong sockets 5 Hole Top 4 Prong base
 from plate brong. Grid, plate sumplied heater connections through. 3C6000-Alden 959 KPC YOUR PRIC $\$ 1.00$.
YOUR PRICE
59C
For Testing Type '33,'46,"47, PZ Tubes in 5 prong- 227 UY soclset

5 Hole Top-5 Prong Base
Cathode brong dead. Plate
3C6001-Alden 9:5; Weston 19625. List $\$ 1.00$ YOUR PRICE

59C


## 419X <br> UX199 to UV201A

$\cdot \mathrm{V}^{\text {Adants }}$ 201 A 199 tubes 10
diameter of of 954 DS
of adantameter providing a bay-
UV sockets.
$3 C 6025$-ILIst 35 t
YOUR PRICE
194


Universal Output Meter

> 4. Contacts plate brong of Insuiated for use In new
shiflate lead wit 308021 -Na-Ald List 1'rice $\mathbf{3 5}$ YOUR PRICE

Small 7 Pin
Tube Adapter Tests 2AT and $2 \mathrm{~B}=$ in 24 checker socket and 2at ${ }^{6137}$. 6 C 7 , ${ }^{6 D 7}$. $61: 7^{2,14}$ and
 YOUR PRICE 355 Twin Adapter For Testing Six Prong '57 and '58 Tubes in Set Analyzers
 '85. 899-PA-PZH-Wunderlich-6 prong
One 5 Hole Top-6 Prong Base One 6 Hole Top- 5 Prong Base


For analyzing 6 prong tube circuits with any 5 prong test plug. Designed do not have the latett lock. 5 ft . insulated wire connects suppression grid 3E6O13-illen 965DIV: Jewell Dioltil. YOUR PRICE $\$ 1.90$. \$1.12 For Testing
7 Prong Tubes In Set Analyzers To be used with Alden 906 Latch
lock Analyzer Plug. Adiuncr with cenlock Analyzer Plug. Adapter with rentits into seven prong sorket of Adapter with seven hole tow is contact und fits into six hole socket of analyzer. List, Si.90.
3EGO14-Alden 9biGLamigCG YOUR
PRICE
\$1.12
Type '57-'58 Test Adapter

other eontarts are son-
nected straight throush
$3 \mathrm{C6O} 10$ - 4 diden 365 K S ; Jewell 57 ;
LIst Price 65c.
YOUR PRICE
38C
For Testing'41-'42 PA-PZH


## in Tube Testers

 6 Hole Top5 Prong Base
nal of the ton socket connected to a rab on the side of this adabter. AII
other ronnections through.
3C6009-Aden 965CG
D-70142. List.
YOUR PRICE.
44c

## 7 to 7 $308007-x$

## 977M:


large ( .85 socket takes
3E8042-Na-AId


## 1ronk

$$
\begin{aligned}
& \text { Prong tits targe (.85" } \\
& 7 \text { prong socket, top socket takes small }
\end{aligned}
$$ List Price 60.e.

YOUR PRICE ............... 296

| For Testing '82-'83 |  |
| :---: | :---: |
| T1 | Fits all trpe Tulse |
|  | Testers. Switeh giver |
|  | readings for cash plate. |
|  | limiting plate current. |
|  | $306006-$ Mden No. |
|  |  |
|  | List \$3.00. |
|  | Vour |
|  |  |

## NA-ALD Multi-Adapter Type 950xYLA

Enables Your Tube Checker to test over 80 New Tubes
3D8001-NA-ALD 950NYLA Universal Tube Checking Adanter. List Price $\$ 5.00$. your price
s294


This new No. 950 NYI Lniversal Tube Checking Adaptor enables any



 If your tube checker has no filament voltage control switch, the 954 SGL adapter must be used on the base of the 950XYLA.
308002
$308002-N 1-A L D$
bottom. Has krid lead. List irice
Yotom. PRABE.
all tents - no whet-no jacks and only one togkle switch for tithee and meters the proper resistance network to protect all directions for use on underside.

## Na-Ald Multi-Adapter Type 950 TR

For use in checking lubes of higher where ' 24 type tubes are normally
 tlament voltage reguirements of 10 . voltage to the value you select Se12.6, 1.rin. $2 \overline{5 z} 5,43,48$, et, ungert lector switch in the 950 TK controls Nu id sittl-Adaper 950 'TR' insert roltage selectlon. Diagrams and position in your $A C$ in the directions supulied.

308000 LList, $\$ 5.00, \$ 2.81$
YOUR PRICE.......
Tube Adapter Forms
Make ariy style tube or test adapter

moulded lakelite socket top. Moulded hase with hollow prongs. The two sections are meatly and securely hed torether with center sorew. Any desired connections
from top to base can be edsily mide leade can he brought He easily made. Insulated or bare top and wotom are assembled, slack from ton and when up. Leads so arranged are soldered in leads is andled cut off. A job elual to factory production extra lengith prodiced at great saviniss in cost. $1 / 4$ inch hole easily of base permits taps from, any rircult to be brought out

| Stock Number | Bottom | Tols | Stock Number | Bottom | Ton |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $3 E 8050$ | 4 prong | 4 hole | 3E8079 |  |  |
| $3 E 8052$ | 4 prong | 5 hole | 3E8054 | 6 mprong | 4 hole <br> 5 hole |
| 3E8057 | 4 jrong | (i) hole | 3E8959 | 6 pronk | fi hole |
| $\begin{aligned} & \text { 3E8077 } \\ & \text { 3E8078 } \end{aligned}$ | 4 prong | 7 small | $3 E 8066$ | 6 prong | 7 sinal |
|  | 4 brong | 7 1:arae | 3 E 8063 | 6 prong | 7 large |
|  | ${ }_{5} 5$ prong |  |  |  |  |
| 3E8053 | 5 jrong | 5 hole | $3 E 8056$ | 7 small | 4 hole |
| $3 E 8058$ $3 E 8065$ | 5 jurong | 6 hole | $3 E 8061$ | 7 sma! | 5 hole <br> 6 hole |
| $\begin{array}{r} 3 E 8065 \\ 3 E 8062 \end{array}$ | 5 prong | 7 small | $3 E 8081$ | 7 small | $\begin{aligned} & 6 \text { hole } \\ & 7 \text { sniall } \end{aligned}$ |
| $3 E 8062$ | 5 prong | 7 large | $3 \mathrm{E8064}$ | 7 small | 7 large |
| YOUR PRICE, EACH |  |  | YOUR PRICE, EACH |  |  |

Note: Price includes top and bottom and serew for assembling
Make Your Own ADAPTER KIT

## 308076


 List Price $\$ 2.00$
YOUR PRICE
$\$ 1.18$
Contains: Five base sections one each, 4. 5, 6, 7 and 7 small prongs. Five socket sections,
one each, $4,5,6,7$ contact. Five assembly screws One Dozen assorted extension Solfer and connection terminals.
Two phone tip connectors. Five phone tip terminals. Five con trol grid caps. With this outfit sou can make 25 different assembly conbinations. There are
hundreds of possible wiring com-


Baiancing Adapters
3C6042-Alden 9140 P for
$3 C 6043$-Alden 955 GP for UY 5 prons tubes. List, 90c. YOUR PRIC 53c

For Iistening in on R. F. stages. Breaks
grid circult so grid leak and condenser can be detector or aullo freduency stages. Plate circuit is broken and leads are
brought to cord tip terminals.

 operating instructions.
IE2577-List Price, $\$ 30.00$. YOUR
PRICE

# Universal TRIPLETT A.C.-D.C. 

## MODEL 1125 VOLT - OHM - MILLIAMMETER

A Modern Portable Test Instrument The Triplett Model 1125 Universal testing meter consists of ${ }^{3}$ sensitive microammeter mounted in the panel of a convenient carryIng case with a switching arrangement to secure different ranges on the meter. The range selector switch is a 12 point positive action rotary type. A toggle 8 witch shifts the meter from D.C. to A.C. ranges. This arfacks for external connections.

## Quadruple Scale Meter

The lower scale, printed in red, for A.C. has 75 dirisions marked 0-15. The middsie scate is likewise divided with the characters orinted in black. The upper seale is graduated from right to left with 15 major callibrations in ohms. The last two ciphers of each are printof ohm ralues. The selector knob nosletiong of ohm values. The selector knob nositions
indieates the interpretation of the meter scales.

## 14 Different Measuring Ranges

Maximum seale readings of A.C. Volts: 750 150, 15. Maximum seale readings of D.C Volts: 750 . 150 . 15 . D.C. Mllliamperes, 150 . 15, i.5. A.C. Mils. 150 , Mlillamperes, 150 . tance ranges. 0 to 1500 ohms, othree resis. ohms, 0 to 3 megohms. (A zero adjustment for the ohmmeter is prorlded on the panel.)

Every Radio Measurement Possible In addition to the fundamental ranges listed abore, the A.C. Folt ranges may be used for output measurements. A special clrcult (see
diagram on the adjacent page) permits acdiagram on the adjacent base) permits ac curate eapacity measurements.
The size of the Model 1125 case is $111 /{ }^{\prime \prime}$ "x cover is removable
Your cost is less than the meter and resist

## TRIPLETT ALL WAVE OSCILLATOR

## For Modern All Wave Service Al Modulated or Unmodulated Signals

The Now Triplett No. 1851 Hand Calibrated Alt. Wave oscillator meets the latest requirements of
radio service. Four Ware Bands. Rances arallable through the four point seleetor swlth:-A-110 to $500 \mathrm{Ki.C}: 13-500$ to $3.500 \mathrm{~K} . \mathrm{C} ; \mathrm{C}-2,000$ fundamentals $\begin{gathered}\text { and } \\ 2 \text { 2nd }\end{gathered}$ Smooth exact adjustment between each trequency limlt. With this new Triplett oschinator you can accurately allgn and test the latest model recelvera and all early model radios.

## Uses "Dummy Antenna" Output

 The oln jaeks marked Min. and Gind. when con nected to a receiver have the eharacteristles of a broadeast receiver antenna circuit. Type 30 tube used as oscillator. Three $11 / 2$ rolt flashlight cells llght the tube and a standard 22 疫 Volt Midget "C" battery supplies the plate botential.The batterles are under the callbration chart.

You cari make the signals from the Triplett Os clllator audible in the output of the radio under cest or cause a high frequency wave to beat against an incoming signal to produce the fam-
 $7 / 2 " x 4 \frac{1}{2}$ ". Weikht 15 ibs. With Calibration
Graph End Attenuator. Simplified Control Panel

## -Posiuxe action, Four-range Swltch.

2-Complete Attenuation Control; 0 to full powe 3-Modulation control Switeh for Mod. or Unmod. 4-Easils read Dial with bar-knob pointer: 100 -Easily re
divisions. dicisions.
is
Triplett New All Wave Oscillator IE2578-List. Model 1151
YEZ578-LI
YOUR PRICE


Model 1151


Triplett Auxiliary Set Tester Model 1166 Complote with seven prong olug ceable, Four adapter plugs,
and directions and directions. Neat oak case mateh'se above instruments.
IE2579-List Price $\$ 16.00$ with Cose IE2579-List Price. \$16.00 with Case. your PRICE

IE258i-Less Case. your Price
sIO s8 $\underline{49}$

## TRIPLETT Auxiliary Set Tester Combines Point to Point With Set Analysis <br> For Point To Point Testing

 Extreme Flexibitity For Service A nalysis. All the circuits whieh connect to the mrongs of any type tube in any type radio may be reached through the handy pinjacks. The row of red jaeks automatical3acks. The row of red jaeks automatical-
is open the circuit when a pin ty $\begin{aligned} & \text { pe plug }\end{aligned}$ is inserted. Upon placing another plus in the ildjacent black pin jack, current any circuit, to any tube element. Using he black pin jacks, roltare and resistance tests may be made between any the diagram will disclose a larpe number of additional features which will facilitate the use of this equipment in analyzing the exact point of trouble in a receiver

For Standard Analysis
The "old timer" in the servles business accustomed to conrentional analvilical methads of service will find the Triplett 1166 Its most uscful accessory. I3y connecting eircuit and opening the rrid circult for insertion of a "C" battery, a change in Hhace current will be observed. This is
a dependable method of checkino tubes under operating conditions as the change in plate current will indicate the mutual
Triplett $31 / 2$ Inch Universal A. C.-D. C. Meter


## Copper-Oxide Type

Accuracy within $2 \%$ on D.C.- $5 \%$ on A.C Seale matches the Standard Scate sumplied on the Triplett sodels 1125, 1180, 1181 . Sfoter movement requires 1 millanipere for full sale deflection. Primarily designed as a Universal Founda Ivoll drop) cluded. Scale markine as folliplier shunts ar resistors inwith 75 divisions for the 15 , 150 Lorser scale. $0-15$ range. Same seale is used for $1 . \mathrm{C}$. Mifls. Mider scale. same markings for D.C. range. Top ohm scale

Triplett Universal Meter IE2580-List, $\$ 15,00$. YOUR PRICE The cooper pxide reatia housed with the proper compensating shunt for the 0-1 millianmeter in a semarate caso suitable for panel
 Includect in the assembly for quickly
Changing the circuit from A.C. ©o 1 . Changine the circuit from A.C. of 1.C,
Air dumped movement. Jewelled sapAhire bearings, Chrome steel magnets.
A.c. scale Division Scale A.C. seale reads 0 to 15 in red.
D.C.
seale reads 0 to 15 in black. The ohm scale has the signlficent figures in black and the last two ciphers in red to tarilltate reading on either onm scale. Calcutate all multlplier resistors at 1000 ahms per rolt,
allowing 50 Co ohms for internal resis allowing 5000 ohms for internal resis-
tanee of the A.C. range and 50 ohms ance of the A.C. range and 50 ohms
for the internal resistance of the D.C. for the Internal resistance of the D.C.
range. Meter nounts in $2 \% /{ }^{2}$, hole
requiring $1 \% / 4$ clearance back panel.


Model 521 D. C.

| - Model 221 D.C. |  |  |  | Nodel 531 A. C. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock Number | Range | Kesist. (I) ohms | Your Price | $\begin{aligned} & \text { stoek } \\ & \text { Number } \end{aligned}$ | Range | $\begin{aligned} & \text { Reslst. } \\ & \text { in ohms } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| $1 E 9585$ | 1 M.A | 33 | 59.80 | $1 E 9591$ | 10 M.A. | 1950 | 9.80 |
| 159586 | C. 5 M A. | 156 | 11.11 | $1 E 9592$ | 250 M.A. | 1.2 | 9.15 |
| $1 E 9587$ | 0.2 MA . | 185 | 12.42 | $1 E 9593$ | 3 Amys. |  | 9.15 |
| 1E95888 | 10 Amp. | 005 | 9.15 | $1 E 9594$ | 10 voits |  | 9.15 |
| 1E9589 | 300 Volts | 3 meg . | 12.08 | 1E9595 | J 50 volts | 151.500 | 10.45 |

Point-to-Point, Standard Analysis, and Overall Performance with One Triplett All-Purpose Instrument Here is the Secret of Successful Servicemen! Here is how the onditimers in radlo tix sets that deify the best efforts of berinners. The best ieatures
of the aloore three great general systems of servicing are combined. Triplett of the abore three great general systen1s of servicing are combined. Triplett
has perfected the one complete 1nstrument which hatulen all three systems has perfect
successfully.
Experience
servicemen that fine instinet developed by conssientitous

 modern un-to-dnte instrument designed to servise both ling ind short
wave recelvers. you cand do better and more satisfactory radio service than
 the most skilltul odediner puttering away
with obsolete cuulpumet $\xrightarrow{\text { with olsolete }}$ Point-To. Poippuch. Point
Use point-to-point testing when the sio-
nals are mushy or distorted: when thum
distorton is present or when the stami-
ist
 plays the most important part. Ne miting While the circuit of earh tuhe is brought tester. ${ }^{\text {to }}$ Here conveniently and thutckls.
 meaturing portion of hinmeter to jilentify the temporary repair can usually be made


## $\longrightarrow$ Standard Analysis


 riving at the canse of trouble when there
is no signil ausible the thoult the ratio. Inserting the plug of the Auximiar Tenter. first in the rectifier tube socket
and surcessirecly th the audio sorkets. detector. I. F. and 18. F. stages, will permit you to make current and voltage measure-
ment. :t the same fime testinn the tulles ments at the same !me testine the tubes

 sence of voltage Indicates that you should $\xrightarrow{\text { change Overall Performance }}$ The one sure system of locating the The one sure system of locating the cause

 olensers. The stabilits of the chlions Oscillor ander used as an output indlvator through the duxilliary tester make overal easy. Derformanve testing initrestion


For Overall Performance and General Testing
offered in one unit-the two most ea sential instruments for radio service. [Bulersal All Wave Oscillator witlo self contalned power supply, and the
Triplett Multi-range A.C.-i). Volt, Ohm. Milliatsmeter
form. lieads for bench or home radto serviec. 'linis unit is particularly sulted for the serviceman who has a selective circuit analyzer.

Oscillator Ranges

Range A: 110 to $500 \mathrm{K.C}$. Ranoe B : 540 to 3 , 100 K.C. Ranqe C: 2000 to 6000 K.'. Ranqe D: 6000 Brd har:
Fundamentals and 2 nd and 3 . Fundamentals and 2 nd and 3rd har-
 modulated at anprovimately 100 evcles for tent employing a stundard output meter. Unmodulated siqnals may be employed for
tion of receivers.

Measures all voltages
modern radio receivere.
modern
colts
olt or 118. at 1 10100 ohens ber 0.1 .5 . Measures all mate currents. And Millimpere rankes for caparits and power output tests, 0-1. $1,1,00$ M. A. .5-3 megohns. A.C. Folt scales man Sup employed for output $11^{1 / 4^{\prime \prime} \times 7^{1 / 2} \text { " }}$

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IE2644-Molel lis0 in Oak ease. Conplete with Test Leads. List. YOUR PRICE
$\$ 29.40$
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YOUR 10 to 1500 $\$ 36.00$.
YOUR PRICE



Triplett Ferpetual All-Wave Tester 1181 Combincs the Auxiltary testwr and all as ondat, pluys, ndapters, test leads eparate chart permit capacity buessure
 Ing mase with battoriss. oscillator tube.
IE2575-Model 1381 . Lis. Irice. $\$ 57.140$.
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Four Range Oscillator Capactly measurements of vaper dielecric condensenter the perpetual Tester, emplosing the electic Ifght nes circuit as the source of Ac, "The



## 16.5 to 2727 Meters

B. UD-to-Date with this latest al wave oucillator! Ratolek is the firs offer this surerior enuipment. Hand cationaled tuning chant with fond acdection uf desjred siumal vet simple. Oncillator is adjustal to rov and $1-t$ and tand harmonics of fundia fiature of the new oncillitom is the mitput cirenit which Is roubled



## Universal Selective Analyzer

For Point-To-Point and
Multi-Range Volt-Ohm-
Standard Analysis Mudel 1167
Excellent for the service shop equipped Eith a kon, westilator. This 1 andern twoe of equipment fic
 the modern pointio-ppint resiatan e style of locatials troubre. The sele
 sockets for $\mathrm{a}^{\text {an }}$, standuct vase tuber,
18 pin-jacks, and a modern 1 proof locking lyne analyzer blyg with adapters to fit all standarll racio andiets. Fxtra wires ndjarent to the
sollo are fo: pround and tor grit
 tween the litack win- ianks. Diserting the tion jack in the reil pin-jack opin the the circuit to permit cur YOUR the thatack in circular circuit to permit c:1r--
the batiCE
rent measurenents.

Employs the Triplett Universai meter. T'ued A. -1). voltaqm 11000 ohms llampere is in plate circuits and perack pircuits, of $0.1 \ldots, 15.170$ ployed in caparity and inducemre met-urement. (1-15-150 M.s. One low ohm scale, $0-1.500$ ohms. and wo megohn scales. $0-1.5-2$, megohns ero auju ter compensates for battery deterioration selector subich preMf mossibiltty of damage to moter. IE2576-Model 11 $\mathrm{K}^{\circ}$. Complite structions


The Selector Switch
Has 12 basitlons arranged to make

1. Grid or Screen Grid to Cathesto.
 tuhes. soreun Gir
Grid tyse tubes.
 irid polt on pirect Heater Screen crid tubey.
2. Measures Cathode rolts on Cath-
ode tylu tules, and Screen rol:
do output 1 reytodes.
3. Mrasures Plate solts on Cathode type amplifier and outhut tubes.
4. Measures Plate yolts on Direct Hoater nimplifier and output tubes. of tubes hasing top can. 7. Measures the voltare from sup-

volts on toulthe plate output tube:
 Grid to cathode on Insater type output l'entodes.
Cathode itasures voltave from Ilate to buch as 79.
5. Measures the moltage from Control Grid to Cathode of double plate output tubes, such as
6. Neasures the valtage hetween the second Control Grid and Cathode on Giouble plate output tubes. Buch 12. Measures the voltage between the Conventional Ilate cuntart and the Conventional screen contame. The ogke switeli miarked positive and


## Dat SET

 TESTERSModels 710 and 712
mosition is recorded on the suriteh-each kind of trouble without remoring the on the panel-and read directly on the contained battery cabinet. Has self meter the exact condition of every part of transformers. chokes ete. conter testing of the circuits. ('heek the continuity and resjstinere charts are furndinedery and resistance of the A.V.C. diode use in testing condensers furnished for resistance coupling. phase shifting, resistances ap to 100,000 uhms. otio automatic noise supbression, automatic 9 scale readines of the meters may is tone control. IX.F. I.F'. detector, used separately with the jack term osciliator, i.F.. filter and similar provided. Siale readings are 0-20-60circuits. In the same cherk filter, bi- $300-600$ D.C. volts: $0-10-140-700$ A.C bass and couplling condensers for shorts voles and $0-15-150$ millanineres. 13.C and opens, soldered joints for resistance, volimeter resistance 300 ohms per volt bleeder resistances for shorts and onens. Cherk the power transformer, primary and sccondary for balance. Check the ine coltage. for balance. Check the promy sodating all 4, 5, 6 and criving set wiring diagram the service- leatherette covered case size $103 \pm 31 / 28$ man can easily and quickly locate every

Has Sockets for all newer 4,5,6 and 7 prong tubes. Makes all voltage, current, capacity and continuity tests required for any set and for the tubes in the set, regardless of current used-whether A.C. or any type battery current. READRITE MODEL 710 . As deseribed above curacy guarantced within 5 co. ( 'omplete with curacs \&uaranted within 5 Co. Complete with


Readrite Model 1000
Resistance-Continuity and Cance-Continuity
CFor Cold Chassis"
"For Cold Chassis" 3E2622-

## YOUR

S2940
New and Different! Permits testing of any recelver without the tubes in
the receiver and without the nower turned on the set. I'ses two plug-in cathlys ane in the rectifier socket and the other to each tube socket in turn sinkure and cabreity tests hetween all inportant cirrults. Triplet! sistance and any voltage or current measurements dostred. A $2^{\prime \prime}$ A. 110 to 120 wolt line is employed for caparity measurements. The precision
D. C. meter has a 60 division voltinil seale whirth permits reading 0 to
30 , to 300 , to 600 volts. also 0 to .0 , to 300 , millifamperce. Resistance measmements may be inarse on the olm
scale, 0 to 510, to 50.000 to 3 mea ohms. An extral $221 / 2$ wolt battery and .9 meg resister will extend the olm range to 6 megnlms. With adanters, In fabricnid rase, gize $131 / 2^{\prime \prime} \mathrm{s} 9^{1 / 4} \times \mathrm{x}$ 11/2". Shipping weight li libs.

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Test All Tubes without Adapters Including All New Types


Readrite Model 410

3E2600YOUR
PRICE
\$1617
A new and improved tube tester f checking tandard hase rectifier ant method of chanking the the grid shift reading whirh is a enose approximatuhn of the ratual rondurtance of the meter with an illuminated dial indicates the clunge in plate curron all tubes Both plates of relts for tubes are tested. ('omplete instrur tions and standard vatues for gom colses are attuched to the lid of it
case. Leatherette case with sib hing lid. sife 11 "xase $114 \times 41 / 4=$ slinNhipping weight 11 ths. For connection to $\quad 105-125$ volts 60 cyele

Readrite Model 416
With Triplett Moving Coil Precision Meter

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For testing tubes with a orenter degree of precision than is possible with He Model 410. A sensitive Triblett datsonval thipe meter in the ith
iester employs a lunger scale which permits very arcurate reading of tuibe ralues. For house to house canciasing excellent ruggel inpe whirh will oxcelent rugerd tyne which will slip-hinged lid remoredi it is suitable for counter or test bench service, Simple instructions and values for all Stanclird tubes inside cover. Mousteml


TRIPLETT PRECISION METERS


Guaranteed Accuracy Within $2 \%$ at $72^{\circ} \mathrm{F}$.
Genuine d' Arsonval Moving Coll Type Rugged dependable meters for radlo sersice experimental. and educational use.
Alamard in slze, range and appearance. Clear white enameled dials. Balaned alaminum indioating nointer. Zero ad-
justment.
Germane nolished saphire jewelled bearings. liakelite or Metal dustproof cases with elossy black finish.
Cases should not be removed. Triolett meters offer the greatest value in the low price Instrument feld, having many feapriced meter lines,
Model 321 D. Fitu Ty Tye, wide flang $31 / 2^{\prime \prime}$ diameter. Scale length 23's', Nig hule Ctrs.. 3" Madel 331 A.C

| $3 E 9811$ | C. 6.05 | $0-500$ M. A. | 3E9815 | S |
| :--- | :--- | :--- | :--- | :--- |


| 3E9812 $7.84 \mid 0-200$ |
| :---: |
| D. C. RESISTANCE METERS |

$3 E 9823$
Ifst. 57.00 .
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$\$ 4.55$
3E9824-Tyne 321. $0 / 4.5$ volls. $0 / 50.000$ ohths.
IIst, $\$ 8.25$.
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A. C. Vane Type Meters

31/2" TYPE $331 \quad \mathbf{2}^{\prime \prime}$ TYPE 233


| A. C. MILLIAMMETERS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 3E9825 |  | 0-15mils. | $3 E 9830$ |  |
| 3 E 9826 |  | 0-25 | 3E9831 |  |
| $3 E 9827$ | \$3.75 | 0-50 | 3E9832 | \$2.94 |
| $3 E 9828$ <br> $3 E 9829$ |  | - $\begin{aligned} & 0-250 \\ & 0-500\end{aligned}$ | $\begin{aligned} & 3 E 9833 \\ & 3 E 9834 \end{aligned}$ |  |
| A. C. AMMETERS |  |  |  |  |
| 3E9835 |  | 0-1Amps. | $3 E 9842$ |  |
| $3 E 9836$ |  | $0-2$ $0-3$ | 3E9843 | 2.94 |
| 3E9837 | 3.75 | $0-3$ $0-5$ | $\begin{aligned} & \text { 3E9844 } \\ & 3 E 9845 \end{aligned}$ | 2.94 |
| $3 E 9838$ SE9839 |  | $0-5$ $0-10$ | $\begin{aligned} & 3 E 9845 \\ & 3 E 9846 \end{aligned}$ |  |
| 3 E9840 | 54.47 | 0-25 | 3 E9847 | \$ 3.75 |
| A. C. VOLTMETERS |  |  |  |  |
| 3E9849 |  | 0-1 Volts | $3 E 9864$ |  |
| $3 E 9850$ $3 E 9851$ |  | 0-3 | $3 E 9865$ $3 E 9866$ | \$2.94 |
| $\begin{aligned} & 3 E 9851 \\ & 3 E 9852 \end{aligned}$ | \$3.75 | $\left\lvert\, \begin{aligned} & 0-5 \\ & 0-10 \end{aligned}\right.$ | 3E9866 | \$2.94 |
| 3E9853 |  | 0-15 | $3 \mathrm{E9868}$ |  |
| 3E9854 |  | 0-25 | 3E9869 | 2.94 |
| 3E9855 3E9856 | 3.75 | $\left\lvert\, \begin{aligned} & 0-50 \\ & 0-100 \end{aligned}\right.$ | $\begin{aligned} & 3 E 9870 \\ & 3 E 9871 \end{aligned}$ | 2.94 |
| $3 E 9857$ | $\$ 4.55$ | 0-150 | 3 E9872 | 53.75 |
| 3E9858 | 5.39 | 0-300 | 3E9873 | 4.68 |
| 3E9859 | 7.18 | 0-500 | 3E9874 | 6.47 |
| 3E9860 | 8.26 | 0-750 | 3E9875 | 7.51 |
| 3E9861 | 10.45 | 0-1000 | 3E9876 | 9.70 |
| 3E9862 | 8.26 | 0-3-15-150 |  |  |













 Makne ic Sollonoid Tywe. For

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 Chienting line vitage, ampit
 radif sets, and reftrikeration

| Voltmeters |  |  | Ammeters |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock Number | Scale Volts | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Stock } \\ & \text { Numlier } \end{aligned}$ | Scale Ambs. | Your Price |
| 3C2778 | 0-4 |  | 3 C 2792 3 C 2793 | $0-1$ $0-3$ |  |
| 3C2779 | ( ${ }_{\substack{0-10 \\ 0-15)}} \leqslant 1$ | \$1.62 | 3 C 2794 | 0-5 | \$1.62 |
| 3 C 2780 |  |  | 3 C 2795 | 0-10 |  |
| 3 C 2781 |  |  | 3C2796 | 10-50 | \$1.91 |
| 3C2782 | 0-150 | \$2.65 | Milliammeters |  |  |
| 3 C 2783 | 0-300 | 3.23 | Stork | Scale | Your |
| 3C2784 | 0-4inn | 3.82 | Number | M.A. | Price |
| 3 C 2785 | 0-7511 | 4.56 | 3 C 2787 | ก-25 |  |
| 3 C 2786 | 0-10-1:0 | 2.65 | 3 C 2788 | 0.50 | S1.62 |



Filament Meter
Oxldizet Bronze Finlsh. flanged
fiole.
$3 C 2698$
List 51.00 YOUR PRICE

394


| 31/2" | Model 321 |  | Model 223 |  |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stuck } \\ & \text { Sumber } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ | RANGE | $\begin{aligned} & \text { Stuck } \\ & \text { Sumber } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| D. C. VOLTMETERS <br> 125 Ohms Per Volt |  |  |  |  |
| 3E9712 | \$3.75 | $0-1$ Volts | $3 E 9750$ | \$2.94 |
| $3 E 9713$ $3 E 9714$ |  | $0-3$ $0-5$ | 3E9751 3E9752 |  |
| 3E9715. |  | 0-10 | 3E9753 |  |
| 3 E9716 | 3.75 | 0-15 | 3E9754 | 2.94 |
| $3 E 9717$ |  | 0-25 | 3E9755 |  |
| 3E9718 |  | 0-50 | 3E9756 |  |
| $\begin{aligned} & 3 E 9719 \\ & 3 E 9720 \end{aligned}$ |  | $\begin{aligned} & 0-100 \\ & 0-150 \end{aligned}$ | $\begin{aligned} & 3 E 9757 \\ & 3 E 9758 \end{aligned}$ |  |
| 3 E 9721 | \$ 4.55 | 0-200 | $3 E 9759$ | 3.75 |
| 3E9722 | 4.55 | 0-250 | 3E9760 | 3.75 |
| 3E9723 | 5.39 | 0-300 | 3E9761 | 4.24 |
| $3 E 9724$ | 6.05 | 10-500 | 3E9762 | 5.06 |
| 3E9725 | 7.18 | 0.750 | 3E9763 | 6.05 |
| 3 S 9726 | 9.31 | 0-1000 | $3 \mathrm{C9764}$ | 8.33 |
| $3 E 9727$ | 11.43 | 0-2000 | 3E9765 | 10.45 |
| 3 E9728 | 3.75 | 3-0-3 | $3 E 9766$ | 2.94 |
| 3E9729 | 3.75 | 50-0-50 | 3E9767 | 2.94 |
| 3E9730 | 3.75 | 150-0-150 | 3 E9768 | 2.94 |
| D. C. VOLTMETERS 1000 Ohms Per Volt |  |  |  |  |
| $3 \mathrm{E9769}$ | \$5.39 | $0-5$ Volts | \|3E9797] | \$4.24 |
| $3 E 9770$ |  | 0-10 | $3 E 9798$ |  |
| 3 E9771 |  | 0-25 | 3E9799 |  |
| 3E9772 |  | 0-50 | 3E980 |  |
| 3 E9773 | S 5.71 | 0-100 | $3 \mathrm{E9801}$ | \$ 5.06 |
| 3E9774 | 5.71 | 0-150 | $3 E 9802$ |  |
| 3E9775 | 6.53 | $0-300$ | 3E9803 | 5.71 |
| $3 \mathrm{E9776}$ | 7.18 | 0-500 | 3E9804 | 6.53 |
| 3E9780 | 7.18 | 0-15-150 | 3E9808 | 6.53 |
| 3E9781 | 10.88 | 0-250-750 | 3E9809 | 9.63 |
| 3E9782 | 10.29 | $\begin{array}{r} 0-15-60-0 \\ 300-600 \end{array}$ | 3E9810 | 9.14 |
| D. C. MILLIVOLTMETERS |  |  |  |  |
| $3 \mathrm{E9817}$ | 3.75 | 0-50M.V. | $3 E 9821$ | 2.94 |
| 3 E9818 | 3.75 | 0-150 | 3E9822 | 2.94 |

Readrite D.C. Panel Meters Model 55
Good serviceable Instruments. Guaranteed accurapy within $5 \%$ in both trges. suitable for practically a all murposes excent precision engineering. Hercuire o-5/ht"
mounting hole. White dial, black lettering, metal shell. clamp included to hold meter Hisht against panel. Nerew connections with binding nuts in rear. ZERO
ADJESTMENT TVY't has serew mounted on face


| $\underset{\text { Without Zero }}{\text { Widintment }} \mathbf{D}$. C. Voltmeters Adjustment |  |  |  |  |  | Without Zero Adjustment |  | Milliammeters |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stork | Price | Scale | Ohms | stock | Your Price | $\begin{aligned} & \text { iock } \\ & \text { Number } \end{aligned}$ | Your | $\begin{aligned} & \text { seale } \\ & \text { M1. A. } \end{aligned}$ | Olins lesist | $\begin{array}{\|l\|} \hline \text { Stuck } \\ \text { Number } \end{array}$ | Your Price |
| Num. | Price | Volts | Resist. |  |  |  |  | $\begin{aligned} & 0-5 \\ & 0-10 \end{aligned}$ | $2.160$ | $\left\lvert\, \begin{aligned} & 3 D 7766 \\ & \text { 3D7767 } \end{aligned}\right.$ |  |
| $\begin{aligned} & 3 C 2735 \\ & 3 C 2736 \\ & 3 C 2737 \\ & 3 C 27381 \end{aligned}$ | 59 | -1 | $\begin{aligned} & 30 \\ & 175 \\ & 550 \\ & 110 \end{aligned}$ | $\left\{\left.\begin{array}{l} 3077351 \\ 307736 \\ 307737 \\ 307738 \end{array} \right\rvert\,\right.$ | 73 c | $\begin{array}{r} 3 C 2766 \\ 3 C 2767 \end{array}$ | S1.32 1.18 |  |  |  | $\begin{array}{r} \$ 1.47 \\ 1.32 \end{array}$ |
|  |  | 0-3 |  |  |  |  |  |  |  |  |  |
|  |  | (0-6 |  |  |  | $\left(\begin{array}{l} 3 \mathrm{C} 2768 \\ 3 \mathrm{C} 2769 \\ 3 \mathrm{C} 2770 \\ 3 \mathrm{C} 2771 \end{array}\right)$ | 59 c | $\begin{aligned} & 0-15 \\ & 0-2.5 \\ & 0-50 \\ & 0-100 \end{aligned}$ | $\begin{aligned} & 295 \\ & 8.5 \\ & 20 \\ & 5.5 \end{aligned}$ | $\left\lvert\, \begin{aligned} & 3 D 7768 \\ & 307769 \\ & 3 D 7770 \\ & 30777 \end{aligned}\right.$ | 73 |
|  |  | (1)-5 |  |  |  |  |  |  |  |  |  |
| 3 C 2739 ) | 59 c |  | 850 | $3 D 7739$ |  |  |  |  |  | $\left\|\begin{array}{l} 3 D 7770 \\ 307771 \end{array}\right\|$ |  |
| $3 C 2740$ 3 |  | $\left[\begin{array}{l} 15 \\ 0-15-3-3 \\ 0-25 \end{array}\right.$ | $\left\{\begin{array}{l} 9.10 \\ 2.50 \\ 1,625 \end{array}\right.$ | $\begin{aligned} & 307741 \\ & 307742 \\ & 307743 \end{aligned}$ | 73 c |  | $59 c$ | $0-150$0.1$0-200$0.300$0-400$ | $\begin{array}{r} 3.3 \\ 1.0 \\ .8 \\ .5 \end{array}$ | $\left\lvert\, \begin{aligned} & 307772 \\ & 307773 \\ & 307774 \\ & 307775 \end{aligned}\right.$ | $73 c$ |
| $3 C 2741$ $3 C 2742$ 3 |  |  |  |  |  | $\left\|\begin{array}{l} 3 \mathrm{BC2772} \\ 3 \mathrm{C} 2773 \\ 3 \mathrm{C} 2774 \\ 3 \mathrm{C} 2775 \end{array}\right\|$ |  |  |  |  |  |
| $3 C 2742$ <br> 3 C 2743 |  |  |  |  |  |  |  |  |  |  |  |
| $3 C 2744$ |  | (0-25 | $\begin{aligned} & 7,720 \\ & 3.250 \\ & 15,440 \\ & 6.500 \end{aligned}$ | $3 D 7744$307745307746307747 | 51.77 |  |  |  |  |  |  |
| 3 C 2745 | \$1.62 | (1)-50 |  |  |  | $3 C 2776$ <br> $3 C 2777$ | $\begin{aligned} & 1.18 \\ & 1.18 \end{aligned}$ | (1) $\begin{aligned} & 0-20-100 \\ & 0-15-1 / 80 \mid 305 / 24\end{aligned}$ |  | ( $\begin{aligned} & 307776 \\ & 307777\end{aligned}$ | 1.32 <br> 1.32 |
| $3 \mathrm{3C2746}$ | 1.91 | (1-5) |  |  | 2.06 <br> 1.03 |  |  |  |  |  |  |  |
| 3 C 2747 | 88 | 0-100 |  | $\begin{aligned} & 307748 \\ & 3077499 \\ & 307750 \\ & 307751 \end{aligned}$ | $\begin{aligned} & 2.06 \\ & 1.18 \\ & 2.06 \\ & 2.06 \end{aligned}$ |  | D. C. Ammeters |  |  |  | Your Price |
| $3 \mathrm{Cl2748}$ 3 C 2749 | 1.91 | $0-100$ <br> $(0) 150$ <br> 10.50 | $\begin{aligned} & 30.548 \\ & 3.750 \\ & 40.30 \\ & 912.640 \end{aligned}$ |  |  | $\left\lvert\, \begin{aligned} & \text { Stuck } \\ & \text { X'umber } \end{aligned}\right.$ |  |  |  |  |  |  |  |  |  |
| $3 C 2749$ $3 C 2750$ 3 | 1.03 1.91 | (0-1.50) |  |  |  |  | Your Price | $\begin{aligned} & \text { Scale } \\ & \text { Ampl } \\ & \hline \end{aligned}$ |  |  |  |
| 3C2751 | 1.91 | (0-301) |  |  |  | 302757302758302759302760 | $59 c$ | $\begin{aligned} & 0-1 \\ & 0-3 \\ & 0-5 \\ & 0-10 \end{aligned}$ |  | $\left(\left.\begin{array}{l} 307757 \\ 307758 \\ 307759 \\ 307760 \end{array} \right\rvert\,\right.$ | 73 |
| $3 C 2752$ | 2.65 | 10-5019 | $\begin{aligned} & 154,400 \\ & 1,2,640 \\ & 231,600 \\ & 5,6) / 16,200 \end{aligned}$ | $\begin{aligned} & 307752 \\ & 307753 \\ & 307754 \\ & 307755 \end{aligned}$ | $\begin{aligned} & \mathbf{2 . 7 9} \\ & \mathbf{2 . 7 9} \\ & 3.38 \\ & 1.47 \end{aligned}$ |  |  |  |  |  |  |  |
| 3 C 2753 | 2.65 | (0-60-300 |  |  |  |  |  |  |  |  |  |  |
| 3 C 2754 | 3.23 | 0-750 |  |  |  |  |  |  |  |  |  |  |
| 3 C 2755 | 1.32 | (0)- -160 |  |  | 1.47 |  | 59 c | $1-0-1$$3-0.3$$6-0-6$$10-6-10$$20-(0)-20$ |  | 307761 | 73 |
|  |  |  | 180,000 | 307756 | $3.38$ |  |  |  |  | $\begin{aligned} & 307762 \\ & 307763 \end{aligned}$ |  |
| 3C2756 | 3.23 | n-20-fio |  |  |  |  |  |  |  | $\left.\begin{array}{r} 307763 \\ 307764 \end{array}\right\}$ |  |
|  |  | $300-604$ |  |  |  |  |  |  |  | 307764 <br> $\mathbf{3 0 7 7 6 5}$ |  |



1E2538PRICE

New Mackiyn Testers

## New Mode1 101 Analyzer

Latest model test instrument for locat ing trouble in radio recciver. Conbines the adrantakes of Point-to-Point "cold" chassils testing with standard voltage and current analysis. Uses selective analysis method.
curately mearsures the voltage between any tuhe prongs, the eurrent in any D.C. circuit. and the resistance be tween athy chrouits suphlying the tube mairs of win-jacks with two meters.
Measuring ranges are: be belt Measuring ranges are: 1.C. Volts $0-15-1516-600$ at 10100 ohms per wol
amd $0-1 \mathrm{~b}-150$ milliamueres. Heslat ance
$0-4-500,000$ olmas. A.C. volts

## New Mode1 89 Tube Tester

True Tube Performance! Tests all tubes in the Ratolek 'Tube Data a tube justin determines the merit riclio receiver. Simple and fast for tube testing. A row of pin-jacts ernneet to all the Indibidual tulse sockut bins. Allother row of bin-jacks :upply the tuhe with the correct volture on each element A chart pives the proper Inter-jack connections for every tube, A tilament selector switch Automitic and 30 volts for all tubes. gas check included ent short check and llie Eeck included. Engraved bakemeter, sockets for 4.5. 6. and large and small 7 prong tubes. Voltages of 10. 22, 15, 67, 90, 135, 180 anh a.so arxlable for tube tests. Complete

$\begin{array}{ll}0-8-150-750 . & \text { Capaclty chart permits } \\ \text { measuremonts betweent } 0.01 \text { and } 5.8\end{array}$ measuremonts betheen 0.01 and 5.8
Mf . An of wire canle with a seven prong blug and four adapters are sup ing case $111 / 2 " x \mid I 1 / 2^{\prime \prime} \times 41 / 2^{\prime \prime}$. with all
adapters.
For Point-to-Point analysls and "hot" clrcuit testing of any type radio re
ceiver. Complete in Fabrikold carry

## BEEDE D'Arsonval Meters

## Accurate small instruments intended Beede Meters arc cquinued whth zer

 for panel test assemblies and as foum- acljuster, samphire bearlngs, aluminum dation unlts in multl-burpose meters. pointer, urinted scale, and hack can['mater normald conditions of room tem- ameled metal cases. Desnite the lowberature and where not sulajected to price of
 satiffictory for radio service as the lonee mating meters has fully quall
 Features: Easy to open fo
 dial Ideal for use with
reetitier or the whormunle for
Al

thents, these meters are as
satistactory as the more ex-
lirechion meters.

## 

Model 701
0.1 Milliammeter

For use wilh enstom-hullt radio test $\operatorname{lng}$ apparatus. 50 chams resistance IE 9600 dirisions. 98 accuracy. YOUR
PRICE
\$3.53

I-O. 1 Mil. Galvanometer For Wheatstule Bridge circuils and Bridge 1 Balaneed Vachum Pule Volt-
nuter
 rale divisions.

PRICE
\$3.53
o-2000 Ohmmeter
Pills the need tor an arcurate low ringe olummeter with $11 / 2$ wolt supphy. 1 Fxayllent for bench test panel.
YE9602-0-2000 Ohmmete
YouR
YOUR
PRICE
\$3.24


## Volt Ohmmeter

## Pocket Size Pocket

 3E2503-
YOUR
PRICE
$\mathbf{S}$
$\mathbf{2} .32$
rite
Model 501
3E2685-
$\underset{\substack{\text { PRICE } \\ \text { PRICE }}}{\mathbf{Y O}} \mathbf{\$ 1 . 6 2}$
Direct reading volt ohmmeter. $0-41 / 2$ yolts, $0-10.000$ ohms. w" flanise tylie meter. Hegulres three small flashmeasured ale connerted in series with

## Readrite Selector Switches



Rotating single contac
for custom-buily inall
in a stiple ${ }^{3}$ " hole set testers. ete. Mount
plete with knob and mounting nut bushin. Com-
3E2672-Triple pole
3E2673-Doubie nole
3E2674-Douhle nole
12 positlons.
3E2670-Iforble pole
3E2
3E2671-lingle pole 13 bositions.
cach position.

| YOUR | YOCh |
| :--- | :--- | :--- |
| PRICE, | YOUR |
| PRICE, Each. |  |

## Triumph Signal Generator A New All Wave Oscillator

Generatos Fundamental Modulated and Unmodulated Frequencies Between 100 K.C. and 10.000 K.C. liso 350 Coyeled All Electrle Four hecron coypled. Ale Complete shieldRange Attenuator. Complete ShieldRange 10 megcycles to 50 M.C

- Four Tuning Ranges Four separate tuning coils. Range 1. produces all I.F. between 100 and Broadrast between 3511 and 1080 k.C. Range 3 lies between 10,0 ithu he niost adranced type of short Wave Kecrivers between 3200 and 10.000 KCl Larmonters of this ast ranke are ayatiahie is that rage of 6 meters to 3000
- Audio Frequency

A filth position on the frequency selector switeh culs out the radio treguenty oscilator and gemende not Amplitier testling. spenker adjustare hriuge measurements, and audio gain tests.

## - Convenient Size

Front hatel "xal , Depth of case metal. The case forms an electromagnetic shield about the entire unit. hlelded.

## - Electron Coupled

alibration and freclom from strass or birdies. The use of the new 73 l'entode tuhe makes this signal gen-

## - All Electric

00 volts 60 escle diode rectifier
 filtered with twin bypass condensers.
urecedlus the tran-former primary. No signal is radiated through the A.C. Line.


## IE2525-Completc. $\$ 3$ YOUR PRICE

- Calibrated Attenuator

And Modulation control. Ladder type Hower output control matintains setpiconstant imnedinue for all output ferels. The relative kaim ar aiterent revel may be anprostmated form the position of the attematar knobs. The iecuricy of these tests is excreded only by Siknal Generators rosting humbeds of dinlars. sulteln solection of the arroit. Dermittine selent or the tests. or the modulated signal for receiver herformance tests fiversable tenuated output.

## - Profitable

The Triumph sisnal (ienerator will quick1s earn liack his cost for the evars service job. The imbraved tone of at radio which has been accurately alikned and balanecd wthe thas osechlatur will bermit mustomer satisfaction. The feature of hating an atdiotesting signal will mrove of greatest assistance in lorating rauses or audio amplifier portion of a rcceiver.

A.C. D.C. Type-With Beede 1 Milli, D.C. Movement and
 Copper Oxide Rectifier Consists of a Standard $31 / 2^{\prime \prime}$ Reede d'Arsonral meter with mateled individually rallbrated romper-oxide rectitier, ind a sueclal "'toundatlon'" style scale. D.C. meter reduires 1 M.A. for full scale deflection.
ohms internal resistance. Semarate
D. bhnding jursts on the rear. A.C. eircuit prondures full soate deflertion volls A.C. will rause fill scale deflection. The sperfal seale is printeil with 20 divistons
$(01-100)$ for the 1$),($. ringes hnd a dual sesle of 20 divisions each for the A.C. range matk et $0-100$ ind $0-5$. The upper scale
brated fir olums for use with a 4 to $41 / 2$ rolt ohms.
ontery
ons

RCA Victor Midget Phono Motor and Electric Pickup For Portable Combination Radio Phonographs
May be used for demonstrating amplifiers ind lesting andio stages o radio receivers. Motor assembly only "" in dhameter nind $21 / 2$ " deen.



Fange $2{ }^{2}$ 2 2 th mounting hole. Moldarta ase. Mounts flush with clamp from rear. Sbe-

Cobalt Magnet $2^{\prime \prime}$ Type MX A.C. Meters Nor-k
Num. Price E9884 (1) Miliamperes Thermocouple $\$ 12.37$ 59885 (12.37

2" Tungsten and Cobalt Magnet D.C.
1E9881 ()-20 Mteroamberes 2180 ohnis
E9882 $0-500 \mathrm{Mliromajper}$ g 110 ohms
E9887 0-1 Milliampres 110 ohms
E9888 0-10 NH1amm 2 chm
1E989000-10 Amucres
Universal A.C.-D.C. Rectox
Foundation Meter. $31 / 2^{\prime \prime}$ Flanice Nize. Moldarta case Kinfe Fidke Pointer. 100 ohms resistance in the D.C. circuit. 5000 ohms in A.C. eircuit. D.C. scale has 20 dirisions calibrated 0 to 100. Midide A.C. scale has a double set of graduations for low and high A.C. ranges. Unper Externit restsiors are reguired ahove 1 Ma. D.C. IE9880-
YOUR PRICE
\$14.25
31/" Westinghouse $31 / \mathbf{2}^{\prime \prime}$ Type NX (A sperial form of bakelite) case Accuracy within 2 c

1 E9891 0-1 Milliampere 110 ohms
$1 E 9892$ 0-10n Nileroimpicers 71 ohtas $\quad 15.75$

# New Standardized IV ESTON 



Model 665 Type 1 Selective ANALYZER

\section*{| IE948 |
| :---: |
| YRICE |
| PRIC | Consists a} Consists of a multi-range A.C.-D.C. Volt-Ohm-Output-Milliammeter with a twenty-four point range

gelection switcli. A.C. and D.C. Volts 1000 . 5 selection switcli. A.C. and D.C. Volts. 1000 . 500. 250, $100.50 .25,10,5,2.5$, and 1 at 1000 $250,100,50,25,10,5,2.5$, and 1 milliamocre Four resistance $10,5,2.5$, and 1 milliambere
 66.5 is designed primartly to be used with the Type 1-A siocket Nelector described below for hoint to-point and stralght analytical radio testing. The A.c. bortion consisting of a Weston full ware copper oxide type iridpe rectitjer and complensated rircult is suitable for all output roltage
self locking push-buttons control the choice of lng rheostat compensates for 20 ob deterior adiust. the battery sumbly. Panel size 5\%/2"×81/4". Denth of case in" made of pressed steel. attractively fin-

## Model 665 Type 2

## Selective ANALYZER



YOUR
PRICE
$\$ 40.42$
Consists of the same meter and ranges as Type 1, but uses pinfiwiteh. to choowe the current sired. Farh pin-j uekplainly manked Fispecially designed to be used rith the Weston Nowket sclector lame size Jin "xs ${ }^{1}$ " Pressed stee on this pare thed container
 hissmi separately for 85.00 .


## Weston Model 666-1A

 SOCKET SELECTORA deblee to mermit individual clrcuit measurements hrount the tube soekets of a radio receiver with The sorket seler or consists of a reetankular bakeite bux equipmed with wo pins spaced to fit the hite bux edulphed with wo pins spaced to fit the cour models of teat apharatus mentioned. The ton of the box contains a seven prong sumet and number of pin jacks by whifh measurements niay be mate between the seren frongs or In series with the circuit of six connections to the tube under cest. An 8 wire cable connects the box to a small sien prong blug which may be inserted in a receiber under test. Four double allanters are nroided to vermit tests of 4.5.6, and large 7 yrong
IE9444-Weston 666-1A Sccket $\$ 15.00$
YOUR PRICE
\$11.02


MODEL 694 NEW OSCILLATOR

List. $\$ 60.00$
ID9434-DEALERS PRICE
$\$ 44.10$
ID9435-Jess Carrying Case. Llst, \$55.00.
$\$ 40.42$
A standardized unit with four bards having fonun to 6,000 li $C$. and higher available on harmonjes. Allows for peaking I.F. stakes for greatest sensitfifity or for "that toppring" for maximum quality in all modern superheterodsnes. Also propide. (or correct adjustment of condenser sang
of T. F . F. Sets as well as It. F slages of super-help-otivnes. For these purposes alages of Superhele"otivnes. For these purposes a sinoothly moduin intensity and frequency is prodiced. The fre in intensity and erequeney is produced. The frooutput control adjusts from maximum to extreme low aninhmum in each hand. Has flament rheostat to contiol roltace for its 32 tulse. perfect shlestat ing Insures complete control over slgnal. Fitted ifo Gurable leatherctte corered case necessar accessolles, battery and type' 32 tube.


## MODEL 664

CAPACITY METER
ID9438-Llist $\$ 60.00$.
DEALERS PRICE
$\$ 44.10$
ID9439-TRESSC
For Electrolytic or Paper Cendensers.
Corers a wide ranke of all typrs of capacity fartils: $10-200.1-20, .1-2 . .01-2, .0001-02$ : volts i-8-10-400-800 A.C. 1,000 ohms wer valts. An
inst uncent that will never berome olsoleter Inst-un:ent that will never become olisolete. Opersupuly is from same as a rolt-ohmmeter. Power rog from any 105-130 volt 60 ejcle line through a ollake adjustor. Indicates short circuited and open condencers as as mensuring raparlites of those in fond condition. In an inditidual carrying case. romplete with test leadse gnd full ingi Shipned operation.

## WESTON PANEL METERS

## Weston Instruments Are Standard "Is It as good as a Weston?" Weston InstriThey are made by the cumbinct Westun and leweli companies with the benefit of their experience of over 30 years of meter manufacturing behind each instrument. So exact is the construction of lreston mstruments that any two meters of the same tyo-even though made years anart-are identical electrically and mechanically <br> Weston meters.

## Volt-Ohm-Milliampere Foundation Meter <br> Weston Model 301 Built Custom <br> Built Testers

309409. List Price. $\$ 10.00$. $\$ 7.35$

Designed expressly for tse with external re buili up a multi-range colts up to 10100 realts 1000 olims fuer volt ex ternal rosistors required for this purpose) or D. C. 50 MV shunt-Van mods (using an cxternal
 eonjunction with a $41 / 2$ volt battery anti a 4450 ohm resistor).
Whilliampere Full Scale Deflection when used Wilhout external resisinrs or shlunts. Interit
sistance of meter, 50 ohms ( 50 Millifoles). Hakellto case, zero adjuster, otched metal dtal vith ilack tlgures on silver barkkround. 50 scale divislons with figures at each 10 ditisions. Figures at full scale are $50-250-1000$, for use on rolt
rances. Divtule by 10 for use on millampere ranges. Divile by 10 for use on mitllampere to 2000,500 ohm steps to 10,000 , 10300 ohm steps to 20.000 , 5000 ohm steps to 60.000 , the next divisions being 100,000 and inflntty.
Blaek bakeltte case has front flange 3 s" diameter. Case body diameter $2 \%$. Case depth bark of fosts with proper polarity marking.
Mr. Serstceman: Build your own analgzer or test panel with this precision multi-range founda. tion meter. UBlng the proper resistors and
shunts additional rances may be added for greater shants additional rankes may bo added for greater thexibilsty and
requirements.

Weston Model 506 D.C.


Weston Model 517 A. C. Voltmeter 150 Volt: 15.850 ohms total resistance. Approxi-

your price

Every Meter You Need In Radio Service Radolek carrles a complete assortment of Weston Meters in the Models 301, $506,517,425,476$ and 600, realy for imblediate shipment. Only the nost popular Weston instruments are listed here.
You may depend upon prompt shipnient and the You may depend upon prompt shipnient and the
lowest wholesale prices when you order your comlowest wholesale prices when you order your com-
pleto pleto Weston testing ergupment from Radolek.
Weston meters may be enmplosed in all special dir ruits prepared hy Radolek for "Build it Yourself

Weston Model 301 DC


31/4 Inch Case A high grade matched lina
of meters to cover a wide a meters to rover a wide
infiety of electrical measurement reanirements. satadard throughout the world in the ladio and Electrical in-
dustries. Excellent for Renc dustries Excellent for Renc
eral Hadio use. Supplled in flush or surfare type and in metal or bakellte cases, all

Model 301 D.C. Milliammeters
 $\begin{array}{lccc}\text { Sumher Milli. } & \text { Res. } & \text { Number } \\ \text { SE9340 } & 1 & 27 & 3 C 9342\end{array}$ $\begin{array}{lllll}3 E 9341 & 1.5 & 18 & \text { 3C9343 }\end{array}$
YOUR PRICE
$\$ 7.35$
Model 301 D. C. Microammeters

 | $3 E 9363$ | 2001 | 55 | $\$ 14.25$ | $\$ 10.48$ |
| :--- | :--- | :--- | :--- | :--- |
| 3 | $\$ 9364$ | $500^{\prime}$ | 5.3 | 1125 | 3E9364

$$
\text { horizontal or } 450 \text { pesition. }
$$

## Weston AC Model 301 Rectifler Milliammeters

| Article | Milli- | Ohms | I, ist | Your |
| :--- | :---: | :---: | :---: | ---: |
| Numher | Almps. | Res. | Price | Price |
| $\mathbf{3 E 9 3 7 9}$ | 0.5 | 2000 | $\$ 19.25$ | $\$ 14.15$ |
| $3 E 9380$ | 1 | 2000 | $\$ 15.00$ | $\$ 11.02$ |



3D2532
 for use with external re-
gistors and shunts sistors and shunts. in
huitd un Miltt-Range $\begin{array}{ccc}\text { huild } \\ \text { A.C. } & \text { Mit } & \text { Mitt-RAnge } \\ \text { Meter } & 10\end{array}$ $\begin{array}{ll}\text { rcad A. C. Folts up to } \\ 1,000 & \text { volts: } D \text { volts }\end{array}$ 1,000 volts: D.
up to 1.000
I). Tin millismps up io
50 m 4 s . and ohms un
Mlliampere Full Scals Deftection 100.000 nhm ithout External Resistars or Shunts.
D. Cout Ternal Meter Resistance (with attached shunt in circuit) 50 ohms: $A$. C. Total Meter fesistance (with self contained rectifer in cirResistance (with
Bakelite Case. Knife Edge Pointer. Front Zern Bakelit
Adjuver.
Etched metal dial-with hack flaures on sil er barkground. Three sets of sealo readings. Lower D. C. Seale with 50 dirislons hating fig D. C mils (when external shunts are used) o D. C. Folts (when external resistors are used) at 1000 ohme ver rolt. Midder $A$. C. Scale with iriple seat inchted 1 ith di fione having Fion $C$ voltage readinge of 5 rolt ( 1,000 ohms per rolt, without external realstors) 10 volts: 50 rolts and upward. 1'rictically an coltape reating desired up to 1000 volts can he handled with the use of proper raluo elerna resistors.
ToD ohm Scale for reading ohms 0 to Ino.000. This arrangement requires in circuit, a 9 rolt bat tery and 8.950 ohm resistor
Dull black finish bakelite case, with front Hance $33 /{ }^{\prime \prime}$ " dianeter. Case body diameter $23{ }^{4 \prime \prime}$ Case depth, back of flange 1 . overall with screws $13 / 4^{\prime \prime}$. Four binding post monnertions, for A. C.. 2 for D. C. Externally mounted shunt prorided for connecting in when $\mathbf{D}$. C. readings are made.


Weston Model 425 -Galvanometer
Thermocouple Galranom-
eter for use on A.C
current only. Very eff
rdent high grade instru-
ment-may he used on any frenuency whout impairing jet accuracy. Approzi mate welght 6 ounces.

Madel 476 Wieston renulsion fron rane instraments aro not to be employed on frequencies exceadink to observe arprage defluction of incicator.

## Model 476 A.C. Voltmeters

YOUR
\$13.23
Weston Model 425-Milliammeters



Weston Meters Have Superior Features Position Balance -Threaded counterweights ex aty halance he morment to read the same in at horizontal, $45^{\circ}$ or vertical position. "Non.
Fatigue Springs"-The sensitirity controlled partly Fatigue Springs"-The senstifity rontrolled partly
hy suring tension remains constant in a Weston vister Acelirate at any temperature. "Jewelled Bearings"-Toal steet pivol polnts in diamond cut sapphire jewell hearings permit Weston meters to
Preclston terrine ribration.
Universal A. C.-D. C. Foundation 0-1 Milliampere Meter
 Weston Model 600
High Sensitivity
Instruments
Most sensitive line of rusged small instruments made. Similar in appearance to Model 301. Flange dlam. 3.5". Body diam. $5 \%$ with rectifier on A.C. Bake D. C. Micro-a

## Stork

Num
$3 E 9$
$3 E$
$3 E 9$
$3 E 9$

## Stork Numb

$3 E 9417$
$3 E 94$
3E9419


## IE2556-Supreme Model 333 Complete with Leads Adapters and operating instructions <br> \$3871 <br> Dealers' net cash wholesale price

Time Payment Terms: $\$ 15.00$ down, tive monthly payments of $\$ 5.65$ each. Write for contract

## Resistance Ranges Provided

Resistance measurements between any points in a tube circuit! Jeasurt any resistance up to 0.1
mesohm on one uf the three resistance soales whiph operate from the self cont a ine d batters, ohms,-with the addlition of an external 45 volt function. In addition to pnergizing the ohmmeter it may be tulckly ronnerted into the control grit of making resistance and mutual conductance test appeals to experlenced servicemen

Ub to 1250 volts A.C. or D.C. between any two points in any radio circuit! Four sockets take care of all standard 4, 5, 6, and large or small 7 prong tubes. All the socket terminals and the top-cad connection are wired through an 8 wire analyzer buttons are provided on the panel to tests. push buttons are provided on the panel to open any circuit except the flament) and pernilt the pinjacks abore the button to be connerted to the mildliammeter circult. Short leads are prorided for this purbose, and to counle the meter range tip
jaeks to permit analytical tests.


## SUPREME MODEL 5-UNIT RADIO TESTER

 Combines in ene instrument the features of Analyzer. Tube Tester. Oselilator, Ohmmeter the cost of the Model 333 Analyzer, a Model 45 Tube Tester and a Model 60 Oscillator you will find that this rombination instrument, (which includes these 3 units), offers much more conrenient to carry on the fot than three separate instruments-all of which needed on service cal IE2564 SUPREME MODEL 444 Five Unit Radio Tester.Net Cash Price. \$0771
TIME PAYMENT TERMS:- $\$ 30.00$ Down and Five Monthly Payments of $\$ 13.65$ Each

## Improved Oseillator

The Moded Nid incorbrates new FREE REFER-
ENCE POINT SYSTEM OF ANALYSIS with PI circutts of radio luble sockets extended through Analyzer calbe to four moulded sockets and to meter may the ipplifed for current, roltage, and The ANALYZER CIRCUITS of the Model 411 are rirtually a dunlirate of those describad under he Mode and canality ranges. (Nee "Table currore) Also the same system of analyzing is used.
Also the same ssstem of analyzing is used. hination of the feqtures of the Mant-l is and 55 Tube Testers. A Gas Test is brotided by insert-
ing a bigh resistane in the circuit so that eas current wifl cause a rhange in grid voltage. thereby also rausing a change in plate current which can teadily be observed on the mate millammeter.
I'rovision is aiso made for testing Individually the elements of new type tuhes having more than one tube in a single enrelope such as the type

## Easy Terms

You may use a "Supreme" Instrument while you are paying for it, if you wishThey are available on Time Payments to responsible Dealers and Servicemen. If you wish to purchase one of these write us for time payment contracts and application blanks. Fill them out and return them to us with the down payment as shown in this catalog. However we wish to point out that you make a substantial saving when buying for cash.

## Free Trial

You can try any Supreme Instrument at no risk. Send us your order. If you are not thoroughly pleased with its performance return the instrument to us in its original good condition within five days after you received it and if you desire, your money will be cheerfully and promptly refunded. No greater recommendation for this line of fine instruments can be given- We know that once you have had the opportunity to use one, you will not want to part with it

# InsTRUMEDTS: 

## $45 \overline{\text { Tube Tester }}$

Can you test ALL the new tubes? Can you test the more common tybes such as $248,27 \mathrm{~s}$. 45s, etc. and really determine the difterence "Falr"? II you are not enfuipned to do this. think how many sales you are losing and how murh money is sliuping away from you just berause you are not showing your though those in the set still play.

## Simplified Modern Tester

The Supreme Model 45 is a Tube Tester to the hallio serviremant It ennloys the point tions similiar to thase utilized in the
tor new Supreme Analyzers. Each element in the tube is connected to the contact arin of an individual selector switeth so that the proper circuit connections ran me made to MINAL CONNECTIONS AT THE TUBE BASE OR TOP.CAP solescence-proof Teste
seven prongs or

All soeket holes are numbered in eceordance
wleh R.M.A. standards, There is a rotary switch for each of these socket terminals beary ing a corresponding number. The contart arm of this swlteh is directly connected to the socket terninal having the same number. By rotating the contact arm of the switch. the corre element lorated at the varticular number to arresponding to the switch can be connected solta part of the elreuit or to any desired for erage. In this manner if a tube has a plate. rated, the where the cathode is usually locan be connected to a sultable plate soltaga instead of to the 13 m Inus nosition in the cirnected. A COMPLETE CHANGE IN THE LOCATION OF THE TUBE ELEMENTS MAKES NO DIFFERENCE TO THE SU. PREME MODEL 45.
lias a highily Insulated thakelite panel heaut
pully lettered in silver. The entire assembly is enclosed in a handsome quartered white oak the hap case which includes a compartment in arcessorles. Size $11 " L \times 91 / 2{ }^{\prime \prime} w^{\prime \prime} \times 5$ " high A ehart showing the switch settings and tube readmaz for all the tubes on the market fodas is placod on the inside of the cover. As new
tuthes are announced new charts will be


IE:2563-Supreme Model 45 Portable TYPe Tube Tester.
DERLERS NET CASH PRICE

## s28으

Time payment terms: $\$ 10.00$ down, Five monthly payments of $\$ 4.49$ each. Write for time payment contract.


## Supreme Model 85 Tube Tester

1E2555-Sudreme YOUR PRICE
$\$ 39.15$
Time Payment Terms- $\$ 15.00$
Down and Five Monthly Payments of $\$ 5.85$ Each
A tube tester that sells tubes! diarsonval $31 /{ }^{\prime \prime}$ meter shows tubes to be elther Good or Bad. Neon Iamp short and leakage indirator for all tube elements. Only three stmme oberations to test as
tule. Only four sockets. Eimission tybe test. Tay-tube. Only four sockets. Einmassion tment. for 98 to
ped 125 Volt for cycle service. Nupplied in a luartar in
sawed nak cirrying case. rests all tubes llated in the Radolek Tube Chart.



Covers 100 K.C. to 4 Megacyeles. Uses Iundamental and harmonic signals. l'recision type tuning dial laboratory callirated. 100 ia modulation at frequency of A.C. line supply. Fixed attenuation assures wositive freduency stability and full output at all times. Comnletely shielued with alun:inum. Housed in a hardwood rase with a bakelite panel attractively marked. Jortable. with leather strap. I'ower supply is isolated from the A.C. line with a transformer, permititing direct connecton of the oscillator in A. (.). C. sets without danger of shorting. Supplipd with a type 31 tuhe. and a shlelded antenna-ground cable. For use with 110-120 volt 60 eycle. A.C. A hand call. brated chart is supplied with each oscillator.
2. Ca arrier Frequency 2 Megacyeles.
3. Modulation.

Separate modulator stage that reauency popreximately 50 at at 400 cycles.
4. Frequency Callbration. Each Sizna! Generator is individualls eilibrat. with a guaranterd accuracy of $\frac{1}{2}$ of $1 \%$.
5. Stability. The calibraerator is independent of moterate variations of plate potential and explate potenti
ternal loads.

1. Cireuit. Electron counded clrcult with seven sets of rnils whth seten

## New SUPREME STANDARD DIAGNOMETER

The Finest Test Instrument

You Could Desire Dominant Features 1. Point to foint Analysis 2. GOOD-BAD Tube Test Dial 4. Mutual Condurtance Test 5. Protected Tube Meter
6. Adanters Not Necessary
7. For $1 / / 2$ to 30 Fil. Volte 8. Tube Short Checker
10. Codulated Oscillator
10. Completely shiselded
12. No Frequency Drift
13. Cabartor Leakaze Testa
15. No D.C. Replster on A.C.
15. No A.C Rerister on D.C 17. Simplified Tube Tester 17. SImplified Tube Teste
19. Orersize Transformer 20. Flexible For Future Use 21. Ohm 13attery Compensator 22. Iniform A C Compensator 23. 'omplete Instructions 24. 'omplete Instructions Triple Range $0.0025--0.125 .0 .025$
25. Triple 25-121/2 Mifd. Capaclty
25. Triple liange Ohmmeter. with Self eontained 26. Six A.C. Voltage Hanges: $0-5-25-125 \cdot 250-500-$ 27. SIT D.C. Voltage Ranges: $0-5-25-125-250-500$ 1250
28. Six D.C. Milliampere Rances: 0-5-25-125-2.50-500-1250. Mils
The Supreme Multimeter is an exclusire patentes feature with all A.C. and D.C. readings on the same uniform scale.
The Precision Callbrated Oscillator prorides Fundainentals orer the lower freguency renkes and powerflu harmonics over the high freguency ranges. 60 cycle modulation, pertert attenuation aty ans
rolume level. Complete with all instructions.


SUPREME Precision Multiwave Signal Generator Model 180
Portable Oscillator. Electron Coupled. Battery (self-contained) operated. An Accurate Modern Test Instrument for Precision Radio Service.

## 10 Superior Features

. De.ubluar Peaks. Nonis this is facme neaks, proper desien of indurtors anis
7. Tibes. Two tubes one type 32 utilized as an :iD is a modulator
8. Power Supply. Four two $41 / 2$ rolt fllament patteries and two $22 t / 2$ vilt "B" batteries.
9. Power Consumption. af 0315 watts. insure I ing battery life.
10. Stray Fields. The Sle ral senerdor and nowby stilelded, eliminating stras felds.

 lite Panel clearly engraved.
IE2550-Model 180. with tubes and batterics.
YOUR
PRICE ........
Write for time payment price.

Improved Model RCA Oscillator


Lower Price
Extended Range
Type TMV-97-B, Range 90 to 25,000 K.C.

## $\$ 2950$

Less Batteries
A Full Range Test Oscillator:
A plate modulated tuned orid circuit The A.ing type 30 tubers is employed. H00 cycle note. modulating the K. F. are employed for the output elreult which is attenuated by a smooth con trol of the botentiometer tybe. Bat
teries required are: $1 \quad 22^{1 / 2}$ volt "B lattery and 1 standard slze $41 / 2$ volt
" $\mathbf{C}$ " batters
which provides eurrens for the 1 wo type 30 tubes ln suribes. lintire oscllataor and battery cquip-
ment enclosed in a black finished aluminum case provited with a leather thrluding butterles. size of base.
Produces 8 fundamental frequenc ranges as follows: 90 to $150 \mathrm{~K} . \mathrm{C}$.

 $\begin{array}{ll}14300 & \text { K.C. }-14300 \\ \text { Range selector } \mathrm{switch} \\ 25000 & \text { K. }\end{array}$ Range selector switch 1 s located on
the front pancl the front pancl and mainty marked.
Farlate range Varlathe range tuning dial is an
adjustable verniur tspe callisrated In Prequeney to an aceuracy of $3 \%$ plus or minus. No special charts
$\qquad$ IE2505-With tubes, less bat YOUR PRICE ...... \$29.50 rour price ...... $\mathbf{\$ 3 0 . 7 1}$

## 

## Portable Model 024

Complete with Batteries and Type 30 Philco Tube 3E2507ー
$5] 350$

## YOUR PRICE



Whit cell to supply the tyble 30 tube assures mixinum life from the tube
For Intermediate and Broadcast Frequencies 110 K.C. to 2000 K.C. ith etched brass punt opening the

Dual tuning range: Range "A" pro- value. Accuracy of frequency selec ides fundamental frequencles between thon within 10 ' of scale designia

 queneles between 220 and $500 \mathrm{~K} . \mathrm{C}$. attenuator, shileciled Antenna lead with fourth harmonics between 880 to receiver. Pernits aligning any
end 2000 K.C. Solf modulated to a broadcast superheterodyne or R.F. wheasing audio tome of follelerminate type radio set.
 1000 ohms per volt on four rankes,
$0-71 /, ~$
$15, ~ 150, ~$
650 , volts.
D.C. $\begin{array}{llll}0-71 / 2, & 15, & 150, & 750, \text { rolls. D.C. } \\ \text { only, } \\ \text { ance } & 0-71 / 2, & 75 & \text { Millaamperes. Two resist- }\end{array}$ ance ranges, $5000,500,000$ ohms using an inclosed $41 / 2$ volt ". ", battery. Togkle Battery Aeljustment rheostal compensates for battery deterioration. Complete selective Set Servicer supplied in blatk leatherette ease, $121 / 4$ "x10" $\times 5$ " high, Slip hinge remorable lid. Vothing else to buy. Conulete Modern F'ield

New Clough-Brengle All-Wave Model OA Electron Coupled Oscillator

$14 \overline{0}$ Fundamental Frequencies Over 860 Strong Harmonic Waves

Intermediate

## Broadcast and

## Modern Up-to-Date New

 Service Test OscillatorTins is the igs monel oscilntor with
 lation. Just the osiflator you need serticing the bely Three tubes: a ispe 37 momulator tube 36 cillator tulue makes a stable efficient circuit with neglible frequencs Independant trimmers on cach wal band germit aremrate calibratlon agains trublaint signals at ant futura time. Calibration is indejendant

Easy To Read Accurately simplified controls bermit aciutate selection of and of the fundaremtals larmonie signals The hodulther control (upper ecntry in the illustration) So miximum contained power strength. or D.C. line supply elin for A.C. heary expensise batterics employed In most oscinators signal of constant intensity. A 400 Cycle audio modelation and wlow to work with is clear corred frequencr with which to adiust tier or and spaker cone. Any rectlwill give accurate reading on the 400 cycle Lone. Expertly Engineered The interior ifustralion mal dharam below show cleaty the subrior featites
of this modern service instrument. The trbple sut of choke colls in the line circuit effectively block radiation of unsrstem, Capact:y insulation to chasis ground prefents dimger of shoek or shore cireuits. For 110 to 120 Volts. A. C.
 urence bift? cmmpens.ale, for fand trimmers. boes it use expensire batteries The oan 1 det ans lietter sulue for my money in any other make oscillator? The OA is the best buy in its obtain a better instrumeut.

Clough-Brengle Msdel "OA
Test Oscillator amplets with tubes.

## YOUR PRICE

## $32^{6}$

## Famous Analytical Tester

Consists of the Fimous "88, and one case with space for the adabl ers. thags and test leads. Case
is of durable black fabricoid with slip hinged cover. leather carrsing strap and satchel type
latch. The two indigidual unlts lated. The two individual unlts
are noten in place athd maty diriduil use Tuis cut or in equipment is particulardy suited for traclog trouble in automobile radlos. Its brofessional abpear unon radios in their hame. This in alytical Tester with a guod oscillator will bermit sou to bovate tronble and make repair
 IE2522-Com YOUR

## \$32.34



## Famous "888" Circuit Checker

For "Selective Analysis" Testing A compaet circult analszer whith phag. adanters, individuai sockets hesides me small seven hule sheke for the 5 f. Analyer rable ind phat espe plug to any tule socket, ant ton arid Bnection. Eight circuits pass through double pin-jacks on the panel. Small red push-buttons $t o$ onen any circuit fer Coltage ind resisfime monsurn matle belween. any of these elreutts Weter size $4 \frac{1}{2} 2^{\prime \prime} x^{\prime \prime \prime} x 3 \%_{4}^{\prime \prime}$ dee
IE2523-Complete YOUR
PRICE.

5012


Famous "777" AC-DC Unitmeter $\therefore$ multirange volt-ohm-milliamueter for hoth spareed tin-jacks and a durable set of test
 tit the pin-jacks make this the handiest in$33^{\prime \prime}$ d'Arsonval theter with hand ralibrated mbper-oxide rectitier, multiplier resistances. A.C.-D.C. Yolt ranges. 0 to s, 10,50 current ranges, (I to 10. 25 and 100 Mils
 x" x 3 多" tere
1E2524-Completc
s23.23


## Vacuum Tube Volt Meter

## 0.1 to 3 Volts A. C. Of Any Frequency! The Clough-Brengle VTVM consists of a power pack. micro- ammeter, and movable vacuum tube signal collector in a use of advanced servicemen, design engineers. and universi IE2574-Complete YOUR <br> s38.22

## Specifications

Range 0.1 to 3 volts without drawing current from the circull heing measurper volt may he arcurately determined. Meter is callorited atalist Bureau of Standards tested Precision Standard on 60 cycle line. Frequency error less than $1 / 2$ of $10 \%$ under $2000 \mathrm{~K} . \mathrm{C}$. luss than the at 4010 K . C . Rhenstat actusts blate circuit burking clurrent for changes in line voltare and zem adjust ment of meter. it it thesible cable between units permits location
of voltmeter close to the cl reuit under of voltmeter close to the circuit under test Supbled complete with $1-60^{\circ} \mathrm{h}$ lube, $1-8:$ tube, grid lead, 1 ground
lead. and qube shield. Diagran below.


# Radolek's New Wheatstone Bridge 

\section*{| YOUR |
| :--- |
| PRICE. |}

Conslsts of at 1000 ohm potentlometer mounted in a
moulded bakellte
 minum imfliates proportional ratios between known athd unknown electrical values. Onerates on terupted in. $\%$. Iequires a sensitire headplone to indlcalk electrlcal balAp

## Application

 The WheatstaneBridge method of
 electrleal measuremett by connbarison of the ratios of a known ralue to an unknown is the most accurate systen known. With the laddolek New Whatstone Bridke, you can measure Imbedoutput of two amplifiers employing the same input. A selection of non-inductive prectsion resistors is recommended as an accessory 10 the whealstone bridge.


Specifications Moulded IB rown hakellte ense, 5 " $\times 27 / 8^{\prime \prime} \times 21 / 4 " 1$
Watt wire wound 1000 olm precision jotentiometer. Scale accurately divited. Four vin-jacks for whones and current circult. Two pair of flexibte leads for connectlon to the known and unknown values are supplited.

Fabrikoid Tester Cases


These substantally constructed and durably cosered cases are ideal for houslng "Festag Apbaratus of ontes own consiruction, Also often reguirud to re-
Hace cises of Headrite Standard Testers which have becmue danaged through wear or accident. Model numbers indicate headrlte Testers they fit Arailable in threc sizes to mect a white variety of
needs. Fibrikoda cover with reinforced leather corners, carrying strap and nlekeled snap eateh. $3 E 2609-M o d e l$
List ${ }^{2}$ rice. $\$ 6.60$. YOUR PRICE.
\$3.88 3E2635-Motel 110-C. size 10\%/: YKt rue. 55.50 .
YOUR PRICE.
\$3.23


## Speaker Field Supply Kit

Kit consists of the essentlal parts with which 10 bulld a 30 wat 300 wolt Dynamie Nueaker Fleld
supply to operate from $110-125$ volt, 60 cycle A.C. Line. Finished unit will supply up to 100 mil liamperes to at lond of 3000 ohms or less. The
power Rheostat (IB in the dagram) permits adpower Rheostat (1s in the diarian)
justrment for sistance. A mans as 6 -500 ohm speaker fledels may be supplitel


100 M.A. cach ( 5 watts per fleld). Small port able carrying case supplied with the kit permits the most convenient arrankement of this combact A 5000 hour Eikon dry lise rectifier jruvides D.C 3E3921-Complete Kit of Essential parts
YOUR SPECIAL
LOW PRICE
$\$ 7.25$

## Modernize Your Tube Tester

Substitute a Modern Tube Tester Filament Transe former in your oresent tube checker! Employ a ten point non-shorting sulector switel (Cat. Num. YCl640, \$1.82 net) with the Tube 'Tester Fllament Transformer (3F:392!, \$1.25 net) and you can rebuild sour present endibment.

Tube Tester Filament Trans.
$11 / 2,2,2 \frac{1}{2}, 3.3,5,6.3,7 \frac{1}{2}, 15,25,30$
 For pinstruction of
tube testers or replacetube testers or renlace-
ment in $s t$ indard testers. volupples tho corrert roltikes for an
tyines of tubes including the oldest tybes arde alt those just reFlexible $8 \%$ leads are color coded and a ditigram is included which Nires a I the cons-
nections. Dhamenslons: $233^{\prime \prime}$ hlgh. $3^{\prime \prime}$ vide.
$23_{1}^{\prime \prime}$ deep. Mounting


## Bakelite Bar Knobs



Tapered Pointer Type for Test Instruments Replace old style round $1 / 6^{\prime \prime}$ nole with set screw. Whate bin line indicator. Farnished In black or lurown bakelite. They add a fartory anpearatice to home bullt instruments.
3E6815-1/4" Black. 3E6816-1 $3_{6}^{\prime \prime}$ Brown. YOUR
PRICE, EACH.. $9 ¢$

3E6818-2" " Rlack.



## Rectifier

## Assembly

For 1 M.A. Meters
3E2510 For West on 301 or 2 ti meters. Whth 301 Dial Scale.

List Price, \$5.00. YOUR
\$3.25
A compensated rectifier fer I MA d'Arsonval meters With internal resistance of less that so ohins.
 he secured witit external resistors of 1 woo ohms bier volt. Nectitier is "sandwiched" between micarta dises equipfed with soldering jugs and connertlons for monnting on the studs of a meter The D.C. range of the meter is not effected and may the employed in the normal manner while the

Full Wave Copper Oxide Rectifier Tr Type A 5 Milliampore Capacity


Miniature copper oxide rerthler. Guaranteed the ing D. C. For ronrertdrawing less than 5 mllliamberes to A. C. Instruments. Insulated silk covered wlre leads,
plainly marked. Cross section ing hole renters ${ }^{75}$ ".
304855 YOUR
\$2.15
Type $B 20$ Milliampere Capacity
Size $\mathbf{7}^{2 \prime \prime}$ round discs, $3 / /^{\prime \prime}$ long.



Circtiver oxide rectifier for A.C. eircuits of less than 5000 cycles
Prequency and not to exceed 40 Prequency and not to exceed 40
militanaber In, current. Excellent for rectification of 110 115 volt A.C. rurrent for tield excitation of dynamic sDeakers with $t 250$ to 30010 ohm field. Not recommended on circutis exceeding 600 volts. May be substituted for electrolytir rectiflers in Whllard, Exide or Philco "13 Ellminators" within
40 inill. limits. Only serricemen famillar with ranper oxite restifler principles should attempt this replacement.
3D4857-YOUR PRICE
\$1.75

Littelfuses

## For Test Instruments



For Radio Receivers and Amplifiers Type 3A, for use in suphts. Tested and ap.
rosed by the Underwriters lathoratories illustration ts netual aize $13 / 6^{\prime \prime}$ lons. "4" dianneter


| Littelfuse Mountings |  |
| :---: | :---: |
| Cinned shakebroot termunals and extra nuality phosphor bronze. nirkel- |  |
|  |  |
| plated fuse clides. Molidet <br>  |  |
| inehes. 60 |  |
| 3C6944-For Littei. <br> Fuse $1 / 4 \times 1 / 4$ inches. |  |
|  |  |
|  |  |
|  |  |
| 3C6945-ForYOUR PRICE, EACHEfrent |  |
| Per Dozen....... \$1.05 |  |
| Littelfuse <br> Panel Type Mounting |  |
|  |  |
| For use where concealeds wiring is reauired. lakelite bise. lonks. threaded \% \% full lengilh. |  |
|  |  |
|  |  |
|  |  |
|  |  |
| 3C6946-1. ist each. 200. |  |
|  |  |

## Littelfuse Lug Connector



Designed for temporary hook-ubs. experimental set-ups. ote., in the laboratory or classroom where time is valuable. Made of nlekel blated spring gnug fit. The large hole. of inches in diameter will . 3C6947-List Price per pair. 15c.
YOUR PRICE

## Standard Radio Fuses

Fuse element enclosed in glass iuhe with brass caps on ends. Size $11 /$
overioad. Type 3A.G.
Per Box of 5 .
YOUR PRICE
15c
Per Hundred

These circuit dlagrams and parts lists elsewhere. however they may be re-
were developed by the Radolek Engin. printed in Radlo publieations where were developed by the Radolek Engin- printed in Radio publications where
eering Department specifically for full eredit is given the Radolek ComRering Department specifically for full eredit is oiven the
Rervicemen and Dealers. The pany for development.


Vacuum Tube Voltmeter Kit of Essential Parts
Six volt filament lighting trinsformer for 110 rolts $A(G$ Two 111.000 ohm preciston resistars. 15,800 ohm notenthometer. Fise Prong sucket. Five
nolnt shorting type switch. Four selecteal carbon resistors. IDP'S tog. gle switeh. Mira rondenser. Three Tip Jacks. 51/"xs1/2 hakelite banel and I'ortable Wialnut Instrument
3E2450 Vissentials Ki VTVM
YOUR YOUR
PRICE
\$787

## Radolek V.T. V.M.

 Bridoe tyoe Varcum Tube volt- and easy to calibrate. Resistance It and lir must be wire wound prem cision type 10,000 ohm resistors 182 is 15.000 ohnis. wire Hound. luitial adjustment requires settine R2 to ersual blate cireuit resistance ing on the indicated hy o readence of a signal across the krid cirthe tube and causes eurrent to flow through the meter. Normal rance colt. A series of tapned resistors in the grid circuit permits multindylng The essential barts are listed in the adjacent column. Any make of type listell in this catalor may be employed in this circult.
" maty te used.

Radolek Portable Tube Short Checker Kit

|  |
| :---: |

A simplifled tube sh
11.000 ohins
cathode hater shorts 40 ohms. Wind dete Any interelement short will instantly be int than 12.000 ohms.
An open flament prevents uny reading on the meter. Six 2000 ohm resistors are connected between the numbered tertuinals. "Hot" nected between the numbered tertuinals. "llot'
tube tests may be made by connecting an A. tube tests may be made
subpls to terminals $3-4$


3E2451-kit of parts to lubke tube short-checker in compart strle is fllust
Comblete instructions. YOUR PRICE \$210

## Neon Leakage Tester Kit



 test leads may be phakied into the insulated tin
jarks aml continuity tests may be made throukh
reststors as hich as resistors as high as 2 megohms. Without the
A. ${ }^{*}$. line connected. the neon luth formig A.c. line connected. the neon bult forms a
sylendid molarlts findeator on circuits carrying over 100 rolts. Also excellent for lacating high ©reguency ignition leaks in auto-radio instatla-
tions. Uses thrce 25,000 ohm carlon resistors.
352452 $\underset{\substack{\text { YOUR } \\ \text { PRIIEE }}}{ } \mathbf{\$ 2} 25$

| 4.4 mumb | (11) |
| :---: | :---: |

## Radolek Police Call Alarm

## For Use On Any Radio Within to Miles of a Police Trans-

 mitter. Does Not Prevent Normal Broadcast Reception! Hadolek supplies complete parts to build this auriliary detector for use Calls while the regular lsroadeast programs are being received. Essentially thils device is a one tube a stundard radio set and using the audio ambllfier of the standard setfor productns loudspeaker volume. It should lie tuned to the frequency of the local police ratlito station to bring
in local poltce calls while listening to in local wotice calls while listening to included. neat walnut bor. Tube is not



## Walnut Analyzer Instrument Case

A professional type genuine walnut carry Takes for your portable instruments panel. l'artition for panel support proFiles room for analyzer cable, test leads, Inside dimensions $81 / 2$ "xl4"x31/2"; deep. Sllu-hinged cover has $11 / 2 "$ instide
clearance above Danel. Metal handie. sultcase lateh type catch. Lacquer finlsh
without stain leaves the rteh walnut grain with its natural arpearance. This handy 4E10445- Walnut inalyzet size case enhances the appearance of sour
$\qquad$ custom built test equipment. Impress
your customers by the urofessional appearjour customers by the professional appear-
Panels listed on l'age 93

## 1/4 Watt Mildget Precislon

 Multiplier Resistors

Oniy $5 / 8^{\prime \prime}$ diameter, $1 / 4$ " wide. Mas be stacked on a $6-32$ threaded stul as

illustrated. These are the smallest irecislon resistors. Accurate within 1.\%. We particularly recommend precision resistors in the lower ranges \begin{tabular}{l|l}
of voltmeters. <br>
\hline Stork \& Resist. Volts YOUR

 

Stork \& Resist. Yolts \& YOUR <br>
Number \& in ohmsat IMA \& PRICE <br>
\hline $\mathbf{3 E s 4 0 0}$ \& $1450 *$ \&
\end{tabular}



| $3 E 8493$ | $4450^{*}$ | 4,5 |
| :--- | :--- | :--- | :--- |
| $3 E 8404$ | $4950^{*}$ | 5 |
| $3 E 8405$ | 5000 |  | $44 c$

c

 Double wiping diam. 1/2" long. ball bearing pressure gping contacts. positive stop on earh position. Ins contact resistance permits use of this switeh in circults controlling milliammeter shunts and volt-ohmmeter cit cuits. Built very rusiced mechanieal1y. Supplied In Non-Shorting and Ten Active Contacts Per Deck. \begin{tabular}{l|l|l|l|}
\hline Non-Nhortjng \& Your \& Shorting <br>
\hline Stk. No \& De'ks \& Price \& $\frac{\text { Stk No }}{}$ <br>
\hline

 

Stk. \& Ne'k. \& Stk. No. \& Dec <br>
$3 E 6326$ \& 1 \& $\$ 0.59$ \& $3 E 6329$ \& 1 <br>
$3 E 6327$ \& 2 \& .94 \& $3 E 6330$ \& 2 <br>
$3 E 6328$ \& 3 \& 1.35 \& $3 E 6331$ \& 3 <br>
\hline
\end{tabular}

## Beede A. C. Voltmeter

A ${ }^{0}-150$


3E2455-
youk 95
ramat ham bakelite with
bereled bake-
lite mite top whate
mounting with two insulated screws. Stze of
case sujports ${ }^{3}$ " between inside, tranel for small bin jacks, or wires. This is the ideal size small instrumient
case for short checkers. neon test circuits. standard resistors. standard


## Panel Lifhe 3E6769-

 YOURPRICE 30 Takes standard tubular pliot lights Illumbnates meters on a test panel Mounts in a $1 / 2^{\prime \prime}$ hole in sour eyes. (Genuine Mazda pllot lights listed on page 91.)

## Selective Analyzer Kit

Build Your Own Point-to-Point Selective Analyzer! Make current and voltare tests simul-
tancously. Kit consists of a blain $5 / /_{2 " 10 "}^{\prime \prime}$ hakelite banel. walnut instrument case, seven prong Ahen wire test blug eable, four adapdouble circuit ofening. fuxley lacks, two rotary ten boint selector swithes. Insulated grld clip and rrounding wire. Hookuo wire and eircult diagrams, with suggested layout included.
3E2526-Kit not assembled.
YOUR
PRICE
${ }^{\$ 10} 105$

## Dial Scales for Use with I Milliampere Movement Meters



For Use on 1
Milliampere Movement Meters
Unper seale callbrated for use with $11 / 2$ volt ohnt battery
sions marked 50.
250 ant 1000 for J.C. Volt. Milliampere hanges.
Exactly replaces orlkinal dial.

## YOUR <br> PRICE

$3 E 8380$ - For Wreston Model 301. 3 E8382-For Trwlet liodel 321 3E8383-For Heede 32 mode model.

3E8431-For Jewell type 51.

corials in adition the following ma-
, uired to make up this outfit: Meter Dial No. 1: 11, volt battery: 1 each precision resistor in olims, 1450, 10.000, 40,000 , 200,0001, 750,000 ; semi-variathe resistor to bring meter resistance $u$, to 50
ohins; Van series shunt resistor, S. F . S. T. Swite


Scale Num. 2. Upper scale is for 11/2 $^{1 / 2}$ solt Ohmmeter. Mid
dle scale indlates dhe scale indlates thims
when unknown resisWhen unknown resls-
tance is shunted across
50 50 ohm movement car-
rying 1 M. A. Iower scale has 50 untform
divisions marked 10 divisions marked. 10.
100 and 1000 volts. Use sanganin wire in series with meters les than 50 ohms resistance

YOUR
PRICE
3E8432-For Hewell Model 8s
3E8388-Fnr Wrston Model 301
3E8433-For Brede 314" 0-1 Mil

3E8435-For Triplett $51 /{ }^{\prime \prime} 521$.
(See Page - Triplett meter pquinned with Scale 2
 Range D. C. Voltmeter
A high range mhmeter reading to 100.000 ohms and a low range ohnineter reading ub to ing 10, 100, and 1000 volts. Swltch provided for either low to hash oht readings. Provides for an lnstrument of maximum utility. Fasy to assemble and calibrate recardless of type 0-1 milllampere meter employed.
The following materiats in addition to the 1 mil. meter are reguired to make wifl this outit: filectrad 600 ohimi wotentionster ; they rolt battery; tio ohm semi-pariable resistor; 4,000 ohm wire wound resistor: 9010 . 010 ohm carbon resistor: 10.000 and 90.000 ohm Electrad prectsion
 $308390-$ All of above materlals supplied in Case. YOUR PRICE
\$8.25


Scale Number 3


308392 -List Price, Fach 75 c . YOUR PRICE
Two voltage scales are provided to permit use voice coll of a spaker or using the hacross the voice coll of a speaker or using the high voltage
scalc, across the primary of the outnut transscalc, across the primary of the outfut transformer. Lsed as a high range ohmmeter in


Scale Num. 4.
For use with Weston
Universal A.C.-D.C. Unirersal A.C.-D.C. Meter or equivalant 1
Mll. meters equabned with copper oxide rec
 values on D.C. call brated Ranke. 50 scale dvisions marked 50 . Milliamperes roccording or to external circuit employed. ToD Scale for $41 / 2$ Volt ohim battery.
$3 E 8395-F o r ~ l e e d e ~ 3 \% "$.
$3 E 8396-F o r ~ W e s t o n ~$
301 .
3E8397-For Triplett 321 .
YOUR PRICE, EACH
45¢
Diagram Number 4


For I Milliampere Universal Meter Provides A.C.-D.U. Multi-lhange Voltmeter-D. Millammeter-Ohmmeter.
This arrangument provides for A.C.-D.C meter seven rankes on full seale detlection of 10 . 50.100 . 250,500 and 1000 rolts. $D$ i. Milliammeter: six ranges. $1.5,10,50$, 1011 . 5u0 millamperes: Ohmmeter: Thiree ranges, $1,0 n t) ;$
10,000 , 100,000 ohms. Nelector switch for tywe readings desired. A.C.-I).C. Shifting swlech. Individual ranges selected on insulated tip jacks. The following materials in addition to the meter are reguircd to make ub the outtit. Meter 1)ial No. 4: Yaxley 3 pole, double throw switch; Yaxley three deck. 8 contact rotary switch; S . 1'S.T. Switch: 800 ohm tapered Putentiomeler; $13 / 2$ volt battery; 4 insulated tip jacks; one earh Precision Multipliters $4.950,5.000,40,000,50,000$. $150,000,250,000,500,000$ ohms : one each shunts. 5. 10, 50, 100, 5110 mils ; one each Precision lic. sistors. 30, 400. 3.500 ohms; banel: cabinet.

## Diagram Number 6

Circuit of a Universal A.C.-D.C. linear Voltohmmeter. Volt ranges are accurate on all fre quencies including radlo. Ue of a quick heating 99 tube as a half ware rectitier for the 1 M . A circuit eliminates the characteristic crrors of the conper oxide neter rectitiers. A.C. range may be calibrated on I. (. Resistor $\mathbf{R} 3$ is adjusted to equal the intenal resistance of the 99 tube. Ki is then adjusted to permit 10 rolts full seale readIng on the 10 volt scale. 123 , R4, and Hz , are 1500 ohn wire wound IIdget Yaxley potentiometers. 155 is a non-crltical 8500 to 9000 ohm resis. tor. R6 is 90.000 ohm $1 \%$ precision resistor.
 Caparity of 0.01 Nid. is shunted acros:
meter to protect the whaling on A.C. ranges.

Scale Num. 5
Suecial top ohm scale for use with $11 / 2$ volt ry-cell, reads 1.500 ohms midscale a $n$ d mo.n00 0 h It s maxihas 30 divisions with has so divisions with 1.50 , 4.50 Warked. 15. neclal circuit the shecial circuit listed
felow. this scale whll nhanee the value of
any 1 MA meter it is installed uion This scale and circult is an cxclusive kadolek develop-

3 E8436 For Heede 31,4
3E8437-For lloyt $55 \%$.
3E8438-For twell 8s.
3E8440-For Wibston 301 .
VOUR PRICE. EACH
Diagram Number 5
Diagram Number 5


Use any standard 1 MA meter, preferably with 50 olins intermal resistance. Any 100 to 150 MA Meter will serve in the current circuit. Low resistances may he accurately measured by clos-
ing the switch circult and atiosting ki untl ing the switch clrcult and adjusting Kl untll
eractly 100 MA is flowing through the unknown eractly 100 MA is flowing through the unknown resistance. The unknown resistance in obmis is When Rl is adjusted to permit 10 Mi ar scale. When ll 1 is adjusted to nermit 10 Ma to flow $0-150$ the unknown resistanc, the reading on the The ton ohm scale calibrated for use witl $11 / 2$ volt dry cell, maly be extended from its firinted maximum to read 500,000 ohms with suitable battery and resistor as indicated dofted lines in the diagtam. volt ranges of 15 fullness of this type test couloment.
In the diagram, 131 is 1500 ohms rarlable, (See It iley midget lotentiometere tage 36). Re is 150 ohm carbon non-precision. R3 is 1000 ohms noti-precision. K4 is 151),000 ohms wire wound brecision resistor. JiJ is 199.0. ohms pret cision type. Rh is 300,000 ohmis carbon or bre
rision tspe reaistance. 127 is 1 t50 ohms brecision wire wound. A bush button switeh is recommended


Scale Num. 6 Milliampere Movement Meters Upper scale is marked in ohms for use with a $41 / 2$ volt battery.
Iover scale has 50 divisions and ten subdirisions without se-
companying flgures companying flgures to
for any particular scale desired
$3 E 844$ 1-F'or ruetle $31 /{ }^{\prime \prime}$.
$3 E 8443$ —For Triulott 391
3E8444-For Triplett $51 / 4$
3E8444-For Hovt i57.
3E8446-For Jewell 88.
YE8447-F
YOUR
EACH
45c
Accurate Linear Scale A.C. Measurements Use scale number 1,2. or 6. With resistars suitahie for securing the desired ranges at 1000 ohms ber seale with less than $5 \%$ variation



Circuit Opening Twin Tip Jacks
 Clreuit opens when both pin tips are in place. Closed while either
one alone is in position. Vsed in Selective Analyzers for ojening eircuits for current measurement or for roltige measurements between eleMounts above or helow pancl guirard has screw. 有" holes reunder wanels less than tors, for use 3E6419-No. ${ }^{-132}$

15c
Jewelled Pilot Light Brackets


Used as short indicators, sig-
nitl light on test panels. nill light on test panels. iron pilot when connected across 2 ohm resistance in
series with a 100 watt iron. series with a 100 watt tron.
(212v, bulb required.) 1 lracket lakes standard sized bilot light butbs Maunts
liole on any banel not hole on any banel not over
Th" thick. Ided Jevel includ-

3E6765-
Your PRICE, Each
29¢

## Jewels For Pilot Light

Colored jewel on threaded shank with mounting nut. Refinire ${ }^{2}$ hole it manel not orer bit". Yery
attractive when used in front of small neon or filament oilot Hghts.
3E6766-Red
3E66768-Green.
YOG

## Radolek-Triplett

 O-1 MA Foundation Meter

3E8389-
s 46
31/2" Black Bakelite Case d'Arsonva Movement

Designed parctularly for use with external re sistors and shunts to hutld up a multi-ranke
D.C. valtmeter and a doal scale ohumeter win bloving the sene wiring tlagram as glven tor Radolek Dial scate No 2 on base 36 . Meter has ith chms intermal resistance and requires 1
mittiambere for full scite deflection kesistors for woltage ranges are calculated at 1000 thems ber volt athawing the 50 ohms of internal tesistance as suftrient for 50 milli-
volt. The meter mas be made to read current by use of standard shunts for sol whm meter
resistance or lsy use of hand calluated manresistance or lys us
ganin wire shunts.
$\begin{array}{ccc}\text { Spectal } \\ \text { Scale: The } & \text { Ohm } \\ \text { low }\end{array}$

sumes
of 13 a chrrent
and
$\qquad$
$\qquad$
$\qquad$
 RaLOLEK
Shunting the meter with an unknown resistanco catues a lower scale reading. ( 50 ohms abre pears at midscale.) The high ohn scale is the
standard type reguring a tho ohnt ressatince inderies with a $+1 / 2$ volt battery. This scate
indicates $4 \bar{y} 010$ ohms at milicale and 100.060 ohm, at we hifhent ohm marking.
 dlameter, $2 a^{\prime \prime}$, Depth hack of panel to clear
binding posts. jon". White enamel dial with binding pest
Knife Edge Pointer: Assists in the con gested mortions of the ohmic sale in ricter mining the exact resistance value. A front zern aljuster assures a constant zero return of
nuinter. Dust-proof construction. Tungsten steel magnet and genuine sapphire jewelled

## bearmes

Servicemen-A Quality 0.1 Milliammeter at a Price!


Used by many leading manufacturers of high grade test equibment. With the use of proper
shumts and rel tor can be converted into a high resistunce soltmeter or higher ringe mil lianmeter.
Masing
Masing coil type D. Dr=onal Morement. Ac
curaty within $2 \%$, "ase Diameter 216 inches
Flange Dimmeter $3^{1+}$ indies. Metal ease.

D. C. Model 301 309340-Metal 3D9339- Bake. List I'rice. $\$ 10.00$.
YOUR
PRICE $\$ 7.35$
standard for Elec. trical and Radio Measurements. 1.atmodel. Metal scale with black figures etched on siber back ground. Calibrated "to on front. Vers uniform neter resistance of 27 ohms. Duli black enameled tinish metal
 bakelite cose flimge $33^{\prime \prime}$ diameter with $23 / 3$ diameter bods. $\frac{14}{2 \prime}{ }^{\prime \prime}$ deep back of flange

## Black Bakelite Test Panels

 Polished Bakelite to fit Professlonal Type Instrument Cases. Supplied syuare. Cornersmust be filed round to must be filed round to fit exactly on the standard model "ases.



## Make Your Own Shunts with Manganin Resistance Wire

Standardize your milliammeters by making all thave the same internal resistance! As 50 ohms is the
standard value usually embloyed, we surgest adstantard value usually embloyed, we suggest ad-
dimsulated Mankanin wire in series with the ding insulated Mankanin wire in series with the
movement to seeure the total of fo olams. Finnloy movement to secure the total of 50 olams. Finanloy The 30 gatuge for all serfes multiplier purboses. The ef Nauge is suitable for shunts earrying less than 50 Ma. Employ 2y gauge for shunts of less than 1000 mitliamberes. 'Ithis round wire is suitable for use is shumt and multiblier resistance for all styles of meters, wheatstone bridge cti. Temperature co-efficlent 0.000025 abiang value, ${ }^{\circ} \mathrm{C}$. Temberatire co-efficlent 0.00002 ohms ner C. Practicalls no thermal co-efficient in conact wht eopper
bun fuote B\&S. 0.452 olims ber loot 3 D4840-YOUR PRICE Covered.
\$1.10
2 f Gatuge IB\&N, 1.147 vhms per foot
2n0 tun sumi, Double silk Corerel.
3 D484 i-YOUR PRICE ........
\$1.20
30 Gatuge 13\&S. 2.859 ohnis fuer toot 300 foot spool. Double silk Covered. $\$ 1.15$

## Bare Resistance Wire

For use at extreme high temperatures in heater lements. of ranges, radiant heaters, toasters, rheostats, bineter esistances, ete.. Temperature co-effictent 0.000112 ohms per of up to $500^{\circ}$ $1000^{\circ} \mathrm{C}$ (183: of ) constant to $1000^{\circ} \mathrm{C}$ ( $\left.1833^{\circ} \mathrm{F}.\right)$ Non-oxidizing in air. Nonmacnetic. 13
out insulation
20 Gauge mexs, 1.015 ohms ner foot 100 font spool, hare wire.
3 D4843-YOUR PRICE
\$1.05
${ }^{32}$ Gauge bes, 10.15 olms per foot. 500
3D4844-YOUR PRICE
$\$ 1.00$

## "VAN" SHUNTS

Yery small and complact. Size about $11 / 4^{\prime \prime}$ long. 3/8 wide. Resistance elements of non-corrosiro tically nil. These shunts are intended for uso in converting 0.1 milliammere morement meters for reading htgher range currents with maximum milliamps specided

## Multiple Shunts

For 1. Mil. Weston
D. C. Mod. 301

List $\$ 1.50$.
88C



304891 -For Universal Model 301.50 ohms


## Series Tapped Shunt

For Beede, Host, Triplett. and Weston 1 millitampere tueters having 5 ol ohms internail resistance or
with meters oi lower resistance hasing in external series resistanne of manganin wire to secure a net $\mathbf{3 E 4 8 9 2}$ - For 50 oinm, 10 and 100 milliamperes.
$3 E 4892-F$
YOUR PRICE
sindlest, lightest weight headset made Highy emelent. Tutal weight of complete set only four Eances. letad for Aircraft, Hard-of-hearing and phones for any extended time. Extremely sensitive. Will respond to signals over $100 \mathrm{D} . \mathrm{B}$. down. Precision made of finest materlals. Will give unstrong, adjustable spring steel head band and five font cord. Total resistance 4.000 ohms.


## Head Phone Cords

For connecting two headphone units to output of radio receiver or other apparatus. Two double conductor cords are jointed together in series connecthon with one double conductor cord. Fine quality 3 C 3050 Whith pin tios on both enda. $3 \mathrm{C2} 306$-With pirade tipa on phone un 3C2306-With spade tipe on phone unit ond. PRICE EACH

196

## Two Conductor Cords

For Speakers or Single l'niz Headphones Finest quality glossy mercerized cosering. Leth. 5 th. 3 C 308 -Pin tips one end, spade tips other.
$\mathbf{3 C 2 3 0 7 - p i n ~ t i p s ~ b o t h ~ e n d s . ~}$

TEN FOR 76 Cc

## "Tweeter"

 Loud Speaker HornsComplete with Baldwin Phono Unit. Horn is scientifleally moulded of polished hard rubber to giva best acoustic results. Very satisfactory for some types auto sets and P.A. systems as higli irequency reproducers. Also as monitor lorn on sound recording systems. Helght $9^{\prime \prime}$ $302369 \quad \$ 1.74$

ROLA Permanent Magnet Dynamic Speaker


Model PM-6 4EIO620 4EIO620
YOUR PRICE $\$ 575$

## Model PM-8

 4E10621
Output transtormers are included. Specify on your order type of output tubes used and how they are connected.
Requires no field current. Eisluecially designed for use in abblic address installations where it is Impractical to apoly energy for the fleld coll. for battery receiters or for remote use with a honie
radio or as a monitor speaker. Sensitivity and tone fidelity are comparable to that of the finest dynamic speakers. The magnetic air-kay and the the entrance of metallic narticles and dust by a the entrance of metallic narticles and dust by
domed renter cap fastened in the aner of then cone and a new dirt broof accoustic fller
entirely new construction of the magnetic entirely new construction flux density and oreater power handllng capacity. Hiphwst guality stcel used in the construction of the electro-magnet assures retention of pull macnetic strencth The sures retention of fun macnetic strenct. The in the modern arc welded construction which is in the modern

Physical Specifications
Model PM-6-6 $x^{\prime \prime}$ cone flange dinmeter, $\quad$ \%' magnet width. $3 P^{\prime}$ " maximum depth.
Model PM-8-8,
magnet widh, $4 \% 8^{\prime \prime}$ maximum depth.

FROST FONES


Frost Fones salisfy the
eracting demands of those wishing to obtain extremely sensitive instruments. Light in weight. comfortable to wear and easily adjustable All materials used are o the very highest quality, and these phones are mado men. For scientiadio parts or complete sets-for lining up condenser-for peaking, Intermediate transformers or any similar uses these
phones may be depended unon to gise perfect satis faction.
3 C2357-Frost No. 174 2000
num shell.
\$1.50

# 3C2358-Frost No. 175, 3000 ohm headset. 

 Aluminum shellIISt. \$3.50. YOUR PRICE
\$1.67

## FROST DX Special Fones

 20,000 ohms ImpedancDesigned especially for amateurs and DX fans. Extremely sensitise to falntest signal. Same general construction as above model Frost Fones. sensitivity The high impedance of 20.000 ohms at 1000 creles ligh impedame phones 20,00 ohms uited for A C Hridge work 3D2356-IAst Price, Set $\$ 5.00$.
$\$ 2.50$
Junior Headphones


The headphoncs lited here are thoroughty reliable and respongive to weak signals. Adjustable woren Aluminum shells, aluninum unbreakable cans corts Aluminuin shells, aluminum unbreakable caps that are more sanitary and will not tirty the ears even Very light and comfortable to wear
Acme Headphones Exceptional value. Sult-
able for use in multiple installations of hospitals, botels etc. Plan on 50 milliwatts jeer set for best re-
sults. Well made. Durable. Spring steel adjustable head band. Light tension. $41 / 2$ fuot braid co
black finish


4,000 olime
Single Lota,
Set ............ \$1,25
TEN SETS FOR $\$ 12.50$


3D2 374
Total resist
974


TEN SETS FOR $\$ 9.40$
Ear Phone Cushions 3C2337-YOUR PRICE 22d PAIR 51.95 TEN PAIR FOR .............STV Very hight and comfortable. Ease pressure from head set yet preserve best
hearing. Fit all phones.


Genuine Nathaniel Baldwin Phones
Tyne c
$30_{2360}$ Your price see seit \$2.89

## $\$ 27.50$

 world famous for of their extreme sensitivity and great effictency. laalanced armature unts ac- curately matched and
carefuliy tested. Ined extensicely by $U . S . S i g n a l$ Corps. Nary and by profossional operators.
Moulded bakelite cases enclose units. While very sensitite they are very rugged and will stand up under hard usace, Complete with adjustable head band and connecting cord. Fitted with MC. diaphrams.

## Genuine Baldwin Units

Honderful bargains at our nrices. All aro of the highly efficient laldwin lalanced armature type. Vers sensitive and carry great rolume without distortion sensitive and carry great volume without distortion. ceiveri and for use on Public Adilress horn spoalsers. Maxigurn undistorted lower llmit. 500 M . W

## Baldwin Concert

Generelly known as the best. Each unit hand made. carefully adjusted and tested. Precision made at every step. Whdcly imitated, but not excelled for the falthful. consistent reproduction. Threaded to nt all standard speakers and horns. Concontric corrugated thathragms 10 handle strong
 sienals wlthout blasting. 5-foo cori with tipe. Shipping wt
2 ln . 3 C2362-Haldwin Concert Unit $\qquad$ $1 \mathrm{~m}=\mathrm{L}$ Not Shielded. NET \$2.95

## Baldwin Rival

Ideal for all console and morning glory type horns. Handles enormous volume with rare falthfulness of reproduction. Shipping wt., 1 lb .
 Baldwin Lyric
An especially desirable unlt for outdoor use. Fully encased. No sarts exposed. Very sensitive. phrams to handio strone stentric corrugated fiaphrams to handle strong signals without blasting. Slistitly larger than the
3C2365-1.1st, $\$ 6.00$
YOUR SPECIAL PRICE
\$1.25

## Phono Pedestal Speaker

For attactitng to tone armi of any phanograph. Equibped with extra long cord and hane thys. Has dur-
atle ind senstive maknets. Suecify make of phonograph a


## Standard Phono Unit

Exactly the same as abore unte excent sunphed


## Utah Units

 The tinest ITTAH unlt Incoryorates natented tripud construrtion Gives falthful reproduction over wille ranke and success fully handles $24 / 3$ watts 1000 o hm Impedance. Finished in nlekel. Dian

YOUR PRICE
\$3.75

## Utah Big Chief

Same dimensions as abore unit b
harrmartite tribod construytion
3D2378-Litt Price $\$ 5.25$.
your PRICE


## OUTPUT TRANSFORMERS

In ordering sweaker with output Transformers, specify type of output tuhes used and whether single or push-pult.
Abbreviations Used
Pdf-: Power dissibition of field.
Pwr.: Power handling coll. 1 mp : Volce c $\mathrm{H}_{1} 1 \mathrm{~lm}$ pedance
cycles.
Res.: Yoice coll resis-
olam : Diameter of Volce Coll.

8, 10 and 12 Inch Soeakers
Model "A". Have extra large tilld bots which brink out the utmost in the haphragtos and orovdes marvelous fidefity of tone at high as wel as low rolume. Cadmum minimed steel sranated coutded ribbed diaphragms of special mpregnae composition. Pdi., "atts. Hes., 4.7 ohms

## 8 Inch Speaker

Hodel 8A. Diameter $8^{\prime \prime}$. Overall Deptli 4 18 Less Output Transformer
4E10250-2500 ohm field) YouR I'rice. $\$ 12.50$ $4 E 10251-1.500$ ohm fleld
$4 E\{O 252-1000$ ohm fleld $\}$ YRUR
4 With Output Transformer 4 E $10250 \mathrm{~T}-2500 \mathrm{ohm}$ fleld Y YOUR 4EIO252T-1000 ohm field PRICE
94.35

## 10 Inch Speaker

Model 10A. Diameter $10^{\prime \prime}{\text { Overall Denth } 43 \%^{\prime \prime}}^{\prime}$ Less Output Transformer $\left.\begin{array}{l}\text { 4E10253-2501 ohm field } \\ 4 E 10254-1500 \text { ohm fleld }\end{array}\right\} \begin{gathered}\text { YOUR Price. } \\ \text { PRICE }\end{gathered}$ $4 E 10255-10011$ ohm fild PRICE

With Output Transform $4 E: O 253 T-2500 ~ o h m ~ f i e l d ~ Y O U R ~$ 4EIO255T-1000 ohm fleld PRICE

## 12 Inch Speaker

## Model 12A. Dlameter 12". Overall Denth 6"

Less Output Transformer
$4 \mathrm{E} 1025 \mathrm{E}-2500$ olm held Mist Irice, $\$ 15.50$
 4ElO2 With Output Transformer 4E\{0256T-2500 ohm field $\}$ YOUR $\mathbf{4 E} \mathbf{O 2 5 7} \mathbf{1} 9$

UTAH 12" STADIUM SPEAKER Model 12B (20 Watts)

I' Price. $\$ 17.50$.
YOUR PRICE

## $\$ 7.95$

With Universal Output Transformer Especially suitable for Delane Console and Public . Iddress installations. Handles is to 20 watts inout without orerloading, with 110 fold Cadmium finislied steel Prame. Improved moulded diaphragm. Large size unlversal transformer. tapped to
match any output qube combination, Diameter 12 " ortall height $122_{2}$, overall depth $1 / 2$ coll diam. kes;, 2500 ohms, 15 wate. 15 lis., 8 ohm. For D.c. Field Power
14 E10259-2500 fleld) List Price. $\$ 17.50$. 14E:O260- 1500 fleld
$14 E 10261-1000$ field $\}$ PRICE $\$ 7.95$ With Universal 500 ohm Line to Voice Coil Transformer
(Permits use of 1 to 6 speakers on 500 ohm line). 14E10259T- 2500 fleld YOUR $\left\{\begin{array}{l}4 E: O 260 T-1.00 \text { fleld } \\ 14 E\{O 26: T-1000 \text { feld }\end{array}\right\}$ PRICE $\$ 7.95$
capaety of volce
 5 Inch Speaker
Wotel 5n. Diameter $5^{\prime \prime}$, Overall Demth $23_{8}^{\prime \prime}$ rdt. . 5 wats. Volce coll diam. Fs", Imb, 5 ohms

Less Output Transformer 4 E10262-3000 ohm fleld List Price $\$ 6.50$. $\left.\begin{array}{l}4 \text { EiO263- } 2500 \text { ohm fleld } \\ 4 \text { EiO264- } 2000 \text { ohm field }\end{array}\right\}$ YRICE $\$ 2.29$

With Output Transformer
 4ETO264T-

## 6 Inch Speaker

Model fir. In Dameter $6^{\prime \prime}$. Overall Depth $3^{\prime \prime}$. Pdf. watts volce coil diam. $3^{"}$ " linp., 3.8 ohmis.

Less Output Transformer
4E10275-2500 ohm fleld) I.ist I'rice. $\$ 8.00$ $4 \mathrm{AE}\{0276-1500$ ohm ficld $\}$ YOUR 92.75 4E10277-l000 ohm aeld PRICE $\$$

With Output Transformer
 $4 \mathrm{4E} 0276 \mathrm{~T}-1000$ ohm jeld $\}$ PRICE 43.25


4D10269 YOUR PRICE
 $\$ 1.78$

4010270 Diameter is inches thit. Wt. ${ }^{2}$ lb
YOUR PRICE
\$2.02

> 4010271 Diameter 8 inehes. YOUR PRICE
> $\$ 2.85$

Special Resistance Speaker Fields
Radolek Dynamic speakers listed can be adapted for use in citcuits renuiring field coll resistances of ralues other than our stock sizes. For use in such circuits. select a speaker with resistance nearest to that required but lower in value. Place in serics with the speatier a 10 watt resistor of value whth added to value of speaker held coll willt give total resistance required in circult. 1 Im.
proved hum filt ration may he secured iny connectiog proved hum filtration mas he secured by connecting a 2 Mid . condenser from the ground to the junction
of


8, 10 and 12 Inch A. C. Speakers
Model 8A.AC. Diameter $8^{\prime \prime}$. overall height $8^{\prime} g^{\prime \prime}$ width $10^{\prime \prime}$. Fleld Res., $2500^{\circ}$ ohms, Pdf., 10 watts.
Voice coil diam., $l^{\prime \prime}$. imple, 6 ohrms, l'wr., 8 watts,
 List I'rice $\$ 19.00$. 4EIO265. YOUR PRICE
\$11.17
Model 10A.AC. Mameter $10^{\prime \prime}$, overall hetcht $1{ }^{\prime \prime} 1 /{ }^{\prime \prime}$ Width $10^{\prime \prime}$. Field lies.. 2500 ohms, ${ }^{\prime}$ df., 10 watts. Hes., 4.7 olms, Ship. Wit. 12 lbs. List I'rice $\mathbf{\$ 2 2 . 0 0}$. I4EIO266. YOUR PRICE
$\$ 12.94$
Model 128-AC. Hameter $12^{\prime \prime}$, overall height $121 h^{\prime \prime}$
 watts, Res., \& ohms. Ship. Wit., 15 List Price $\$ 25.00$.
14E10267. YOUR PRICE
$\$ 14.70$
Utah "P. M." Speakers
3000, 4000 and
6000 Milli-watt
Power Inputs An improved Kinematic Power Loudspeaker with matcling circuit no fleld current. ilandles more wower and volume ans non-dynamic speaker $=$ we have teted. Chrome
steel permanent marnts acting through maminated pole pieces produce an intense magnetic flux in the 6/thousandths ale gap. A heary lamin-
 ated silison steel arma. torgue sumports. No armature pirots to filexible stick. Nipaker will carry 35 Ma . direct current. may be ordered for singe or For improring bitery radios, inse in pound For improring battery radios, use in sound trucks whirh does not provide field current. we recommend these speakers very highly.

## $6^{*}$ Utah Orthovox

3000 Milliwatts Capacity
Frequency Response Equals the Finest Type 5" Dynamic Speakers
4E10280 For single tube.
4E10281-For Push-Pull Tubes. List Price $\$ 3.50$.
YOUR PRICE, EACH
\$2.06

## $8^{*}$ Utah Orthovox

4000 Milliwatts Capacity
Frequency Characteristic Uniform between 140 and 8000 Cycles. 4 E10283-For single tube. 4E10284-For Push-Pull tubes. LIst Price $\$ 4.00$.
YOUR PRICE EACH

## 12" Utah Orthovox

6000 Milliwatts Capacity.
Plenty of Bass in this Big Cone.
Excellent Response Between 80 and 8000 Cycls.
$4 \mathrm{EIO286}$-For single thlee.
4 E 10287 -For
List Prtee $\$ 6.00$.
YOUR PRICE EAC
\$3.53

# Dependable Quality 

## 6 Inch De Luxe

YOUR PRICE $S$ SS
Less Transformer
New Design-
Superior Performance
Carries Puth outbit of any bower huatts. Inductive Shunt Hum acking device permints the lase he power back filter system.
 hiveing tejste 4 bils

Less Output Transformer
EACH
RICE
\$1.55

| $\begin{aligned} & \text { Stock } \\ & \text { Avinber } \end{aligned}$ | F'leld Ohms | $\begin{aligned} & \text { stock } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { Fleled } \\ & \text { Ohm } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| $14 \mathrm{E10500}$ | 1000 | 14E10503 | 1800 tapued |
| $14 \mathrm{E10501}$ | 2010 |  | at 300 |
| 14 E 10502 | 2500 | 14E10504 | 4 ohlus for |

With Output Transformer (Specify output transformer desired by giving type
letter indicated in table belowi.) letter indicated in table below.) Order field Hecitance "Wanted
YOUR PRICE
EACH
TEN FOR
............siz.
\$1.88


| Ficldi (Whms | $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | Field Ohms |
| :---: | :---: | :---: |
| 1000 | 14E10S03T | 1800 tapl |
| $\underline{2000}$ |  | at 300 |
| 2000 | 14E10504T | 4 ohms for |

6 Inch Standard
For 4000 Milliwatt Audio Output 4E10565-5.00

YOUR PRICE
EACH
$\$ 1.35$
$\frac{\text { Ten }}{\text { With Output Transformer }}$
14E10565T-:500
Watt Fillid.
YOUR PRIC
\$1.65
Specify Transformer desired by giving type le indicated in table below
I low cest gond antilty full dynamis speaker. strong rugked ronstruction, voire coil and spider are assuring freedom from chatter usually found in competitirely priced speakers. Voice coil diameter
 $\frac{\text { Weight parked. }}{81 / 2 \text { Inch Standard }}$

For 6000 Milliwatt Audio Output $14 \mathrm{E} 10570-2500$ ohr
YOUR PRICE
YOUR
EACH
$\$ 2.10$
Ten for $\$ 19.50$
With outout Transformer
YOUR PRICE
YOUR
EACH
$\$ 2.45$
Ten for $\$ 2300$
Specify transformer desired by giving type letter indicated in table below
This $81 / 2$ inch siandard guality Dynamic makes a sultable replacemsent or the majorns of five and six lube. slngle or bush-pull. midget radio sets. sistance ahms. diameter of ratre coil 3 ". Speaker is size fleld coils of les than 3000 ohms can be sup-
$\frac{\text { nlied on order for sur each extra. }}{\text { Universal } 500 \text { Ohm }}$

## Line Matching Transformer

YE4140YOUR

74c
A flexible means of coupling I to 6 speaker
to a 500 ohm Amplifie Output Circult. Tapped secondary matrhing limits of ratios within Imits of 1 to 6 sbeak:


81/2 Inch De Luxe

## 11 Inch DeLuxe

For 10 Watt Output with 10 W atts in Field

 Less Trinsformer Speaker is Inch DeLuxe superior tone nuallts great rolume portabilits and hieh efflclencs large slize field pot and xtra large voice coi all frequencol
raveling musicians, the 11 inch Deluxe Model ieularly suited is par installations where a well rounded tone is necessary to accommodate the acoustica of undraned walls strong cone of moulded spamless material supported the edge by the heaby sted frame and at the pider actually carries the voice eatle thus maftifontraction of the cone sith temperature chandes art of this speaker. Voice Coll dianteter $11 / 4$ "
 Depth $6 \frac{3}{3}$ ". Shipping Welght $6 \%$ lbs. A portable is sucaker io broperly reproduce jow notes

Less Output Transforme
YOUR PRICE
EACH

| Siock <br> Number | $\begin{aligned} & \text { Fimd } \\ & \text { Ohms } \end{aligned}$ | $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { Firid } \\ & \text { Ohms } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 14E10540 | 1000 | $14 E 10543$ | 2500 |
| 14E10541 | 1514 | $14 E 10544$ | 3000 |
| 14 E10542 | 2000 | 14E10545 | $6{ }^{\prime}$. |


| $14 E 10542$ | 2010 | $14 E 10545$ |
| ---: | ---: | ---: |
| With Output Transformer |  |  |

Specify Output Transformer desired by low.
YOUR PRICE
EACH
......
\$3.45



New 5 Inch Speaker
YOUR PRICE
EACH EACH
$\$ 13.80$
Ratio With Self-Adjusting-Ratio Coupling Transformer GEIO560 2500 ahm

4EIO56I-3000 ohm fleld 4EIO562-6 rolt, 4 ohms, 月 watts. or with tubes rated 10 dellier less than 3000 new "Cigar Box": sets and Auto Radios. New of the construction assuring freedom from chattering. The Self-Adjusting-Ratio Output Transformer emploss atching non-critical. The following single output tubes onerate properly with this transformer: 38 4 ubes onerate $42.43,45,4 \%$. 2AN. 71 A and 89 triocle. Volce coll reststance. $21 / 2$ ohms. Impedance 3.3 to $\{$ ohms. Orerall diameter $3^{\prime \prime}$. deptll $21_{2}^{\prime \prime}$. Shipping

Select Proper Output Transformer from This Chart When Ordering Speakers Specify Output Transtormers Requir as Specififed Below. Ratios are for 5 to 7 Ohm Voice Colls.

| FOR SINGLE TUBES |  |  |  |
| :---: | :---: | :---: | :---: |
| (5) | (F) | (C) | (1) |
| 20:1 | $271{ }_{2}: 1$ | 35:1 | 45:1 |
| 48 | 13 45 4188 714 2183 1245 48 50 |  | $\begin{aligned} & 10 \\ & 38 \\ & 41 \\ & 49 \mathrm{~T} \\ & 12 \mathrm{~A} \\ & \mathrm{A1} \\ & \mathrm{~K} 1225 \end{aligned}$ |

> | (A) | (B) |
| :--- | :--- |
| 27 | $35: 1$ |
| 48 | 43 |
| 243 | 45 |
|  | 2136 |
|  | 71.45 |
|  | $12 A 28$ |
|  | 483 |
|  |  |
|  |  |

(1)
$60: 1$
10
38
41
49 T
12 A
$\mathbf{A F}$

KR25

(6)


| Transformer Tyue |  | (B) | (C) |  |
| :---: | :---: | :---: | :---: | :---: |
| Ratio | $27^{1}: 1$ | 35:1 | 45:1 |  |
| For The | 48 |  |  |  |
| Following | 243 | ${ }_{2}^{45} 8$ | $\stackrel{20}{33}$ | GA ${ }_{\text {K }}$ |
| Radio |  | 71.1 | 42 | $59{ }^{\text {P }}$ |
| Power Tubes |  |  |  | $\mathrm{SPP}^{\text {S }}$ |
|  |  | 4883 C | 47 | ${ }_{\text {P }} \mathrm{L}$ |
|  |  |  | 88.4 | $\text { Por } \mathrm{T}$ |

## 121/2" Standard Dynamic

For P. A. Systems and large Sets. $\left.\begin{array}{l}\text { YOUR } \\ \text { PRICE } \\ \text { EACH }\end{array}\right\} \leq 35$

## Less Output

 TransformerTremendous Volume with 10 Watts of Audio Input. Hegulres feld excitation for dured Air kad Intensities magnetic fiv Voice Coil Main. tained in perfect alignment with full floating micarta spider suspenof expansion or contraction of cone diaphragm. This speaker should be mounted on a I Bafle of at lea t pedance 6 ohms, Resistrnce 5 ohms. Diameter of Singe: Wi. Less its out out Trenstormer

| Simitior | comem | come | Ampan |
| :---: | :---: | :---: | :---: |
| Sis | \|in |  |  |
|  |  |  |  |
| Wich Outhet Tounsormer |  |  |  |
| Sior | \|iomi |  |  |
|  |  |  | \$6.8 |

## 12 $1 / 2^{\prime \prime}$ Standard Dynamic

 A.C. ModelUses a Filtered Field Supply Rectified by a Type 80 Tube. For 115 V. A.C. 60 Cycle.
14E10595-Less Tute and Less Outsut Trans-
former
YOUR PRICE
\$12.35
1I4EIO595T-Less Tube and Transformer.
YOUR PRICE
$\$ 12.85$
Full 10 Watts of Field Fower available from the fltered rectitied A.C. line supply. Type 80 tube thls purpose. Voice coll and cone construction is the same as the D.C. $121 / 2^{\prime \prime}$ Standard Dynamic described abose. Shipning weight 19 lbs

## 14" Standard Dynamic

For Permanent Public Address Installations, Theaters, Auditoriums, Churches, Athletic Fields.
Handes Full 12 Watt Audio Inout- 10 Watt Field. A Supec Power Dynamic Speaker for use with large P. A. Systems which must distribute great rolume of sound whthout marked directional effect. Yoice
Coll:- Impedance 6 ohms; Hesistance 5 ohms. Diameter $1 / \not \equiv$. Orerall diameter $11^{\prime \prime}$, depth $9^{\prime \prime}$ Diameter $11 /{ }^{2}$ O. Orerall
Shlpping weight 15 lhs.

| Less Output Transformer |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock Nuniber | $\begin{aligned} & \text { Field } \\ & \text { Ohms } \end{aligned}$ | Stock Number | $\begin{aligned} & \text { Field } \\ & \text { Ohins } \end{aligned}$ |
| $\begin{aligned} & 14 E 10600 \\ & 14 E 10601 \\ & 14 E 10602 \end{aligned}$ | 1000 1500 2000 | $\begin{aligned} & 14 E 10603 \\ & 14 E 10604 \\ & 14 E 10605 \end{aligned}$ | $\begin{gathered} 2500 \\ 3.3000 \\ 6 V_{0} \end{gathered}$ |

YOUR PRICE
EACH
\$6.95

| With Output Transformer |  |  |  |
| :---: | :---: | :---: | :---: |
| Stuck Number | $\begin{aligned} & \text { Fietd } \\ & \text { Ohms } \end{aligned}$ | $\begin{aligned} & \text { Stock } \\ & \text { Numbler } \end{aligned}$ | Field |
| 114E10600T <br> 114E10601T <br> 114E10602T | 1000 1500 2000 | 114E10603T 114E10604T 114E10605T | $\begin{array}{r} 2500 \\ 6 \geqslant 000 \end{array}$ |
| YOUR PRIC |  |  | 7 |

## EACH

\$7.55

## 14 Inch Standard Dynamic A.C. Model

115 Voit A.C. 60 Cycle Rectified Fleld Supply. Uses tyoe 80 tube and Filter System, This speaker is identical electrically to the 14" Dynamic descrilied above.
forme
YOUR PRICE
\$12.95
II4EIO6I5T-Less Tube. with Output Trans-
former. YOUR PRICE
\$13.45
For all of Above Models
(Specify Output Transformer desired by giving type letter indicated in table on on page 40. .
Special Field Coils under 3000 ohms can be supplied to order, $\$ 1.50$, extra.

## Dynamic and Magnetic Speakers



## Cabinet with 5 Inch Magnetic Speaker 4EIO489-YOUR PRICE EACH.S2.65 E 10 <br> $\$ 25.00$



## New Walnut Cabinet

## For Magnetic or Dynamic Speakers

 Takes any Speaker NotOver 9 Inches Diameter over 9 inches Diameter.
14010481 -Cabinet 14010481 Cabinet
Onls. Your Price. $\$ 1.85$
Each ...... 1851

TEN FOR $\$ 16.75$
Attractive new design
calinet. (Genuine Walnut front and sides in rich warm walnut brown fin. ish. Neat grille with
fine. dark gold, figured, two tone arille cloth. Pery strong and rigid yet light in weight. Placed back of front grille is a ircular hole. Veneer hack coser drilled with sis $11 / 4$ holes makes for a finely finished joh and insures. i)est acoustic properties. Height 11 ". omitted so that properly flinished job can be made with any speaker. Cabinet with 8 Inch Magnetic Speaker
I4DIO482-YOUR PRICE EACH

TEN FOR S3i.50
\$3.65

## Special Speaker Cabinet

For Magnetic or Dynamic Speakers


## 5 Inch Magnetic

## 4EI045I-List

YOUR PRICE EACH

Ten for $\$ 10.90$ Improsed design. Midget type
speaker. Sturdily buigt speaker. Sturdity built. Very dine tone qualitics. Orerall di-
 cadmium plated. Heary frame, with improved balaneed armature untt. Bakelite strip with molinting lugs. fecomniended as a replacement speaker in Midget A.C.: A.C.- D.C. ; lattery Scts; for Hotel foom or other P.A. multi-
unit installations; for extenslon sjueaker on any unit installations; for extenslon speaker on any
home or auto sct. flandles about $11 / 2$ watts without blasting. D.C. resistance about 1000 ohms.

## 6 Inch Magnetic

Overall diameter $6^{\prime \prime}$. Same const
$4 E 10454$-List irice, $\$ 3.50$.
YEIO454-1/ist Price
$\$ 1.49$


Magnetic

$\left.\begin{array}{l}\text { Your Special } \\ \text { Price, Each }\end{array}\right\}$
Ten for $\$ 17.90$
A highly efficient speaker that gives thore volume on cess energy ingut. Finest fidelity. Operates at neak with about 0.7 watts magnet with Extra heary marmature with balanced electricallv centered An theal speaker for original installation in battery set or for use as an extra extension speaker in sets using cynatmic sjleaker. Mounted in Walnut cabinets we sumply this speaker makes a rery
 $8 \%$ inclies. Bepth $43 / 3^{\prime \prime}$. Higid steel frame with mountins holes in outer dlameter

## Special $41 / 2^{\prime \prime}$ Dynamic

 250 Ohm Field, Voice Coil 4/'" 2 Ohms Impedance 4EIO555-IIst Price $\$ 2.50$. YOUR PRICE
EACH


Ten for $\mathbf{\$ 6 . 5 0}$
The Smallest Satisfactory Dy namie Speaker Made. Three Low resistance Hum-Bucking roice coil sulport. Low resistance hum-Bucking quality for such a small reuroducer. Extends $21 / 2$ back of baffle. Output Transformer not included Instruction sheet explalns how to add this sueaker a existing , circuits "sithout use of transformer, as speaker. Low resistance field coil nermits substi tution of ficld in place of first filter choke in majorlty of recelvers.

## 41/2" Twin Dynamics

4EIO556-List I'rice, $\$ 5.00$.
YOUR PRICE, "Twin-Sweakers".... $\$ 1.35$
Name speakers sunplied as Non-Resonant Twins with ontion of connecting flelds for 125 or 500 ohm 50 to 100 milliampere circuit and the ontion of connecting the volce roils for 1 or 4 ohm impedance clreuit. Especially recommended for use with small P.A. Systems where small speakers must be emdistortion and the large regular speakers used at a distance from the micronhone. Handle 3 watts We recrmmend our 500 ohm line to 4 ohm solice coll matching transtormer to couple these speakers
birat wher larser dynamic units.


Fleld eoll current obtalned by mugglng in cord direct to 110 Volt A.C. line.
ringle 4j


## Speaker

 A new deston. Handles rattles or distortion. lias caparity as is y nambling Speaker of st a the cone size. Requires no tield Dynamics where field cur rent is not available. Es pecially suitable for P.A. extenslons. replacement of magnetle speakers. or as second speaker in Console sets. Dhe cast zine hody securely anchored to pedance coll and castacity units mounted on trame prevents D.i. from entering impedanceWith Impedance Capacity Unit
 Without Impedance Capacity Unit those listed ahove except whthout impedance coll and capracity unlt. Approx. 1000 ohms impedance.
SEDiame
4EIO47I
YOUR


Best Midget Dynamic Chassis


Diameter 5 Inches IIdget, and it'-DC sets Fhlelliy of tone surpassed only by the tinest of Strong rugged construetion. Rust proof alum-
inum finish. Moisture num finish. Moisture proof cone. 16 mounting holes in flange of cone hollsing.
brarket
ters is part of fleld hous-
cen-
Ing, enabling rigid attachment to chassis. New plupe in feature provides best and easiest assembly
and test. Fleld lies., 3000 olims. Pdf., $7 / 2$ watts Volce coll Ila., \%e". Imb, 4.25 ohms, Iwr, WITH INPUT TRANSFORMER FOR

 A Special Value
LEIO470-
List. $\$ 9.50$.
Your Price. Each.

TEN FOR \$18.00 Full Size Genuine B es Dynamie Speaker Chassis. One-picce moulded e one. Diaphragm type splder holds colce coll in exact center regardless of expansion or
contrartion of cone. Rustcontrartion of cone. RustStrong, rusged construction. Field resistance 2500 ohms. Output transformer for single type 47, 2A5, PZ, PZH, 79, 89, 33. i8, Core diameter ss" I'ower handling capacliy core diameter Power distipation of filds 5 watts.
walls.
Speaker Centering Shims
 3E7970-

39
Your Price, Per Kit..... S2,
For tentering and adjusting cone
in pole piece of spoaker, Insure in pole plece of sposker. Insure
simple, positive,-spacing and censimple, positive, Spacing and cen-
tering for Volce Colls and Armatures. Makes Speaker Repairs and reglacements easier to handle. Kit includes four of each size
shims in following thlcknesses-shims in following thicknessesof very flexinie cellulold. Each Shtms are made of vert flexihle cellulold. Each slze shim is distinctively colored to denote its thickness. Packed in a convenient ease

## Replacement Speaker Field Coils

the orloinals. All coils are double dipped in a soetial impregnating solution and will withstand extreme molsture and thanges of temperature. Resistance guaranteed acturate.

Field Coils Supplied for All Speakers We can supply any field coil not included in our listing. When ordering Special Field colls please send us the following informaside diameter of coll (3) Wiathe through center of coll, (2) Outof coll. If you cannot of wire used in the windings of the coils.) (5) If possible give us the name and model number of both speaker and receiver.

| Set or Sumber | $\begin{aligned} & \text { Fiedi } \\ & \text { Ohnis } \end{aligned}$ | Stock Number | $\begin{aligned} & \mathbf{Y o u r} \\ & \text { Price } \end{aligned}$ | Set or Speaker | Ficld Ohms | Stock Number | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ATWATER KENT 46.4 |  |  |  | MAJESTIC (Continued) (11C 201 203, 204 |  |  |  |
| Late 5.3. 55 F . 5.5 FC | 1,700 | $3 E 7911$ | \$2.50 | $\text { C11C } 201,203,204$ | 1,430 | $3 E 7940$ | 2.20 |
| 55, 55 $0^{\circ}$, 60, 600; | 1.100 | $3 E 7912$ | 2.50 | G13, 253, 254, 211, 214 | - 570 | $3 E 7933$ | 1.55 |
| 61, 619, 66 | 7 ( O ) | $3 E 7913$ | 2.50 | G4, Models 130 | 7,650 | 3 E7941 | 4.41 |
| BRUNSWICK MODEL |  |  |  | 233, 61, 72, 14, 3 | 7,650 | 3E7942 | 3.52 |
| D11/ | 2.500 | $3 E 7914$ | 2.10 |  |  |  |  |
| 16 | 2,509 | $3 E 7915$ | 2.35 | Gif, Models 51, 52, 131 | 1.0100 | 3E7943 | 3.55 |
| 15 | 600 | $3 E 7916$ | 3.53 | G7. Model 21 | 1.250 | 3E7944 | 4.41 |
| S14. S21 | 5.000 | 3 E7917 | 4.70 | Cx. Model 22 | 1,250 | 3E7945 | 4.41 4.41 |
| CROSLEY MODEL M45 | 1,500 |  | $2.59$ |  | 1.250 300 | $3 E 7946$ $3 E 7947$ | 4.41 1.95 |
| 269 (3uddy Boy') | $10,(\mathrm{H} 4)$ | उE7919 | $2.35$ | G14. Model 351 | 750 | 3E7948 | 3.88 |
| EDISON R 7 | 4,500 | $3 E 7920$ | 3.25 | C141\%, Model 353 | 5.50 | $3 E 7949$ | 3.88 |
| JENSEN M |  | $3 E 7922$ | 2.57 | G14C, Model 223 | 5.350 | $3 E 7950$ $3 E 7951$ | 3.88 3.53 3.88 |
| IJTHK | 2,500 | 3 E7922 | 2.75 | G1.1:, Motel 221 | 5,350 | 3E7952 | 3.88 |
| ()9-I) 15 | 1.000 | 3 E7923 | 1.75 | G14F*. Model 307 | 1.040 | 3 E7953 | 3.88 |
| 1)9-[15 | 1, 50, | 3 E7924 | 1.65 | Motels G134, 215 | 570 | 3E7954 | 1.94 |
| 1)9-1015 | 2,500 | $\begin{aligned} & 3 E 7925 \\ & 3 E 7926 \end{aligned}$ | 1.47 | OXFORD (Medtum) | 4,010) | 3E7955 | 2.75 |
| LYRIC No. 9 | 5,000 | $3 E 7927$ | 3.50 | HILCO Model 20 | 3.300 | $3 E 7956$ | 1.15 |
|  |  |  |  | 86, 87, 65, 95, 76, 96, 77 | 2.000 | $3 E 7957$ | 1.74 |
| 9* (Mfrllum) | 7.500 | 3E7929 | 2.85 | CA | 7,000 | $3 E 7958$ | 2.25 |
|  |  |  |  | 106 | 6.0010 | $3 E 7959$ | 2.45 |
|  | 3,100 | 3E7930 | 3.25 | ROLA Model Fit | 3.000 | $3 E 7960$ | 1.75 |
| 91,92, 181 | 2,730 | 3E7931 | 3.25 | STEWART WARNER |  |  |  |
| G3, 90, 91, |  |  |  | Serles 9,50. |  |  |  |
| 93. 101. 102, 103 | 2.730 | $3 E 7932$ | 3.30 | Morels 200A, 45A, 565.A <br> Model $\mathrm{H2} 22$ | $\begin{aligned} & 10,0100 \\ & 10,000 \end{aligned}$ | $\begin{aligned} & 3 E 7961 \\ & 3 E 7962 \end{aligned}$ | $\begin{aligned} & 3.95 \\ & 2.39 \end{aligned}$ |
| $\begin{aligned} & \text { G! } \\ & \text { G1013, } 151 . \end{aligned}$ | 1,250 | 3 E7934 | 4.41 |  |  |  |  |
| $153.154,155,156$ | 1,750 | 3E7935 | 2.20 | Model Iftte Ciant |  |  |  |
| G10(, 351 | 1200 | $3 E 7936$ | 1.50 | (Isdoyne) | 2,500 | $3 E 7964$ | 1.95 |
| (:101),56, 57. 58 | 1.850 | $3 E 7937$ $3 E 7938$ | 2.00 1.88 | VICTOR HES $2-45$ | 3.0 | $3 E 7965$ | 1.95 |
| G111i, 251, 253. 254 | 5\%0 | 3E7939 | 1.94 | VICTOR REA2-t5 | 3,0 | 3 C 7665 | 1.95 |

## Magnavox Automobile Speaker <br> Models 150: - 154. New hine qualsy ratiteal clesign are the outstanding features of the new, improved Magnavox   auto spenkers. <br> SINGLE STUD MOUNTING <br> 

easy. Spraker can be mounted on dagh-hoard or
bulkhead. Round hatle can $1 \mathrm{~s} 83 / 4$ in danmeter and bulkhead. Round bathe can is $83_{4}$ " in dianueter and In dentll. Finshed in hlack enamel. Situd proType 150 A with $61 / 2^{\prime \prime}$ unit and type 154 A with $8^{\prime \prime}$ unit. 6 volt. With 4 ohm neid coll.
When ordering specify type of tube or tubes speaker is for and whether connected in single or push-pull. The correct output transformer will be


4E10625Type 1.50 A ( $\mathrm{i}^{2} / 2 "$ model YOUR $\$ 4.21$

4E10626Tspe 1 ITh ${ }^{8}{ }^{8}$ " model. | s.oun |
| :--- |
| phate |
| phice |

## Magnetic Speaker Coils

 for RCA R-100, 30, and Western Electric 540AWMagnetic Speakers 3E7968-

35C Exactly duplleate the original coils thysically and electric-
ally. Total Resistance 1500 ally. Total Resistance 1500
ohms. Size $21 / 32^{\prime \prime}$ Outside Thickness with sio Hole Figure 52, Page 43. Gerns bach Manual

For RCA R-100A, 100B and 103
D.C. resistance 1200 ohms. size of each mil. $11 / 4$ outside diameter. $1 / 4 / 4$ hole diameter. ${ }^{1 / 4}$ thick.
 same size coil.
$3 E 7969 \rightarrow$
YOUR PRICE, PER PAIR


Paper Rings For Speaker
Mounting
3E7971-
Your Price. Per Set 254
An assortment consisting of following sizes: $5 \%$, ${ }^{\circ}$ $8^{\prime \prime} 3^{\prime \prime}$, $10^{\prime \prime} \cdot 11^{\prime \prime} 12^{\prime \prime}$ ani great time sarer and con-
yenience for
in mounting
An absolute neces

## Radio Repair Cement



Waterproof. Makes extra strong durablc joins Ready for use. Generous slze metal can will larit for months. Brush and can of thinner Included. Thinner is also useful for
and remoring roice colls

##  sateranatis



For Majestic Speakers G1, G2 0 ne plece moulded. seamless fibre. The
original part in these original part in these
Speakers is of heavy paper and does not brovide reproduction at all comparatle with ke the change and note the mprovent 4EJI560-For G1 4EII56I-For G2 YOUR PRICE EACH

94F

## For Atwater Kent

43, 46, 55, 60, 66, 67, 74 Rquals or s

original cone | $4 E$ | $500-P a r t$ | 15142 |
| :--- | :--- | :--- |
| $4 E$ | $1501-P a r t$ | 143 | YOUR

PRICE ..... S1. 19


Improved DeLuxe VICTOR Cone For RE32, 45, 57 , 75
Made of reinforced one Diere fabric. costed with
metallyed lacquer. is double reinforcei original. Bakelite roice coll bobbin with 9 layers of precision wound wire 4EII618YEUR $618-$ YOUR PRICE, EACH

894

FOR RADIOLA 106, R80, R82, R86, R35. R39, RE57, R84, R50, R55.
RAE 59 RAE79. A2774B R410C, RAE S9, R47, RAE79. RAL774B, R67 RIDC, ${ }_{9.54,}{ }_{9 \cdot 18,}$ R.26. 9.56 , 12.12 . WEST: ING'HOUSE WR4, WR5. WR6, WRT RCA VICTOR RES7, 34, 35. GRAY. BAR GB678, GB700. GB ${ }^{\text {G }} 770$. GB900. GB100. GEN. ELEC. J80. J85. J76.

4EJI526-
YOUR
PRICE.
$\$ 1.10$


## For Philco

 4EII583-F Models 87. 65. YOU 4 . 689 $4 E 11584-\bar{F}$ 70 Todels 90, 3, 7. 20. ${ }^{21}$.For Radiola 104, 105
Feplaces the out-of-date senmed paner tyne cones used originally in the 4E11585-
YOUR
PRICE
$\$ 1.19$

## For Brunswlek

S81, S82, 81, 82, 14, 21,
31, S14, S21, S31
4EIISIG-
YOUR PRICE
.... 51.42

\begin{tabular}{|c|c|c|c|}
\hline Set or Speaker Model or Part Number \& \[
\underset{\substack{\text { Dlam. } \\ \text { in. }}}{ }
\] \& \[
\left|\begin{array}{c}
\text { Stoek } \\
\text { Nunber }
\end{array}\right|
\] \& Your Prlce \\
\hline \begin{tabular}{l}
AIRLINE 62-70 \\
Uuth large Cub No. 3 \\
332-W (Little (itint No.1)
\end{tabular} \& 8 \& \[
\begin{array}{|c|c|c|}
4 \\
4 E 11507
\end{array}
\] \& \[
\begin{gathered}
\$ 1.23 \\
1.23
\end{gathered}
\] \\
\hline \begin{tabular}{l}
ATWATER KENT 43, 46, 55. 60. 66, 67. 64 (Part ㅅo. 15:42) \\
43. 46, 55, ti0, 66. 67, i4 \\
(Part No. 14374) \\
80, 82, 84, 558, 627.87. 30, 92, Farly 83. 85 (Part No. 19465)
\end{tabular} \& \[
\begin{aligned}
\& 10 \% \\
\& 103 / \\
\& 83
\end{aligned}
\] \& 4E11500 4 [11501 \& 51.19
1.19

.98 <br>

\hline | H2, L. F, l' ${ }^{H}$ |
| :--- |
| 77. 88, 89. 94, 96, 469. |
| Late 83. 85. (1't, 20737) | \& 103

103 \& 4E11503 \& 1.23
1.23 <br>

\hline $$
\begin{aligned}
& \text { 80SCH } 58,48 \\
& 31.73 .20 \mathrm{~J}, 48 \\
& 5 \mathrm{~A}, 39 \mathrm{~A}
\end{aligned}
$$ \& ${ }^{4} 93.8$ \& \[

$$
\begin{aligned}
& \hline 4 E 11510 \\
& 4 E E 1511 \\
& 4 E 11512
\end{aligned}
$$

\] \& | 1.23 |
| ---: |
| 1.35 |
| 1.35 |
| 1.10 | <br>

\hline BRUNSWICK 10 \& $8{ }^{3} 8$ \& $4 E 11514$ \& 51.23 <br>
\hline 1), \& \& $4 E 11516$ \& 1.23 <br>
\hline 1)11, 12. 16, 18, 33 \& 12 \& $4 E 1517$ \& 1.42 <br>
\hline E17, 24: 25. \& 12 \& 4 E11518 \& 1.42 <br>

\hline $$
\begin{aligned}
& 881,882,81,82,14 \\
& 21,31,514,821,531
\end{aligned}
$$

$$
15,22,32,42
$$ \& 12 \& \[

\left\lvert\, $$
\begin{aligned}
& 4 \\
& 4 \\
& 4 \\
& 4
\end{aligned}
$$ \mathrm{E} 11515050\right.
\] \& 1.42 <br>

\hline | CLARION 60. 80. K1. 85. |
| :--- |
| $90,91,100,120,25-60$ |
| 220, 260, 25-260) | \& $8^{88}$ \& 4E11514 \& \$1.22 <br>

\hline CROSLEY 262. 42S, 40s. \& 9 \& 4E11520 \& \$1.19 <br>
\hline 124 ( (tah Cub No. 2) \& 8 \& $4 E 11509$ \& 1.41 <br>
\hline 124 (Jensen D-9) \& 1115 \& 4E11521 \& 1.34
1.34 <br>
\hline  \& 73. \& 4 C 11523 \& 1.34 <br>
\hline 135 (Maqnavox 154) \& 8 \& 4E11524 \& 1.23 <br>
\hline 249 (Maknavox 138) \& $8{ }^{12}$ \& 4E11525 \& 1.23 <br>
\hline FADA shallo \& $8^{1 / 2}$ \& 4E11626 \& \$1.34 <br>

\hline | Deep (Mitodeis 20, 32, 25. |
| :--- |
| 15. 1513. 15 C ) | \& 812 \& 4E11627 \& 1.34 <br>

\hline $$
\mathrm{KUU}_{44,46,4 i}, 412,42,422 \text {. }
$$ \& 101/2 \& $4 E 11628$ \& 1.42 <br>

\hline  \& $10^{10 / 4}$ \& $$
\begin{aligned}
& 4 E 11526 \\
& 4 E 11527
\end{aligned}
$$ \& \$1.23 1.23 <br>

\hline | GENERAL MOTORS |
| :--- |
| "Iittle General (Rola K) | \& 74 \& 4E11528 \& 1.27 <br>

\hline GRAYBAR GB3G7. GB300. GB770, GB90n. (R(A) 10f) \& 10\% ${ }^{\prime \prime}$ \& 4511526 \& 51.23 <br>
\hline GH8. GB989. GB9. GT' GC'13, GC14, GT8. (RCA $48)$ \& 10 \& 4E11527 \& 1.23 <br>
\hline ISOOYNE Utah Iattle Glant No.I Inslde spider \& 8 \& 4E11507 \& 1.23 <br>
\hline JENSEN D4. D5 \& \& \& <br>

\hline | D7. D8 |
| :--- |
| D9 (Outalde Snlder) | \& 1111 \& \[

$$
\begin{aligned}
& 4 E 11531 \\
& 4 E 11532
\end{aligned}
$$
\] \& 1.42

1.32 <br>
\hline D9 (Inside Splder) \& 114 \& 4E11521 \& 1.32 <br>
\hline D11 \& 815 \& $4 E 11533$ \& 1.18 <br>
\hline D15 \& $81 /$ \&  \& 1.10 <br>
\hline D16 \& 81/3 \& 4E11534 \& 1.10 <br>
\hline AUDITORIUM DA5. DAB. DA7. \& \& $4 E 11535$ \& 2.70 <br>
\hline J1. J 2 \& 61/2 \& $4 E 11536$ \& . 98 <br>
\hline 343 \& 5 \& $4 E 11537$ \& . 98 <br>
\hline ${ }^{\text {D } 19}$ \& 10 \& 4E11538 \& 11.34 <br>
\hline D10 \& 8 \& 4E11539 \& 1.10
1.18 <br>
\hline D12. D14 \& 83 \& 4 E 11541 \& 1.18 <br>
\hline PM1, ${ }_{\text {P1 }}$ \& 8 \& CE11542 \& 1.10
.98 <br>
\hline
\end{tabular}

| Set or Slueaker Mode! or Part Number | $\underset{\substack{\text { Diann. } \\ \ln .}}{ }$ | $\left\|\begin{array}{c} \text { Stork } \\ \text { Number } \end{array}\right\|$ | Your Price | Set or Speaker Model or Part Number | $\begin{gathered} 13 \operatorname{lam}, \\ \text { In. } \end{gathered}$ | Ntork Number | $\begin{aligned} & \text { Your } \\ & \text { Prit } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LYRIC Model No. 9 I) | $10^{4}$ | 4 E11545 | 51.23 | RCA (Continued) |  |  |  |
| Model A-7 (Jensen D15 | 84 | $4 E 11529$ | 1.10 | 12CA 134.28 | 5 | 4 E11588 | 50.61 |
| Model 10 | 1 | $4 E 1554$ | 1.23 | R-7R, RAFR4, CRD9 ac, |  | E1588 |  |
| Mrodel ${ }^{\text {S-6 }}$ (liola F-6) | $10^{715}$ | 4 E11547 | 1.34 |  | 10 | $4 E 11589$ | 1.10 |
| Model zx Model Br | 10.3 | 4E11548 | 1.23 1.23 | R71. R-718, R-24. NWA3 | 73 | $4 E 11590$ | 98 |
|  |  |  |  | R73, R75, RTo | 10 | $4 E 11591$ | 1.10 |
| 130 Serles, Model 133 | 8 | $\begin{aligned} & \text { 4E11550 } \\ & \text { 4E1155i } \end{aligned}$ | \$1.32 | ROLA Fis |  | $4 E 11593$ |  |
| 130 siries. M1ondel 138 | 81 | $4 \mathrm{E1525}$ | 1.22 | Series F6 | 8 | 4E11594 | 1.10 1.17 |
| 140 Series, Model 142 | $\mathrm{O}^{12}$ | 4E11553 | 1.22 | ( Ohid Model 'JJ").D?0. |  |  |  |
| Model 143 | 111 | 4E11554 | 1.34 | Series ${ }^{\text {- }} \mathrm{K}$ " | 9 | 4E11595 | 1.22 |
| Model 144 | $7_{6}^{11}$ | $4 E 1522$ | 1.18 |  |  |  |  |
| Morde! 154 | ¢ 8 | CE11556 | 1.10 | PLEX (N.E.) | 6 | $4 E 11630$ | 50.98 |
| Deep | 115 | $4 E 11559$ | 1.42 | SPARTON |  |  |  |
|  | B | (E11558) | 1.10 | 737, $931,89 \mathrm{~A}, 99.10$ |  |  |  |
| MAJESTIC |  |  |  | 591, 503, $740,750,930$ | 9 | 4 E 11550 |  |
| Gi-Models 7!, 72 | 9 | 4E11560 | 50.94 | 737, 931. (Jensen Di ${ }^{\text {a }}$ ) | 114 | CE1153 | 1.34 |
| G2-Models 71, 72, 41, |  |  |  | fiof sierles (Jensen 1)15) | 8 | 4E11529 | 1.10 |
| 92, 181 | $\square$ | 4E11561 | . 94 | 600) Series (Maknivox 138) | 73 | AE11525 | 1.10 |
| G3 Mtotels 90, 91, 93. |  |  |  | Model 410 (Rola K) | 73 | 4E11596 | 1.27 |
| C.4-Model | 10 | $4 E 11563$ | 98 | STEINITE All Models | 10 | $4 E 11597$ | 1.42 |
| G5-Alodels 131. |  |  |  | STEWART-WARNER |  |  |  |
| 233.61, 62.163 | 12 | 4E11564 | 1.42 | 200A. 445A. 565 A. (050) |  |  |  |
| G6-Models 51. 52, 53 | 10 | 4 E11565 | 1.22 | Series) (2 Polnt spider) | 9 | $4 E 11598$ | \$1.34 |
| G7- Model 21 | 10 | 4E11566 | 1.22 | 445 A (3 Polnt splder) | 9 | 4E11599 | 1.34 |
| C8-Model 22 | 1:2 | 4E11567 | 1.42 | 104 A |  | CE11600 | 1.22 |
| (99- Modm 23 | 12 | 4 E 11568 | 1.42 | 1R202 | $81 /$ | 4E11601 | 1.22 |
| $\text { G10H-Models } 151,153 .$ | -1/2 | 4 E1156 | . 98 | U.S. APEX GLORITONE <br> 30. 31 (I'tah stadium) |  |  |  |
| (i)1-M1odels 251, 253. |  | - |  |  | 1173 | CE11508 | \$1.42 |
| 254, 201, 203, 204 | 10 | 4E11570 | 1.18 | 20, Speakrr 2714 |  | $4 E 11602$ | 1.10 |
| G13-Models $211.253 .353,215$ |  |  |  | 26. Npeaker 2286 | 8.5 | 4E11603 | . 98 |
| 211. 214.353, | 12 | $4 E 11571$ | 1.10 | 26A, Speaker 2467 |  | 4E11604 | . 98 |
| G14-Models 351. 353, |  |  |  | 26 P , Suenker 2925 | 8 | CE11606 | 1.10 |
| 223, 221.307 | 12 | $4 E 11572$ | . 98 | $26 P$ speaker 3261 | 8 | $4 E 11607$ | 1.10 |
|  |  |  |  | 27. Nieaker 1936 | 8 8 ${ }^{8}$ | 4E1608 | . 98 |
| G22, Motele 336.344. | 10 | 4 E | . 98 | 8A. Nuaker 2801 |  | CE11609 | 1.10 |
| 3н3. 393 | 12 | 4 E 11574 | . 98 | 90A. Speaker 3251 | 8 | 4E11611 | 1.22 1.10 |
| G25.A-Morlel 381 | 5 | $4 E 11515$ | . 68 | Utah Cuh |  | 3 |  |
| G26A-Models 371.373 | 5 | 4 E1157 | . 73 | Cub (3 Point Spider) | 6 | 4E11613 | 1.10 |
| $411 \mathrm{~A}, 113 \mathrm{~A}$ | 5 | 4E11577 | . 71 | Larpe Cub No. 1 (Inalde | 73 | $4 E 11614$ | 1.22 |
| D6.5-Model 331 (Ihest) | 614 | 4 E 11555 | .95 | Large Cub No. 2 (2 Point | 7\% | 4E12614 | 1.22 |
| D-5 M1odets 371, 373 | 5 | $4 E 11578$ | . 81 | Epider) | 7*16 | 4E11509 | 1.22 |
| (iJ-15B-Model 311 | 8 | 4 E 11534 | 1.10 | Large Cub No. 3 (3 Polnt |  |  |  |
| NEWCOMB-HAWLEY |  |  |  | Splicier) | 73 | 4E115 | 1.22 |
| NH9 | 9 | $4 \mathrm{E11550}$ | 51.34 | Splder) (Imody ne ) | 8 | 4E11507 | 1.07 |
| OXFORD 2 Polnt Splder (Joy Kelsey) 2Pt Splder | ${ }^{81} 10$ | $4 E 11579$ | \$1.18 | Little Glant No. 2 ( 2 Polnt |  |  |  |
| 2 Point Splder | 10 | CE11581 | 1.22 | Litile Gtant No. 3 ( 3 Point | 8 | 4E1161 | 1.22 |
| 3 Point Spider | 10 | 4 E 11632 | 1.34 | (Splder) | 8 | $4 E 11506$ | 1.22 |
| 3 Point Spider | 12 | 4E11582 | 1.34 | A100 | 9 | 4E11617 | 1.34 |
| PHILCO 87. 65, 95, 76. |  |  |  | Stathm (66A-66B) | 11 | 4E11508 | 1.42 |
| 98. 77, 40, 111, 90, 112 | 10 | $4 E 11583$ $4 E 11584$ | \$0.68 | VICTOR RE32. 45, 75 |  | 4E11618 |  |
| 90. 3. 7. 20. 21. 70 | 8 | 4E11584 | . 61 | RE57, 34, 35 (RCA106) | 104 | $4 E 11526$ | 1.22 |
| RCA 104. 105 | 8 | 4E11585 | 51.19 | WESTINGHOUSE |  |  |  |
| 106. R80, R82. R86. 1229 |  |  |  | WR4, WRS. WR6. WR7 | $10^{1}$ | 4E11526 | \$1.22 |
|  |  |  |  | WR10. WR12. WR15 |  | $4 E 11527$ | 1.22 |
| AZ774B. $\mathrm{R} 47 . \mathrm{R} 41 \mathrm{DC}$, |  |  |  | WRIGHT-DECOS No. 107 |  |  |  |
|  |  |  |  | No. 107 | 12 | 4E1163 | 51.42 |
| 7-26. 9-56. 12-15 | 104 | 4E11526 | 1.10 | NITH |  |  |  |
| 48, R7. R7A. R8. R10. |  |  |  | $52.72 \text { (Oxford) }$ $52,72,(\mathrm{LI} 18)$ | 12 | 4E11620 | 51.42 |
| R11, R12. R15, R18, R19. |  |  |  | (sxmington) | 1215 | 4E11621 | 1.42 |
| R20. R23. R42. R14. RaF |  |  |  | 52. 72, (Marnavox) | 113 | $4 E 11622$ | 1.42 |
| RE17. H29. R43ED RAE 26 RF73. CF29 R6 |  |  |  | 52. 72, (Farrand) | 12 | 4E11623 | 1.42 |
| 26. REF3. REL6. REi6A. |  |  |  | 92 (Jensen D9) | 11/6 | $4 E 11521$ | 1.42 |
| Photophone ${ }^{\text {R2, REIGA }}$ | 1434 | ${ }_{4}{ }^{4} \mathrm{E} 11586$ | 1.88 | ${ }^{103}$ Zenetter ${ }^{\text {(Peter }}$ Smith) | 12 | $4 E 11624$ | 1.42 |
| Photophone | 7\% | 4E11587 | 1.10 | A, B, C, D | 81/3 | CE11507 <br> E115S1 | 1.22 1.22 |

## EXACT DUPLICATE

THEY FIT！Mounting holes，lugs．voltazes and eversthing exactly like the original．Hetter inalu－ lation and higher safety factor than the original hut otherwise the same．If the transformer you de． sire to replace is not the one originally supplied whth set，send us on a separate sheet with your order，make．molel，and styte mountins employed and we will sumply the proper replarement．The leading transformer factories of the country are to－ cated only a few blocks from out plant and are arepared to duplicate almost any transformer you lesire，very promptly

REPLACEMENTS

## Complete Stock—Quick Shipments <br> Additional Models

We are monstantly adding to our stork additlonal models of Reblacement I＇ower Transformers．If the trinsformer you redulire is not cunted here，Write ceiver and the number and type of tubes used． We will prombtly send you a low guotation on the job and suarantee an exact replacement．

## weight 5 liss． List l＇rice．$\$ 5.00$. <br>  Niancor Type No．P－106 <br> 5 lths．List．\＄6．10． 3E3654－YOUR PRICE <br> 

Airline 26－W and Apex 26－W

Stancor Type No．P－1405．Shipping 3E3623－YOUR PRICE

## \＄2，94

## ALL－AMERICAN MOHAWK

## Atwater－Kent Models 70，72，74， 76

Chassis Models L1，L2，H1，H2P

| BALKEIT | 3 | 3E3664 | P－1149 | \＄4．00 | \＄2．35 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| BELMONT <br> 41 －serles 40，47－serles 10 <br> 51 －serles 50 | ${ }_{5}^{3}$ | 3E3665 3E3666 |  | 4.25 5.00 | 2.50 2.94 |
| 51 A －nerier 50A． i）13－serles 50h | 4 | 3 E 3667 | P－597 | 4.50 | 2.65 |
|  | 3 6 | 3E3669 3E3668 | $\underset{\mathbf{P}-1260}{ }$ | 4.50 | 2.65 3.97 |
| $\operatorname{BOSCH}_{23,825}$ | 10 | 3E3671 | P－8．59 | 7.50 | 4.41 |
| BREMER－TULLY <br> 81．82，S－81，太－8： | 11 | 3E3674 | P－1112 | 8.25 | 4.85 |
| BRUNSWICK <br> N－14，N－21，S－31，S－81． |  |  |  |  |  |
| $10-82,14,21,31,81,82$ | 11 5 | 3E3674 3E3682 | P－1112 | 8.25 4.40 | 4.85 2.59 |
| $\mathrm{D}, 3 \mathrm{~B}-\mathrm{D}, 33 \mathrm{~A}-\mathrm{D} \text { (rhassis) }$ | 5 | 3E3680 | $12-1136$ | 6.50 | 3.82 |
| $\text { 3-NC及, } 5-\mathrm{NC8}$ | 8 | $3 E 3677$ $3 E 3678$ | ${ }_{\text {P－7915 }}^{\text {P－7915 }}$ | 8.50 7.75 | 5.00 4.56 |

Atwater－Kent<br>Models 37，37C， 38



| RADIO MOHPL． | $\begin{aligned} & \text { Shpg. } \\ & \text { W! } \end{aligned}$ | Hadolek Stock No | stancor <br> Type No． | $\begin{aligned} & \text { LIst } \\ & \text { Price } \end{aligned}$ | Your Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| AIRLINE（Mont．Ward） <br> A $\mathrm{F}=10$ | 8 | 3 E 3629 | $\mathrm{P}-1478$ | 89.25 | \＄5．44 |
| 11．12，16，62－29 | 5 | 3E3680 | $\mathrm{P}-1136$ | 6.50 | 3.82 |
| 20－11， $62-520$ | 3 | 3E3620 | P－1070 | 4.15 | 2.44 |
| 26－1 $32-6,62-030,62-232$ | $\frac{3}{7}$ | 3E3621 3E3624 | ${ }^{\mathrm{P}-1358} \mathrm{P}-1291$ | 5.00 6.25 | 2.94 <br> 3.67 |
| 26 W | 5 | 3 E 3623 | P－1405 | 5.00 | 2.94 |
| 60 | 6 | 3E3625 | P－1404 | 7.018 | 4.12 |
| 1238 | ti | 3E3628 | $\mathrm{P}-149$ | $\therefore 00$ | 4.12 |
| 135.5 .195 .5 | 7 | 3E3630 | P－1016 | 7.25 | 4.26 |
| 62－21，62－22， $62-30$ | 7 | $3 E 3626$ | $\mathrm{P}-14{ }^{\text {P }}$ | 7.55 | 4.56 |
| 62－68 | 7 | $3 E 3631$ | $\mathrm{P}^{3}-14485$ | 7.50 | 4.41 |
| 62－010 | 7 | 3E3627 | P－1438 | 7.85 | 4.62 |

\begin{tabular}{|c|c|c|c|c|c|}
\hline RADIO MODHEL \& Shpe
Wt． \& Radolek
Stock No． \& $$
\begin{aligned}
& \text { stancor } \\
& \text { Tyue No. }
\end{aligned}
$$ \& $$
\begin{aligned}
& \text { Plist } \\
& \text { Price }
\end{aligned}
$$ \& $$
\begin{aligned}
& \text { Your } \\
& \text { Price }
\end{aligned}
$$ <br>
\hline \multicolumn{6}{|l|}{CLARION} <br>
\hline AC－40 \& 4 \& 3 E 3682 \& P－1499 \& \＄4．40 \& 52.59 <br>
\hline $\mathrm{AC}-60$－${ }^{\text {a }}$－ 70 \& 7 \& 3E3627

E 3688 \& P－1438
$\cdots$ \& 7.8 .5
8.45 \& 4.61 <br>

\hline \multirow[t]{2}{*}{$$
\mathrm{AC}^{-80, A C-61, ~ A C-84,}
$$} \& 7 \& 3E3688 \& P－1429 \& 8.45 \& 4.97 <br>

\hline \& 5 \& 3E3683 \& P－1928 \& 5.00 \& 2.94 <br>
\hline AC－90．AC－90－A，AC－91 \& 8 \& 3 E 3689 \& P－1165 \& 6.25 \& 3.67 <br>
\hline AC－100 \& 4 \& 3E3610 \& $\mathrm{P}-15.58$ \& 4.40 \& 2.59 <br>
\hline A $\mathrm{C}-160$ \& 8 \& 3E3611 \& P－1974 \& 6.25 \& 3.67 <br>
\hline A（ -266 \& 8 \& 3E3612 \& P－1494 \& 5．65） \& 3.32 <br>
\hline AC－280 \& 9 \& 3E3613 \& P－1927 \& 6.25 \& 3.67 <br>
\hline A（ -3 －3（） \& 9 \& 3E3614 \& P－1915 \& 8.75 \& 5.14 <br>
\hline $\mathrm{AC}^{\text {－} 320}$ \& 5 \& 3E3615 \& P－1916 \& 3.45 \& 2.03 <br>
\hline A -3.340 \& 6 \& $3 E 3616$ \& P－187 \& 4.40 \& 2.59 <br>
\hline A $(-360$ \& 6 \& 3E3617 \& P－1861 \& 4.70 \& 2.76 <br>
\hline
\end{tabular}

Clarion A．C．90，A．C．90A，A．C． 91


－

GENERAL ELECTRIC
11－31，H－51，H－71

K－62
ㄴ－22． $\mathrm{S}-22 \mathrm{~K}, \mathrm{~s}-42$
$\mathrm{N}-22$
$\mathrm{~T}-12$
$\mathrm{~T}-12$

## POWER TRANSFORMERS

## Diagram of Connections

Fark unit is parked to an indridual earton con－ taining a planograph which jlainly designates the connerting leads．the voltages，and kires the cir－ ，When ordering，state name．monel number cether with the stork numbet and you will be assured of prompt shibment．

25 Cycle Can Be Supplied Transformers for 25 cycle current can be supplied for any Radio Motels histed at an additional cost
of tio $\%$ abore prtce quoted for 60 cyclo Trans－ formers． ranstorniers for 25 cycle current －

# EXACT DUPLICATE 



# EXACT DUPLICATE 

# POWER TRANSFORMERS 



## STANCOR Exact Duplicate AUDIOS

Replacements for All Popular Sets


ADIO MODEL
AIRLINE (Mont. Ward

|  | $\begin{aligned} & \hline \text { BRUNSWICK-10 } \\ & 14,21,31,-31 \\ & 14,21,31,5-14.8-21 . \\ & \text { \&-31, } 8-81.8-82 \end{aligned}$ |
| :---: | :---: |
|  | $\begin{aligned} & 14,21,31, \mathrm{~S}-14 . \mathrm{S}-21, \\ & 4-31,81,8.82 \\ & 15-\mathrm{B}, 15-\mathrm{DC} \\ & 32-\mathrm{DC}, 42-\mathrm{DC} \end{aligned}$ |
|  | $\begin{gathered} \hline \text { CLARION-AC-40 } \\ \text { AC-60 } \\ \text { AC- } 61,25-61 \end{gathered}$ |
|  | $\begin{array}{r} \mathrm{AC}-80, \mathrm{AC}-81, \mathrm{AC}-84, \mathrm{AC-85}, \\ \mathrm{AC}-90, \mathrm{AC}-90-\mathrm{A}, \mathrm{AC-91}, \\ 25-80,25-81,25-84,25-85, \\ 25-90 \end{array}$ |

PHILCO
3 (Transttone Chassis)
82.86 ( 86 Chasel
82. 87 (87 Chassis)

3 (Trangitone Chaskia)
70, 70-A. 270. $270-\mathrm{A}, 370$ (70 Chassls)

20, 20-A. 21, 220, 220-A
${ }^{(20}$ Chassis)
20. 20-A. $21,220.220-\mathrm{A}$
(Chasslas 40)
62. 65 (65 Chasela
62. 65 (65 Chassis)
73.
76
76 Chassis)
77. 77 - ${ }^{2}$ (77 (hnssis)

82,86 (86 Chassis)
83,87 ( 87 Chasis)
90. 90 ) $\mathrm{A}\left(90,2-245^{\prime} \mathrm{B}\right)$
92. 95 ( 95 Chassis)
96. 96-A 296, 296-A
(96 Chassis)
111 (111-A, 211. $211-\mathrm{A}$
112 i $112-\mathrm{A}, 211^{\prime}, 212-\mathrm{A}$
(i) $\left.2,2-2^{2} 45^{\prime} \mathrm{B}\right)$
30 ( 30 Ch : sk s is)
40. 41. 42 (40 Chassis)
77. 77-A ( 77 ('hassis)
82. 86 (86 Chass1s)
83. 87 ( 87 Chissis)

92., 9.5 (95 Chasssla)

96, 96-A. 296, 296-A
${ }^{96}$ Chassis)
111 1 $111-\mathrm{A}, 211,211-\mathrm{A}$
(i) 11 Chassis),
$1212,112-\mathrm{A}, 212,212-\mathrm{A}$


SPARTON 9-A.410,410-DC. 420 $420-\mathrm{DC} .600-\mathrm{A}, 610-\mathrm{A}$.
6920-A
39.49.
55, 103, 111-A, 235, 301,
 591, $593.740,750,870$,


## STANCOR Output Transformers

 are carefully wound and hlshly insulated. laminations accurate ly mado of tine silicon steel. Carofully varnished and stacked. Inshielded type. Cadmium plated mounting strips. Wire leads. Iesikned to withstand hard con-: tinuous userse; (For Class "A'
Amplification.)

## For SIngle Tubes

Core Size $5 / 8^{\prime \prime} x^{3 / 4 "}$. Dimensions: Height 2", Depth
$1 \% /{ }^{\prime \prime}$, Length overall $2^{3 / 3} \mathbf{3}^{\prime \prime}$. Hole Centers 2"

Core Size $3 / 4$ "x $^{3 / 4}$ ". Dimensions: Height 2", Depth
$1 \%$ ", Length overall $3_{18}^{5}$ ". Hole Centers $218^{\prime \prime}$.

| 3E3961List. \$3.25. |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |


| Part | $\left\|\begin{array}{c} \text { Rudc- } \\ \text { lek } \end{array}\right\|$ | $\left\lvert\, \begin{gathered} \text { Stapr } \\ \operatorname{cor} \text { No. } \end{gathered}\right.$ | I.1st | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| P. P. Input | $3 E 3954$ | A-2132 | 54.70 | \$2.76 |
| Output <br> 1st Audio | $\left\lvert\, \begin{aligned} & 3 E 3990 \\ & 3 E 3950 \\ & 3 \end{aligned}\right.$ | $A-2814$ $\mathbf{A U}-101$ | $\begin{aligned} & 1.90 \\ & 3.50 \end{aligned}$ | $\begin{aligned} & 1.12 \\ & 2.06 \end{aligned}$ |
| P. P. Input | 3E3951 | AU-102 | 4.15 | 2.44 |
| P. P. Outwut | 3E3952 | AU-103 | 3.25 | 1.91 |
| P. P. Input | 3E3991 | AU-104 | 5.15 | 3.03 |
| Output | 3E3990 | A.2814 | 1.00 | 2.12 |
| $\boldsymbol{P}$ P. P. In. Input | $3 E 3954$ $3 E 3955$ | A-2132 $A-2133$ | 4.70 4.40 | 2.76 2.88 |
|  |  |  |  |  |
| Out put | 3E3992 | A-2774 | 2.50 | 1.47 |
| P. P. Output | 3 E 3993 | A-2936 | 2.50 | 1.47 |
| P. P. Output | 3 3 3994 |  | 2.50 | 1.47 |
| Driver Trans. | 3E3995 | A-4126 |  | 1.68 |
| Output <br> P. P. Input | 3E3996 3E 3997 | A-2718 | 1.70 | 1.94 1.00 |
| $\begin{aligned} & \text { Innut-Output } \\ & \text { Assembly } \end{aligned}$ | 3E3958 | A U-100 | 7.00 | 4.12 |
| $\begin{aligned} & \text { Input-Output } \\ & \text { Assembly } \end{aligned}$ | 3E395B | AU-100 | 7.00 | 4.12 |
| Ituput | $3 E 3962$ | A-74- | 52.95 | \$1.73 |



Tubes: $71 \mathrm{~A} .45 .48 .4 .2,53$
L.ist 5175

YOUR PRICE $\ldots \ldots \ldots \ldots$

Tuhes: 33, 47, 2A5, 49, 46. 42
3E4 i 8 i-Stancor A-2313.
List. \$1.50.
Tubes: 38.89
3E4 179 -Stancor A-2347.
YOUR PRICE

3E4 886 stancor A-2201.
1.st $\$ 1.60$.
YOUR PRICE ................. 948
Tubes: $\begin{aligned} & \text { 12A, } 10,31, ~ 41 \\ & \text { 3E4 } 78 \text { Stancor } 4-2231 .\end{aligned}$. LIst. \$1.60.

3E4 182-Stancor A-2312.
LISt, \$1.60.
Tubes: 38.89
3E4 180 -Stancor A-2348. 1.lst. $\$ 1.60$. YOUR PRICE
$94 ¢$



Core Size $1^{\prime \prime \times 1 "}$. Dimensions: Height $25 /$ m" $^{\prime \prime}$,
For Push-Puit Tubes i1A, 45, 50, 2A3, 43, 59.
3E4184—Etancor tylue A.2235. List. $\mathbf{\$ 2 . 5 0}$.
YOUR PRICE
$\$ 1.47$

## STANCOR Audio Transformers

For sinkle and pushpull atages. Unmounted with cadmium plated frames and bottoon plater. To feed from type: 26. 27. 30. 37. 56. 85, 01A tubes and all tubes haying similar plate impedances. The - to tatio on any size core is for use with all types of tules listed and in addition will feed from 2A7. 2R7. 12A. 36. 57. 75. 199 tubes and others of hisher plate impedencee but which do not exceed 12 M.A. Dlate current.


## Midget Size

| Rudolek Stock No. | $\begin{aligned} & \text { Stancor } \\ & \text { Tyue No. } \end{aligned}$ | Ratio | $\begin{aligned} & \text { 1.ist } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 3 E 4170 \\ & 3 E 4171 \end{aligned}$ | $\begin{aligned} & A-64 \\ & A-64-C \end{aligned}$ | $\begin{array}{ll} \hline \text { Straight } & 4: 1 \\ P . P . \operatorname{lnp} \text { at } & 4: 1 \\ \hline \end{array}$ | $\begin{array}{r} \$ 1.30 \\ 1.40 \\ \hline \end{array}$ | 5. 76 |
|  |  |  |  |  |
| Radolek Stock No. | $\begin{aligned} & \text { Stuncor } \\ & \text { Type No. } \end{aligned}$ | Ratio | $\begin{aligned} & \text { LAst } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| 3 E 4150 | A-72 | Straight 2:1 | \$1.90 | 1.12 |
| 3E4151 | A-72-C | P.P. Injur 2:1 | 2.00 | 1.18 |
| 3E4152 | A-73 | stralsht 3:1 | 1.90 | 1.12 |
| 3E4153 | A-73-C | P.P. Input 3:1 | 2.00 | 1.18 |
| 3E4154 3E4155 | A-74 ${ }_{\text {A-74-C }}$ | Strath ${ }_{\text {Pr }}$ 4:1 | 1.90 2.00 | 1.12 1.18 |

Medium Size


| Radolek Stock No. | staficor Type No. | Ratio | $\begin{aligned} & \text { 1.1st } \\ & \text { I'rice } \end{aligned}$ | Your Price |
| :---: | :---: | :---: | :---: | :---: |
| $3 E 4156$ $3 E 4157$ | A-74- ${ }_{\text {A }}$ |  | \$2.10 | $\begin{array}{r} \$ 1.23 \\ 1.25 \end{array}$ |

 Assembly
P, P. Input
Audio
P. P. Output
P. P. Input

| 3E3971 | -2128 |  |  |
| :--- | :--- | :--- | :--- | :--- |
| 3.00 |  |  |  |


| 3E3971 | A-2128 | 3.00 | 1.76 |
| :--- | :--- | :--- | :--- |
| 3E3970 | A-73- | 3.00 | 1.76 |

 TRANSFORMERS

Philco Transformers as originally built by Thordarson for Philco. All are EXACT Replacements for Receivers specified. 50-60 Cy. AC Power Transformers for PHILCO 20, 220 Philco No. 4234 For ${ }^{2}$ ?
Tubes. 5 V. 2 C.T. 5 V. 桨 $\Delta$. C.T. T. Shpe wi 7 lbs Ma 3E4382 List. $\$ 6.00$

PHILCO No. 3400 for Model 87
For 26. 27, 45. ard 80 tubes. Pri. 115 r. Ser. 14

List, \$7.00. YOUR PRICE
$\$ 4.12$
PHILCO No. 3271 for Model 86
For 26. 27. 71A and 80 tubes. Pri. 115 V. Sec.


3E4387-TYNe T-3170.
$\$ 3.53$
PHILCO No. 3868 for Mod. 76, 77
For 24
100 Ni A.C.T., $21 / 2 \mathrm{~V}$.
100 Ma. C.T. ${ }^{7}$ pounds.
$3 E 4388-$ Type ${ }^{2}-4247$.
List, $\$ 7.00$. YOUR PRICE $\qquad$ $\$ 4.12$
PHILCO 70, 270, 470
For 24A, 27. 47, and 80 tubes. Frl. 11.5 Y . Sec. ${ }_{709}^{21 / 2}$ V. 90 Mra c.T. 7 pounds. Part No. $3 E 4389-T y P e$ T- $88: 3$.
List, $\$ 6.50$. YOUR PRICE $\$ 3.82$ PHILCONo. 3516 for Model 65
For 24A. ${ }^{27}$. 45 and 80 tuhes.
600 V . 75 Ma. C.T. 8 pounds.
3E4390-Tyne T-3i40.
List, $\$ 7.00$. YOUR PRICE
$\$ 4.12$
PHILCO Part No. 5266 50, 51, 52
For $24 \mathrm{~A},{ }^{47}$, and 80 tubes. Pri. 115 V . Nee
$\mathrm{V} .7 \mathrm{~A}, \mathrm{C} . \mathrm{T}, ~$
$5 \mathrm{~V} .2 \mathrm{~A} ., 700 \mathrm{~V} .70 \mathrm{Ma}$ C.T 3E4391-Type T-4918-A.
$\$ 2.50$
PHILCO Part No. 5362 for Model 90 Note: same tranaforners eniplosed in all Monlel 90 Receivers. Voltages are proper for all types of output tubes used in the Model 90 series. I'ri. 115

List, $\$ 7.00$, YOUR PRICE
PHILCO 90-B, 390, 490
$\$ 3.67$
PHILCO 90-8, 390,490
(Main power tran former; does not brovid
supply.) For $24 \mathrm{~A} .27,4 i$, and 80 tubes. I'ri. 115

List, \$6.25. YOUR PRICE
$\$ 3.67$
PHILCO Part No. 6672 for Model 15
 3E4394-Type T-5292.
List. $\$ 5.50$ YOUR PRICE
$\$ 3.23$
R101 P-P Input, 1 : 2 Ratio 3E4302-List. \$2.25. \$1.33
YOUR PRICE .........
Idantical in appearance to the F 100 excent that it has slightly larger triode tube to any push-pull power tubes. High tension insulation

Designed for making conventent audio renalrs. May celvers without drilling extra holes. Excellent tone. Rat lo 1 10 $31 / 2$. Nize 27/8x
$11 / 2 \times 2^{\prime \prime}$ high. Convenient solder lug cimnections.

## R-103 Universal Audio Replacement

3E4301-List, \$2.00.
YOUR PRICE
$\$ 1.18$
Employs heacter core than $\mathrm{k}-100$, resulting in better bass note response. At least an ortave greater
tone range. Hatio $1: 314$. Size $17 / 8 \mathrm{x} 2 \times 2 \%$. Same style universal mounting brackets.


## R-300 Straight Audio <br> 3E4305-List. \$4.00.

YOUR
PRICE
KR........ \$2.35
Known to custom Setbuilders as the firest Audio arailable. 1:3 ratio. Practically "straisht
line audio characteristics from 30 to 8000 characterlstits Size $^{2}$ $21 / 202 / 2 \times 3^{\prime \prime}$ high. Excellent
for use with tyne 56 or 246
stage working into a fif or nower stage.
Type T-2408 P-P Input (Matches R-300 3E4307-List, $\$ 4.00$. YOUR PRICE
The last word in quality Push-pull Audio amplifieation. Katio $1: 2.2$ Ideal for coupling ${ }^{56}$ or ${ }^{2} 7$
tube to any class "A or "A" prime P-P Amplifier. Install this Transformer in any sultable Radio

## 

Universal Push-Pull Input. Type T-3391. De-
 amplifier tubes. same whysical specilleations as T-2999 listed above.
3E4309-LIS
\$1.18

Radolek "2 A 3"' Transformers
Built by Thordarson to Radolek Specifcations.
Power Transformer
for 2 A3 Amplifier Type T-5822 Extra healy Cool Operating
under lot watt load shielded under lon watt load. Nhielded honsink. Knurkout brovited ohassis as is in breadhoard liyout, or muler chassis.
For $110-120$ rult For 110-120 vilt 50-60 rycle.

 $3 \% 4^{\prime \prime}$. Mounilige hole cen-
 $\begin{aligned} & 3 E 4350-L i s t .56 .00 . \\ & \text { YOUR } \\ & \text { PRICE }\end{aligned} . . . .$.

Push-Pull Input Transformer


Interstage Transformer Type T-5870 Couples push pult 50 into push-pull ed3 tubes.
('ompletely shielded.
insulated $8^{\prime \prime}$ coded leads. 3E4354-1ist. \$3.75.
YOUR PRICE
$\$ 2.21$
Type T-6434. sume in onen style unshlelded.
3E4357-i,st, $\$ 3.50$.
YOUR PRICE
YOUR PRICE
46
Shiflded sub pranel typue. Efficiently transfers 15 Watts from ${ }^{2}$ \& 1 I'F tubes into any speaker volce
coil combination having net load ralue of for 12 ohms. Low reslstance-not critical in coubling.
 sions and antrearance
3E4368-1.1st
YOUR PRICE $\qquad$ $\$ 1.91$
2A3 P-P Output Open Type T-5745

3E4369-List, $\$ 3.00$.
YOUR PRICE
\$1.76

## Filter Choke for 2A3 Circuit

 Shielded Type T-1700A heary brute-force type inter choke capable of
 and followine this choke.) D.C. Resistance 231 ohnns. Size $3^{\prime \prime} \times 3 \%$ "x $3^{37} / \mathbf{a}^{\prime \prime}$. Use as tirst choke
3E4349-Ltst Price, \$4.50.
YOUR PRIC:
\$2.65

## Second Position Filter Choke

Actital indurtance of 9.5 lienries (equal to old style rating of "30" It.) at 110 Ma . D.C. Resist-
 renters $3^{\prime \prime}$, standard for 2 A
3E434-List Price, $\$ 2.00$.
YOUR PRICE
\$1.18

## Microphone Transformers

T-5837; A low nriced shielded microplione Transformer. Trans-
fers sharp, clear signals from 'Mike' to grid. Designed P'riSplit primar: matches 200 ohm single or donble button microphone
YE43
YOUR
YOUR
PRICE
$\$ 1.76$
Orchestra: Shielded $1-22$ ratio tuality double but ton 'Mike" Iransformer. $50-5000$ audio frequency range. For lance bands, vocal. and general speech single or double button microphone
3E4346-T-3020. List l'rice, \$5.00. \$2.94.
YOUR PRICE YOUR PRICE
 bhume transformer. watio $1-22$. $30-7000$ audio
frequency range. will give satisfactory service on 'ymphony concerts, wide range organ, etc. For 3E4347-T-3180. List I'rice, $\$ 8.50$. YOUR PRICE

# Universal Replacement Transformers A Style and Capacity for every Receiver 

Repiace Originalis．These Transformers are Important Information．The first nur，Finest Quality．Those Transformers are intended for use where original replacements are ber of Tubes specined below mpolies for la／4 first quality，new stoek．Correctiy enpineered，eare．
for not avalable，or are priced higher than you are ampere heater Types：the second number applies fully made by skilled workmen in a fully equipled
willing to pay．From these types you can select for heater fype Tubes drawing 0.8 to a ampers．faetory．wo guarantee that they will equal or the proper model for practically any Radio Set．All Transformers are for $105-120 \mathrm{~V} .50 / 60 \mathrm{Cy}$ ．surpass any on the market in their price range．


TYPE A


TYPE B


TYPE C


TYPE D


TYPE E

Soldor lug connections on fibre Unshielded fype with 12 ＂wire Unshielded type with solder Shielded type．Hhack enam．Fitted with black japanned stribs extemink from base．somatied for horizoital mount．thbre sirips brojecthis from enclose windings．fonneetions fibility for varlous eombinat
 enameled steel shield cover．see bracket listing pake 92．cal with type $B$ ．at basv．I2＂prima：y leads．anal mounting hole centers． 3E400 Type A

YOUR PRICE．．．．．974








| lele |  |
| :---: | :---: |
| \％on 0000 | $\underset{\text { Each PRICE，S1．}}{\substack{\text { YOUR } \\ \text { E }}}$ |
|  |  |
| 50 Watt—For 4 Tubes | Shog．wt．， 3 \％lbs． |

$3 E 4070-P^{2}$
YOUR PRICE Each．
$\$ 1.40$


Types $B$ and $C$
$3 E 4023-$ B．＂－Leads． $3 E 4023-" B "$－Leads．
$3 E 4038$－＂C＂二Lugs． YOUR Phice．\＄1． 30

wit．： 3 liss．



| $\begin{aligned} & \text { 3E } \\ & \text { Eat } \end{aligned}$ |
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| Ize |
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$3 E 407$ Type E Each
Slize：2 $27{ }^{\prime \prime}$＂ 3 万＂ Min．Mtg．Centers 1 in $^{\prime \prime}$ hlye．wt．， $3^{1 / 2}$ lus．

3E407Type E
YOUR PRICE Each
\＄1．85
Min．Mta．Centers 1 发＂д－ 1 亲＂．Shyk．wt．， 5 lbs．

3F407 Type E
3E4051／
YOUR PRICE， 82.30
Earh．．．．．．．．．．．
Nize： $31 / y^{\prime \prime} \times 332^{\prime \prime} 141 /{ }^{\prime \prime}$ high．
YOUR
Each．
\＄2．10
Size：2is＂$\times 33^{\prime \prime} \times 3$ 名＂high Mitg．Centers
shog．wi． $41 / 2$
lus． Min＂，Mitg．Centers ing．wis． 5


3E407Type E


1 H ＂．Shpg．Wht．， 5 los．
3E4075 Type E
YOUR PRICE
$\$ 2.45$
Each
新病＂hish．

shong．wt．， $5^{1 / 2}$ lus．
TyE4076 E
YOUH PRICE，
EaCh
$\mathbf{2} .50$
Nize：
Min．Mtk．（＂enters． 1 t＂x－
 Shjog．wt．， $51 / 2$ lbs．


Eah



3E407Type E YOUR PRICE Each．
 shbs．wt．， $51 / 2 \mathrm{~ms}$

3E4048－
YOUR PRICE
\＄3．10
3E4078－
Youn
\＄3．00
 Shog．Hit．，क lbs．
Size： $33{ }^{3}$＂$\times 31 / 3^{\prime \prime} 11 / /^{\prime \prime}$ high


## 3 E4047 Type D

YOUR PRICE，S3．4S
Size ： $33_{4}$＂ $831 / 2$＂x $414_{4} "$ hich．
Mis Centers $4 / 8=12 \%$

Type E
3E4079－

 Shpg．wt．， 6 ýg lbs．


## Filament Transformers



1ty, new materials. Cores carefully wound and rarare excellent for use as yre-heaters, short testers, filament supply, and to light the manients of the tulies in short wave sets
and converters. When useit with "B" eliminator wsed
conrert batlery C. oncration. Cart also bo
used in tube tenters si used in tube testers. Si-
jent in overation-- no ohjectionable hum. All taps marked.
$21 / 2$ Volt Center Tapped, 30 Watts aniv. Helght 3 , width 2 ".". Mounilng hole -center to center $3^{1 / 4}{ }^{1 / 15} 1^{\frac{s}{6} / 8}$ $\qquad$ \$1.95

## 11/2—21/2-5 Volt, 30 Watts <br>  Mounting YOUR PRICE <br> $\$ 2.25$



## Special Filament Transformers

## 3E4227- <br> YOUR PRICE

95¢
Good qnallis and dependable in operation. For ure as prt heater. in short wase bets. ete. 110 volt rimary. inches, Width ith inctes. Weifht, i lb. Silent in ojeration. 15 wates.
$21 / 2$ Volt- 12 Amp. Filament Transformer Center tarned 30 watts.
3E4228-1.sti. $\$ 2.75$.
your PRICE
$\$ 1.10$
6.3 Volt Filament Transformer

Size and appearance, identical to above trangFith the mesy 6.3 volt tubes on 115 volt A. C. Can also be usud on 7.5 volt tubes. 20 watts 3E4229-List. \$2.25.
YOUR PRICE
97¢
7.5 Volt Filament Transformer
hape matcles 3C4227. 20 watts.
3E4230-List. $\$ 2.50$.
YOUR PZICE
$\$ 1.30$
Tube Tester Filament Transformer $11 / 2,2,21 / 2,3.3,5,6.3,71 / 2,15,25,30$ volts; at 2 amps.


For construction of ment in standard testers. Supplies the correct voltages for all types of tubes including the ollest tyues and all those just reFlexible 8 $^{\prime \prime}$ ounced. color coded anit a are gram is inclutled which gires all the connections. Dimensions:
$2 \pi y^{\prime \prime}$ hthh $3^{\prime \prime}$ wide

## Power Transformers Repaired

## Rewound-Rebuilt-Guaranteed Like New

 Duplicate theOriginal
We Prepay the Return Postage
How it Is done: The old winding is measured and then removed. The core laminations are eleaned and restacked. The original Manufarturer's speritications are checked with what remained of the old Whew colls your deseription of the tuhes used checks our findings. New colls are wound eractly like the oripinal and assembled on the Transformer. the Transformer postoald, is cleaned and retinished. We return the Transformer postpald, guaranteed as good as new.

| $\begin{aligned} & \text { Stork } \\ & \text { Nuntber } \end{aligned}$ | Total <br> sumber | Number <br> \& Tyne <br> 1'wr. Tıbes | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 3 E 3600 | 6 to 8 | 1-71 A | 53.85 |
| $3 E 3601$ | fito 8 | 2-71 A | 4.10 |
| 3E3602 | fit 8 | 1-45 | 4.10 |
| 3E3603 | ¢ 109 | $2-45$ or 47 | 4.65 |
| 3 E3604 | 8 to 10 | $1-50$ or 10 | 5.25 |
| 3E3605 | Q 2.010 | 2-50 or 10 | 6.75 |

For Sets with Cardon or Kellogg Tubes
 Add $\$ 1.00$ extra for Units sealed

## Highest Quality Workmanship

 All work is done under the direet ton of skilled.




## How to Obtain Fast Service

(1) Send in old Transtormer prepaid, with your name and aldress. (2) Send your order hy mail int the res (3) manner, said in full or with a $20 \%$ deposit (3) Sperify on your order make, nindel, and exaet tuhe ombination of the Receiver using the Transformer. State ine voltage and frequenry it is to he used with


Power Transformers

## for the New 6.3 Volt Tubes



45 Watt

## Primary 115 volts. 50-60 cycle. Secondary 600

 V. 50 Ma.r 6.3 V. 2 A. C.T. and 5 . 2 A. Itg. centers: Tyue A $21 / 4 \times 21 / 2 "$; Type $13,3 \times 2^{\prime \prime}$. lued as general replacement in the 4 , 5 . and 6 tube sets which employ 6.3 volt tuhes. Each Transformer individually boxed. Wiring diagrams 3E4065-Tyne A Mounting. YOUR PRICE EACH \$1.383E4066-Tywo B Mounting
YOUR PRICE EACH $\$ 1.38$

## 70 Watts

Primary 115 volts. 50-60 cycles. Secondary $\mathbf{5 0 0}$ V. 70 Ma. C.T., 6.3 V. 3 A. C.T., and $21 / 2 \mathrm{~V}$. A. $3,4 \times 3,7^{\prime \prime}$; Type 13, $3 \% x^{3 \prime \prime}$. Used as general rolt tubes and 2.5 volt power tubes. Each Trans former individually boxed.
3E4067-Type A lounting
YOUR PRICE EACH
$\$ 2.19$
3 E4068-Tyne B Mounting.
YOUR PRICE EACH
$\$ 2.19$

## A Complete Selection

Radolek has the most comolete selection of trans. formers ever included in a single catalog. Our all your fransformer the guality guaranteed. Buy with monjodence. See Paide 112 for the best buy ever offered on I'hilco general replacement trans* crer off

Carter Universal

## Output Transformers



Sinding to match any standard lower tube plate
 Joll tubes, both drawhir les than to mils catel total rurremt over 40 mils may not lie used with
his iranvormer.
Socondary taps ean be selented to match plate imgradance to athy wiow eqil having resistance) between 11.11 olum and 15 olams. complete instruction single or push-pull power foner coupled

## Pioneer Shielded Universal Audio <br> 

A reby sheral filue. Standard 2 to 1 ratio

 $201 A, 226,112 \mathrm{~A}$ or $171 \lambda$ or 215 ampliflers. Husky ized windings and laminations insure fine tone
 es. Mounting holes $2 / \sqrt{2}$ imh centers. Steel shell, Flextble color coded leads. Many servicemen using his transformer in small two stage portable $l^{2}$. A


## Special Output Transformer

 For Tubes in Push-Pull $71 \mathrm{~A}, 45,50,2 \mathrm{~A} 3,43,59$
vide twice the plate impedance of one tube by 2.5 for single tube, uslog entire brimary, divide
the plate impedance by got). See tuthe chart in the plate impedance by and. See forbe chart in resistance). Dimensions: Lleight


## Universal Replacement Audios and

 Output Transformer All with universal mounting characteristics. High datality transformer sultable for use in the finest of receivers. ${ }^{\prime \prime}$ lze ofall units: 2f " hizh. 2 wide and $2 h^{2}{ }^{\prime \prime}$ deep. Can be mount rigit cher side or elther end.

$$
\text { Bright cadmium } 1
$$


small size of these untis wermits mounting below as well as above ehassis base. Diagrams and instructions imeluded

## Straight Audio Transformer

3E4 I90-Designed to feed from any type of
 YOUR PRICE

Universal P.P.
Universal Output
Win counle all eombinia-
ions of power tubes. either single or push-puld either single or mush-mull netic speaker. For voice impedances from 1 to 30 ohms.
$3 E 419$ IYOUR

81c nput Ratio 3:1

| YEAR |
| :--- |
| PRICE |

88

Radolek Audio Repair Bridge
Completes Circuit Around Defective
Audio Transformer
May be connected in less than 5 minutes in any Radio re ceiver or amplifier. Simple instructions turnished. fomse proof revingmbar resise. Illesible color coded leads permit emick romnections to fauley athatio rircuit. Will repair
 audios tybe when trinsformer secondary is opent. rolume occurs when this type of repait is made. Substitufoul of tembe ind compensates for the shight loss of volume. The Rudolek ludio Renair Bridge brovides the tastest



Stancor Universal Output


3E3925-LIst, $\$ 2.10$. YOUR PRICE \$1.23
Stancor Universal Input

3E3924-List \$220 YOUR PRICE
$\$ 1.29$

## Pioneer Replacement Audio Transformers



New Deal Values-The lowest priced these Units in our own Laboratory Audio Transformers of satisfactory against Transformers of much preater quality we have ever offered. New meth- cost. Audio range of Ploneer transod of winding the urlmary last with formers from 75 to 90 cycles accordhigh speed special machine makes this ing to size to a high range of 3800
price range possible. We have tested cycles. within 4 db .


Stock Size: $1 / 4 \times 13 / 4 \times 13 / 8$ " high.
$\begin{array}{llll}\text { No. } & \text { Type. } & \text { Raltio } & \text { Price } \\ \text { NE } 400 & \text { S A. } & 1: 2 \\ 3 E+101 & \text { S.A. } & 1: 3 \\ 3 E 4102 & \text { P-P } & 1: 2 \\ 3 E+103 & \text { P.P } & 1: 3\end{array}$

Stancor $\mathbf{3 0}$ Henry Filter Chokes


Replacement Chokes
ForA.C.-D.C. Reccivers


Pioneer Replacement Output Transformers

## How to Select the Right Transformer

Locate
Locate
nowner
Hill


| Power <br> Tube <br> Type | $\begin{gathered} \text { I. P. Platu } \\ \text { to Plate } \\ 1,0 \text { add } \\ \text { Imperd. } \\ \hline \end{gathered}$ | Transformer Type Numbers to use on various Voice Coil Impedances and Output Tubes. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Voice | il Imped | -2 | 3-4 | 5-7 | 9-16 |
| 2.15 | 14060 | I'80 | 130 | $1 \cdot 4.5$ | 135 |
| 6 A 4 | 166090 | 12011 | 1 101 | $1 \cdot 45$ | 135 |
| 10 | 20000 | P(1) | 1'60 |  | $1{ }^{1} 4$ |
| 20 | $13010 H_{7}$ | P301 | I ${ }^{1 / 11}$ | $12+5$ | 135 |
| 31 | 1400) | 1'80 | 1'til) | 13,45 | 1935 |
| 333 | 14000 | 13N0 | $1{ }^{1}(\mathrm{il})$ | 1 4 , | 135 |
| 38 | $2 \cdot 20015$ |  | 1~い | 1 '60 | 195 |
| 41 |  | P>0 | I'til | 1'fil) | $1 \cdot+5$ |
| 42 | 1.4000 | 1-30) | $1{ }^{16}$ | $P^{2}+15$ | $1 \cdot 35$ |
| 43 | ADOM, | 1'60 | P4. | P3, | $12^{2}$ |
| 45 | 8000 | 1380 | 12t5 | $13: 35$ |  |
| 15 | 128010 |  | $1{ }^{1} 6$ | $12+15$ | $1 \cdot 35$ |
| 47 | 189001 | IPN0 | Plic) | $1{ }^{1} 45$ | P35 |
| 48 | 100) | 1P4. | 1絠 | P2\% ${ }^{12}$ | $\mathrm{P}^{2} 27.4$ |
| $49 \mathrm{Tri}$. | 200010 | I'N0 | [10) | $1{ }^{1} 60$ | 145 |
| 2136 | 10000 | 1860 | $1 \cdot 15$ | P3:5 | 1397 |
| 5918 P | 12000 | Pand | P'60 | P.45 | 135 |
| 71 | $9 \mathrm{P}(1)$ | Pfil) | P4, | 135 | 1395: |
| $8{ }^{\text {colri }}$ | 14100 | P*1) | P10) | 1-4.5 | 135 |
| 89 Per | 1 (1into | [P80) | 16130 | 1.45 | P35 |

PRICE LIST



PRICE LIST

| Stock Nium. | size | latio | Type |  |
| :---: | :---: | :---: | :---: | :---: |
| 3E4115 | Nerlium | 20:1 | 1820 | Your |
| 3E4116 |  | $\therefore 73_{2}: 1$ | 122712 | Price |
| 3E4117 | $\because$ | 3.5:1 | 1235 | Each |
| $3 E 4118$ | $\because$ | 4.5:1 | 13.5 |  |
| 3E4119 | $\because$ | 10:1 | 186ic) | 44 |
| 3 E4120 | $\cdots$ | M():1 | 1280 |  |
| 3 E4121 | 1 sitrge | 20:1 | 12:0 | Your |
| 3E4122 | -.. | 271201 | 122715 | Price |
| 3 E 4123 | $\because$ | 35:12 | 12.35 | Each |
| 3E4124 | * | 45:1 | R 1.5 |  |
| 3 E4125 | $\because$ | fi0):1 | 12680 | 1 |
| 3 E4126 | * | 80:1 | 1880 |  |

## Jefferson Transformers

## Universal Audio Replacement

 Outputs, Chokes
## Straight Audio, 1 to 2 Ratio <br>  For underchassis replace ment in any A.C. or D.C set. Brackets for vertical or horizontal mounting. liange $\pm 4 \mathrm{db} .120$ to 5 mon  <br> 304281 -Code <br> yOUR PRICE <br> 73C

Push-Pull Input or Straight Audio
 amplitication. necting renter tap, al to ratio straight audio is obtained. May be M110unted mersal positions with unitinned leade Lems and tinned le
convenient
conve at 1 to 80 to 3500 cycles 3E4278-Code 467-168. YOUR PRICE


94c
Jefferson Universal Output Center tapped primary. six termmat secondary. 40 Ma, eurtent rarrying capacity, pri. 30100
turns C . T
 tirally all vower tubes io a ranke of volce coil Imple diances
struct inns
and
3E4297-Code 467-170. List, $\$ 1.60$. YOUR PRICE

94¢

## General Purpose Choke

80 Ma 220 ohm. approximately 10 henrles abso-
 3E4298-Code 406-135. YOUR PRICE

73c

## Jefferson "Quality Series" <br> Oversize Push-Pull Input

A bus
ky new unisersal mounting input

## rormer.

New high permeabhity core rreased cros high bermeablity corc of inthe primary winding particularly huigsedance of former to the new ype high-mu triode tubes of work hetter with the type. The earlier triodes with their original transfonmers. The mechanirally center lapped secondary delivers uniform bo"x23/y x 2 " high. Wt. $11_{3} \mathrm{lbs}$
3E4295-Cod
YOUR PRICE
\$1.17
Oversize Universal Output

of adjusting the ratio of
the transformer by proper sedection of secondary tiths.
The primary is 3000 turns The pimary is 3000 C. T. The sccondery
twns taped at es.
ix. turns. To match an revt 2 A 3 and nop power tuhe coil output to any the relations of the respective wholings is fur sary. Unirersathematical carackets. Instructions etc. Size $2^{\prime \prime} x 2 y^{\prime \prime}$ "x2" high. Stock this transformer as a regular itetm-its wile application guarantees 3E 4 solescence.
YOUR PRICE
\$1.17
Universal Choke " 30 " Henry An all-purnose filter choko incornorating uniRecommended for use in all circults requiring a guality choke of sturdy and quaty choke of sturdy and kenerous proportions.
Wrindings are racuum jm pregnated to remole all trace of moisture and to guard against re-alsorption. Connections brought
 and Connertiosis hrathent out to silveres lugs
 high. shug. wt.. $1 \% / 4 \mathrm{lls}$. 3E4296-Code 466-125.
YOUR PRICE
794
Replacement Type Audios

## Straight Audio



Push-Pull Input
Manufacturer's type. ratio 1 to 2. For counling SE4266-467-402, Hist I'rice, \$1.10. ©S发 YOUR PRICE $\frac{\text { Push-Pull Output }}{\text {.................. }}$
For coupling nush-mull 71 A or 45 's to a voice For coupling pustr-muld 71A or 45 s to a roice
coil having a D .C. resistance of abproximately 4 coil having a D.C. resistance of itproximately
ohms and an impedance of $b$ ohms at 400 cycles. ohins and an impedance of 6 ohms at 400 cycles.
$13 y$ not employing the center tap, a single 33,42 , fic tube may be coupled to the same volce coll.
Ratio of transormer. $371 / 2$ to 1 , total urimary to
 YOUR PRICE

Large Size Replacement
Push-Pull Input

Ratio 1 to
 3E4268-467-404. List your paice... 82C Increased core size and heasiar wire greatls int-
prove the atudio response prove the athdio resuonse
curve of thi: transformer. sell this transformer on service jobs where results better than obtained with the oripinal unit are desired. $\pm 4 \mathrm{db}$. from 90 to 4000 rycles

## Push-Pull Output

Tatio 62:1 total primary to total secondary, $3^{1 / 2}$ tratt. Designed to couble 71 A or 45 tubes in D.C. resistance or 6 to 8 ohm impedance. When the center tap is not used, tubes of the $33,42.47$ and 2.15 tyme may be counled to the same voice 3E4269-467-410. List. \$1.15. YOUR PRIC

## 150 Milliampere Choke

A heary current. "First Scction Choke" of the ones fertical toproximately 30 benrics at resistance 425 ohnis. doproximately 30 henries at 150 mils. Weighs $3 \% 4$ insulated. machine wound colls thoroughly inpresnated prepares this choke for hard service use. nated prepares this ehoke for hard service use.
T'sed in series with a 50 watt 5000 ohm rheostat. and the shielded Vniversai Output (467-171) a dummy speaker subatitute circuit for test bench use may be bulte which will duplicate any dynamic speaker requirement of any standiard radio chassis $3 E 4270-466-210$. List, $\$ 1.75$. S1, 3

## Shielded Universal Output

 The finest Universal Outputon the market 21 lios. For coupling any sunde or pushor 2 a3 to any dynamic voice coils or magnetic speaker. Irrimary consists of $3: 00$ turns of 36 enamel corered wire insulated layers, C.'r ary is 2200 turns tapped at
750 turns. The next section
50 the secondary is 105 turns tapmed at 27, 37 50,83 . A chart showing the relations of the turns ratio to the tube impedances and the speaker for the test bendi to substitute one tegt speant for the test bench to substitute one test speaker $3^{1 /}$ "x 3 石" high. Ho-nting bole centers 9 "

3E4280-467-171. Lisi Price, $\$ 5.00$ YOUR PRICE


MicrophoneTransformer Two Button-Shielded A splendid stocl caset single or double button "Mike" transformer with extra layer insulation to prev
vent capacity losses within the vent capacity losses within the
winding whleh would redure the winding whlch would redure the 2 button 200 ohm nilcrophones of using $1 / 2$ the primary winding will match a single 900 obm
hutton 2K" ${ }^{2} 271-467-263$. List, $\$ 5.00$.
YOUR SPECIAL PRICE

## $21 / 2 V, 31 / 2 A$,

10 Watts

## Open type, 115 Folt $50-60$

 sulated A small, well in-runsformer for shortoly
share ransformer for short-waye
adapters. etc. size $1 \%{ }^{\prime \prime} x$

Vuve ifice 82c

## $21 / 2 \mathrm{~V}, 121 / 2 \mathrm{~A}, 35$ Watt

Open type, 115 volt $50-60$ erycles. Extra heary
 3E4273-464-201. List, $\$ 2.00$. YOUR PRICE

## $6.3 \mathrm{~V}, 4 \mathrm{~A}, 30 \mathrm{Watt}$

Open type, 115 volt 50.6. cyyles. For the new type center tupes 3E4274-464-221. List, \$2.00. YOUR PRICE
\$1.18
Class "B' Plate, Filament, Audio, Transformers and Chokes

Class "B" Plate Supply-90 Watts For use with type 82, 523 . or
$8: 3$ tubes. Has single second. ary 775 steadily at voo Will oberate

 furnished.
 List. \$8.75-Code 465-151.
YOUR PRICE

Class "B" Filament Transformer For use with aloove Ilate Transformer. Has $5 V$. windings.
3E4283-C
YOUR PRICE
\$3.24
Class " $B$ " Input Transformer
 3E4286-Code 467-27.

\$2.94
or interstape or straight audio oupling pora ciass "B bower cunter taphed. Nide lug comnerlons. size $21 / z^{* \prime} x^{27} y^{\prime \prime} x^{2} 1_{2}{ }^{\prime \prime}$ high lhamams furnished.

Class "B" Output Transformer Has tapled primaty and tapped secondary for coup$1,3,6$, or 10 olm roice coll. Shpe. vi
$3 E 4287-C a d e ~ 467-281 . ~ L i s t, ~ \$ 6.25$.
YOUR PRICE ............................
\$2.94
Class "B" Buffer Choke For use as tirst choke of a class "Is" filler sys-
tem. 190 ohms, is hen!les, 100 Ma, canacity. Size 3E4284-Code 466-190, List, $\$ 3.20$. YOUR PRICE
$\$ 1.47$
Class "B" General Purpose Filter Choke Is particularly amplicible as second section class inal induetance 10 henrics. 150 M . A. Construction nat inductance 10 imenvions are flentiral vith gonse chok Diagram included. Shimping wt. $21 / 2$ lbs 3E4285-Code 466-200.
YOUR PRICE
\$1.47



An Inductance Capacity wilter. Ellminates scrateh or buzzing nolses catused by leaky wower-lines, deaction of this unlt is espectally adapted for filtering out line nolses and assuring a flow of smooth flltered current to the radio. Contains a dualestablishes a high impedance circuit preventing line noise and diverting interference to the ground. A ground connection is brovided on the case of the lilterctite. Size of case $21 / 2^{\prime \prime} \pm 11 / 2^{\prime \prime} \mathrm{x} 31 / 2^{\prime \prime}$ high.
for use on A.C. or D.C. Ines under 130 volts and with radio recelvers drawing less than 150


Falck Claroceptor
List, \$5.00. \$2,
Especially effectlve for reducing no Inductance The electric 亩ghting endless antennae which collect not only signals from broadcast stations but also electrical intererence noise caused by telephoncs. strect cars, elevators, electric notors and countless electre disturbused within and outside the home. These disturb ances senetrate into and are heard as blare wueal Pry ant scratch_-"Man-made statte" Block qut these nolses by plugging in a Clarocentor beout these nolses hy plugging
tween the wall socket and set.


Thordarson A. C. Line Booster Auto Transformer 3 E4321Transformer. Tapped for boost-

 $\underset{\substack{\text { Your } \\ \text { Price } \\ \mathbf{\$ N} \\ \mathbf{2} \\ \hline}}{ } \mathbf{3 9}$
3E4322-150 watt Duto-Transformer, Tapped for boosting etther 90 or 100 rolts to List Price. $\$ 5.00$. YOUR PRICE
$\$ 2.96$ Employed to step up A.C. line coltages in districts at a considerable distance from a line-trans former as in out kirts of a elty or in rural dis*
trlets. Built with $18^{\prime \prime}$ cord for connection to wall socket A.C. outlet. Neat flreproof metal rontainer equipped with two standard A.C. female blus sockets. Type OB 110 $3 E 8524$

## cour

For apslication to all wil burners to prevent distribution of radio noise caused by elec-
tric lanition or by
 the universal motors used with whe burner Mounted in a standard black enameled steel cutout mounted in a standard black enanteled steel cutout to hurner wiring, Has detaclable clamps to allow mounting on a pipe standard or tat surface. Maxi current four amperes. Supplied with complete instructions for installing with any type of burner should bo located as close to the interfaring mechanism as nossible and should lise grounded to the oil

## WIRT Voltage

 RegulatorNo. 211
The Wirt Voltare Regulator installs between the
 requirements where a dependable regulatar mist Reslstor increases in rexistance value as line volt age raises, thas automatically maintalning a steady Stock Num. Tyse Watts of Set List Eais \$1.75

## 3E3102

3E3100
$3 E 3101$
$\left.\begin{array}{rrrr}0 & \begin{array}{rlr}10 & \text { to } & 60 \\ A & 60 & 10 \\ 100 \\ 1 & 100 & \text { to }\end{array} 150\end{array}\right\}$
95

## I. C. A. "Junior" Filtervolt Noise Eliminators 3E2480$\$ 1.64$

 heating pads, tiglit switches and motors of bess than 1 H.F. Oberates on $110-120$ Volts A.C. or D.C. Tell your cuntomer why he should buy thisItem with a demonstration. Make $\$ 1.24$ extra on your regular serilice calls.


Maintains a constant Ten for $\mathbf{\$ 3 . 0 0}$ voltage climbs. Iroterts tuhes, condensers and ducing line voltage to a normal ouprating volita re Air-cooled true with nlur for standard outlet Csually sells for $\$ 1.00$ serricemen can make 680 Usually sells for $\$ 1.00$. Serricemen can make 68c extra on each call where the set owner has had

Standard Amperites For 110 volt Sets
$115-130$ volt IInes. Stock No. Amperite

$\begin{array}{lc}\text { 3E2400 } & 4-5 \\ 3 E 2402 & 6-7 \\ 3 E 2404 & 8-9-10\end{array}$
$\begin{array}{lr}3 E 2404 & 8-9-10 \\ 3 E 2406 & 11-12\end{array}$
3E2408-175 Watt



You Price Es. \$1. 25

## Amperite Self Adjusting Voltage Controls

"Amnerite" is a thermal regulated resistance designed to maintain a unlform potentlal across the frimary of the Power Transformer. Receivers deslgned to use "Amnerite" controls usually" hase Power Trans-
formers designed to operate on 80 to 90 volts. The "Amperite" mitched formers deslgned to operate on 80 to 90 volts. The "Amperite" matched the line roltage flurtuates the temperature of this wire changes its resistance ralue in direct pronortion to the Increase or decreace in roltage. This action results in. a uniform voltage across the brimary of the Power Transformer. When replacing "Amperite" always check
for a short circult. If the "Amperite" lights up brighty, thls indi-

## Special "Amperite" Controls


erricemen can easily sell a control like this to out tubes. condensers or resistors due to excesolre Ine viltare.

| Clarostat Replacement |  |
| :---: | :---: |
| Line Ballasts |  |
| $\cdots \cdots \quad$ Compensates line roltage chances for |  |
|  |  |
|  | W゙ill maintain the normal roltage |
|  | across the primary of the nower trans- |
|  | former within allowable limits for of- |
|  | ficlent oneration regardless of line |
|  | fluetuation between 9 and 13.5 voltc |
|  | WE CAN ALSO SUPPLY REPLACE. MENT BALLASTS FOR SETS NOT |
|  | LISTED BELOW. Send your order |
| $3$ | giring make, model and number of tubes in Set. |
| Number | Tyne Set |
|  | 2160 Bremer Tully |
| 3 E 3 | 2179 IBrunswick, III Q-30, Scott Silver |
|  | and so |
| 3E3117 | 2408 Clarion |
| 3105 | 1.11d *MAJESTIC 70, 71 |
| 3E3106 | 1508 - MAJESTIC 70B. 72 |
|  | 1012 - MAJESTIC 180. 181 |
| 3E3108 | 1210 *MAJESTIC 90. 91. 92. 100 |
| 3E3109 | 6310 United Reproducer. Peerless and |
| 3E3110 | 2518 Stark I'iano and Lelmont |
| 3 E3 1 | 2516 Simplex. Maldwin |
| 3E3112 | 5001 Stespart-Warner 900-61816 |
| 3E3113 | 5002 Stewart-Warner 9.:0-62152 |
| 3E3114 | 5003 Stewart-Warner K100-1i675 |
| List Price. | Each \$2.50. |
| YOUR PRICE. |  |
| (*) Ballasts also aratlable for MA.JESTIC Sets |  |
| operating on | n 25-30-40 cyrles: and 230 rolts 60 |
| cycles. In ordering please mential power unit type, frequency and ballast markines. |  |
|  |  |
| THE DEVICES listed on thls page are for reducing line nolses and regulating line voltages. Shiolded antenna systems and noise reducing aerial |  |
|  |  |
|  |  |
|  |  |

Vitreous Enameled Resistors

 commel and tired al red heat making an hamel roating which is fused tighty base. Wither the solder lugs and $11 / 2$ "
tinned wire leads may be used for mounting unit in circuit.
Non-Porous Waterproof 10 Watt yourprice. each

18 c Ten for.

Coating

| ()hma | Siturk | O1 |
| :---: | :---: | :---: |
| 200 | 3 D1952 | 1.000 |
| 250 | 3 D 1953 | 1:230 |
| 300 | $3 \mathrm{D1954}$ | 1,510 |
| 150 | 3 Cl 1955 | 2.010) |
| 410 | $3 \mathrm{D1956}$ | 2.500 |
| 500 | 3 D 1957 | 3.0010 |
| fin) | 3 Cl 1958 | 3.509 |
| 7.50 | 301959 | 4,000 |

20 Watt Size-2 Inches Iong

| $\begin{aligned} & \text { Siock } \\ & \text { Sumber } \end{aligned}$ | $\begin{gathered} \text { Resists- } \\ \text { ince } \\ \text { Ohnus. } \end{gathered}$ | Strock Sumber | $\begin{aligned} & \text { Th'slis - } \\ & \text { inve } \\ & \text { intils } \end{aligned}$ | $\begin{aligned} & \text { Stuck } \\ & \text { sumber } \end{aligned}$ | Resist *unce ()hins | $\begin{aligned} & \text { Stork } \\ & \text { Sumbrer } \end{aligned}$ | $\begin{aligned} & \text { Resist - } \\ & \text { ance } \\ & \text { Ohms } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $3 \mathrm{C1825}$ | 5 | 3 C 1839 | 7.50 | $3 \mathrm{C1853}$ | \$000) | $3 C 1866$ | 15.001 |
| $3 \mathrm{Cl1826}$ | 10 | $3 \mathrm{Cl840}$ | 800 | $3 \mathrm{C1854}$ | 32.06 | 3 l 1867 | 25, 1060 |
| 3 C 1828 | 50 | 3 C 1841 | 1000 | $3 \mathrm{C1855}$ | 3.506 | 3 D 8210 | 30.000 |
| ${ }^{3} \mathrm{C} 1829$ | 75 | 3 C 1842 | 1160 | $3 \mathrm{C1856}$ | 3175 | 3 l 8211 | 35, (104) |
| $3 C 1830$ | 100 | 3 C 1844 | 12.50 | $3 \mathrm{C1857}$ | 11110 | 3 D 8212 | 40.1006 |
| $3 \mathrm{C1831}$ | 150 | 3 C 1845 | 1.500 | 3C1858 | $45(4)$ | 3 D 8213 | 45.0100 |
| 3 C 1832 | 200 | 3 C 1846 | 1750 | $3 C 1859$ | 511010 | 3D8214 | 50.0100 |
| $3 \mathrm{Cl1833}$ | 250 | 3 C 1847 | 14.5 | 3 C 1860 | (i) 10 | 3 S 8215 | (io), (1) |
| $3 \mathrm{3C1834}$ | 309 | 3 C 1848 | 21010 | 3 C 1861 | 7090 | 308215 308216 | $70 .(101)$ |
| 3 C 1835 | 350 | $3 C 1849$ | 22.50 | 3 C 1862 | 75010 | 3 D 8217 | 75.000 |
| $3 \mathrm{3C1836}$ | $4(9)$ | $3 \mathrm{C1850}$ | 24010 | ${ }^{3} \mathrm{C} 1863$ | 880 | 3 D 8218 | 80. 10 |
| ${ }^{3} \mathrm{C} 1837$ | 51910 | $3 \mathrm{Cl1851}$ | 2500 | 3 C 1864 | 10000 | 3 D 8219 | (\%) 000 |
| 3 Cl 1838 | 6.50 | $3 \mathrm{C1852}$ | 2750 | 3C1865 | 12509 | 3 D 8220 | (6).000) |
| YOUR PRICE |  | $\begin{aligned} & \text { YOUR } \\ & \text { PRICEE } \end{aligned}$ |  | YOUR PRICE | $7$ | $\begin{aligned} & \text { YOUR } \\ & \text { PRICE } \end{aligned}$ |  |
| 50 Watt Size-t/nches Long (uilh /ugs) |  |  |  |  |  |  |  |
| 3C1875 | 10 | 3 C1883 | 1000 | 3 C 1891 | 41001 | 3 C 1898 |  |
| $3 C 1876$ $3 C 1877$ | 20 | $3 C 1884$ 3 C 1885 | 1150 | $3 \mathrm{Cl1892}$ |  | $3 \mathrm{C1899}$ | 12.000 |
| ${ }^{3} \mathbf{C 1 8 7 7}$ | 50 | 3 3 1885 | 12.31 | 3 C 1893 | він1) | 3 C 1900 | $15 .(0) 19$ |
| $3 \mathrm{Cl1878}$ | 100 | 3 Cl 1886 | 1.5010 | 3C1894 | 7000 | 3 C 1901 | 25,000) |
| $3 \mathrm{C1879}$ | 250 | $3 \mathrm{Cl1887}$ | 2004 | 3 C 1895 | 7.509 | 3 C 1902 | $50.0(1)$ |
| $3 \mathrm{3C1880}$ | 500 | $3 \mathrm{C1888}$ | 2020 | $3 \mathrm{C1896}$ | 8006 | 3 C 1903 | 70, 010 |
| 3 C 1882 | 750 | 3 Cl 889 | 2500 | 3 C 1897 | !1010 | 3 C 1904 | 100,010) |
| YOUR 29e\|rérice 35c |  |  |  | $\underset{\text { PRICE }}{\text { YOUR }} \mathbf{3 9} \|$PROUR <br> PR |  |  |  |



Vitreous Enameled Will replace any tapped volt-
 the exact value slider luak One Adjustable Lug

| $\begin{array}{r} 30 \\ \text { Size } \\ \text { inimun } \end{array}$ | Watt ${ }^{1}{ }^{\prime 2}{ }^{\prime \prime} x^{5}$ Mtg. |  | $\begin{array}{r} 50 \\ \text { Minimun } \\ 50 \end{array}$ |  | $e_{8 \prime \prime}^{\prime \prime \prime}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stiork <br> Number | Resist (hhms | $\left\|\begin{array}{c} \text { Max } \\ \text { Curut } \\ \text { M1. } \end{array}\right\|$ | Stork <br> Number | lieqist. ()hms | $\left\|\begin{array}{cc} \text { Mux. } \\ \operatorname{curn} \\ \text { M1. } \end{array}\right\|$ | stock | ITesist. (Thtus | $\left\|\begin{array}{c} \text { Mas } \\ c u r n t \\ \text { M. } \end{array}\right\|$ |
| $3 \mathrm{E1676}$ | 5 | 2450 | $3 E 1703$ | 0 | 2340 | 3 E1732 | 100 |  |
| 3 E 1678 | 5 | 1410 | 3 E 1704 | 50 | 1048 | $3 E 1733$ | 250 | 5.5 |
| 3 E 1682 | 10 | 5 | ${ }_{3 E 1709}$ | 100 200 | 710 520 | $3 E 1734$ $3 E 1736$ | 500 | 7 |
| $3 E 1683$ | 150 | 4.5 | 3 3E1711 | Sile | 520 | 3E1736 | 1000 | $\begin{array}{r}270 \\ 223 \\ \hline 2\end{array}$ |
| 3E1684 | 200 | 3as) | 3 E1714 | (\%m) | 234 | 3E1738 | 2040 | $1!0$ |
| $3 E 1685$ | , | 34.5 | 3 E 1 | 2000 | (8.5 | E1739 | 509 | 73 |
| $3 E 1686$ | 0 | 245 | 3 E 1718 | 31096 | 3.5. | 3 E 1741 | 5000 | 㖪 |
| 3E1687 | 750 | 209 | 3 E1719 | 4000 | 117 | 3 E 1742 | 10000 |  |
| $3 E 1688$ $3 E 1689$ | 800 1000 | 19 | 3 E1720 | 51000 | 104 | $3 E 1743$ | 15141501 | 0 |
| 3E1690 | 1500 | 1.1 |  |  |  | 3E1744 3 E 1745 Y | 20000 2.5000 |  |
| $3 E 1691$ | 2000 |  | OUR |  | - | YOUR |  |  |
| $3 E 1693$ | 3000 | 100 | RICE |  |  | PRICE |  |  |
| $3 E 1696$ | 5000 |  |  |  |  |  |  |  |
| $3 \mathrm{C1698}$ | 7500 | 5 | $3 E 1757$ | 75061 | 85 | $3 E 1746$ | 30000 | 0 |
| $3 E 1699$ | 10000 |  | 3 E 1721 | 10000 | 74 | $3 E 1748$ | 40000 |  |
| List Price. 75c. |  |  | 3 3 1722 | 12000 | 67 | 3E1750 | ${ }_{6} 5100000$ | 5 |
|  |  |  | $3 E 1723$ | 1.5000 | 5 | 3E1751 | $\mathrm{ClOHO}_{6}$ | 5 |
| YOUR |  |  | 3E1724 | 20500 | 45 | 3E1753 | 100010 | 27 |
|  |  |  | List P'rice, \$1.25. |  |  | $\begin{aligned} & \text { YOUR } \\ & \text { PRICE } . . . . . .9 .948 \end{aligned}$ |  |  |
| 3E1700 ${ }^{\text {P }} 120$ |  |  | $\begin{aligned} & \text { YOUR } \\ & \text { PRICE } \end{aligned}$ |  |  | Exira Adjusiable Lugs |  |  |
| 3E1701 | 15000 | 4.4 |  |  |  |  |  |  |
| $\begin{aligned} & 3 E 1670 \\ & \text { 3E1672 } \end{aligned}$ | -0000 30000 | 331 | 3E1726 30000 |  |  | Fur the where ad- |  |  |
| 3E1674 | 50000 | 25 | $3 E 1726$ 3 E 1727 | $\begin{aligned} & 30000 \\ & 50000 \end{aligned}$ | $\begin{aligned} & 43 \\ & 37 \end{aligned}$ | ditional |  |  |
| l.ist Price. 95 c . YOUR <br> PRICE |  |  | List Price. \$1.35. YOUR |  |  | 3E1755 <br> your <br> PRICE. |  |  |

## New Radolek Resistance Indicator <br> Calibrated Variable Resistance Box


haxmum. Ohmmeters minger haring en ranges from 100 to 1000 ars by comparison of reading with scale of the Megohm Indicator Fiz
 Fitched almminum diactor, lositive mosilion, constan resistance in fentis of a memohm. sumplied with int test leads

Calibrated Resistance Indicator Set
Consists of One Radolek Resistanc Indicator and One Megohm Indicator Rekular Value. \$13.00.
YOUR SPECIAL PRICE
FOR COMPLETE SET FOR COMPLETE SET. (1) the serviecman a complete rang any odd yatue and $1,110.000$ ohms perimental or test use. Serves the furfor more than $\$ 100.00$. Excellent for

 Thed dial plates. Nens style modernistlc knolus 100 " shock-mroof " deep. Fach Calibrated fesistance Indicator is small enough to he carried in your

## $\underset{\substack{\text { Radatek } \\ \text { Rertuted }}}{ }$ Carbon Resistors



## Certified Quality

Fimest gualits, new fresh stotk direct from the factory The derelomment of years of extensive restarm and mat arrow rance even when operat.od at oserloads for a long period of thene. Have onls slithe temperature ronthejpots at ordinary voltages. The resistance-after ilest few minutes of operation becomes constant. Free (rnal rapmells eftect. Thatected by humidits. Nefative temperature coeffelent. loads safely

At Our Price, No Serviceman Can Afford to Waste Ifis Time or Jeopardize IIis "fputation Using Infarior "Joh Let" or "Surplus"Resisitors. Resistors Off.red At
laner Prives Ar" of Inferior Quality and Expensive dt Any Price.


## Guaranteed Accuracy

Fariations from salues are negligible. Ratings guar anteed within $10 \%$ a verage sariations close to $5 \%$. Un-
 use hanilling in matnufarturlng anh repairing. All hape welded-on $1 / 2$ inch timbed cupper wire leads. Perfect and permanent elertrical and mechanical mantact vich labeled with rated resistance.

Be Fair to Yourself and Your Customer:
Win recommend a resale price of $\$ 1.00$ for Certified Ounlity Resistors. With this gencrous profit you cannot afford to risk your reputation asa arervierman with "owd lot"

| $1 / 5$ WATT | $1 / 2$ WATT | 1 WATT |
| :---: | :---: | :---: |
| Price | Net, | Net, |
| Each . | Each. | Each |
| Per Per Hundred.............s88.95 $\mathbf{8 8}$ | Per Dozen...............8868. $8 \mathbf{8 5}$ Per Hundred........ | $\begin{aligned} & \text { Per Dozen................98c } \\ & \text { Per Hundred............ } 7.15 \end{aligned}$ |


|  | $\begin{aligned} & \text { 3/3 Watt } \\ & \text { Stork } \\ & \text { Number } \\ & \hline \end{aligned}$ | 1 Tatt Secify Size and Resistance by Stock |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
|  |  | Numi | Ohtus | Number |  | Number | Onlus |
| $3{ }^{3 C 1000}$ | ${ }^{3} \mathrm{C} 1075$ | $3 \mathrm{Cl150}$ | 1711 | $3 \mathrm{3C} 10$ | 3 Cl 109 | $3 \mathrm{Cl171}$ |  |
| $3 \mathrm{3C1001}$ | ${ }^{3 C 1076}$ | $3 \mathrm{Cl155}$ | 15i) | 3 Cl 1022 | 3 Cl 109 | 3 Cl 172 |  |
| $3 \mathrm{3CL} 002$ | ${ }_{3} \mathbf{3 C 1 0 7 7}$ | ${ }^{3 \mathrm{C}} 1152$ | 200 | ${ }^{3 \mathrm{C} 1023}$ | 3C10 | 3C1173 | 510 |
| ${ }_{3}^{3 C 1003}$ | ${ }^{3 C 1078}$ | ${ }^{3} \mathrm{C} 11$ | 2.51 | ${ }_{3} \mathrm{C} 1024$ | 3C1099 | 3 Cl |  |
| 3 Cl 100 | 3 C 1079 | 3C1154 | 300 | 3C1025 | 3 Cl 100 | 3C1175 | 0 |
| ${ }^{3 C 1005}$ | ${ }^{3 C 1080}$ | ${ }^{3 C 1155}$ | 3 300 | $3 \mathrm{3C10}$ |  |  |  |
| ${ }_{3}^{3 C 1007}$ | ${ }_{3 C}^{3 C 1082}$ |  |  | 3C1027 | 361102 | 3C1177 |  |
| 3 Cl 100 | ${ }^{3} \mathrm{C} 1083$ | ${ }_{3 C} 1158$ | Siois | ${ }^{3 C 1228}$ | ${ }_{3}{ }^{3} 11103$ | 3C1178 | . 000 |
| ${ }^{3} \mathrm{ClOn9}$ | 3 Cl 1084 | 3 CH 159 | 109 | ${ }^{3 \mathrm{3Cl} 102}$ | $3 \mathrm{3C}$ | ${ }^{3 C 1179}$ |  |
| ${ }^{3 C 10}$ | ${ }^{\text {3CIO}}$ | 3 Cl 116 |  |  |  |  |  |
|  |  |  | 800 | 3 | 3C1106 |  | 15.017 |
| ${ }^{3 C 1012}$ | 3 C 1087 | ${ }_{3}^{3 C 1162}$ | 900 | ${ }^{3}$ | ${ }_{3 C 1108}$ | ${ }_{361183}$ | 20.000 |
| $3 \mathrm{ClO14}$ | ${ }^{3 \mathrm{C}} 1088$ | 3C1163 | 1.000 | ${ }^{3}$ | $3 C 108$ $3 C 1109$ | ${ }_{361189}$ |  |
| $3 \mathrm{Cl014}$ | 3C1089 | $3 \mathrm{Cl164}$ | 1.550 | ${ }^{36} 1035$ | ${ }_{3 C 1110}$ |  |  |
| 3 C | ${ }_{\text {3C1090 }}^{3 \mathrm{Cl}}$ | 3C1165 | 1.750 |  |  |  |  |
| $3 \mathrm{3C1017}$ |  | ${ }_{3}$ | 2, 0001 | ${ }^{3 C 1037}$ | ${ }_{3} \mathbf{C} 1112$ | 361187 |  |
|  |  | 3 C |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  | 硣 |  |  |  |  |  |


|  |  | $\begin{aligned} & \begin{array}{l} \text { Watt } \\ \text { sumek } \\ \text { Number } \end{array} \end{aligned}$ |  |
| :---: | :---: | :---: | :---: |
| C041 | 3 C 1116 | C | 0 |
| 042 | 3 Cl | ${ }_{3}$ | 150,000 |
| 043 |  | 3C1193 | 21110000 |
| 044 | $3 \mathrm{C1119}$ | 3C1194 | 250.000 |
|  | 3 C 1120 | 3C1195 |  |
| 3C1046 | $3 \mathrm{Cl\mid 21}$ | 3C1196 | 400.000 |
|  |  |  | kohms |
| ${ }_{3 E 1047}$ | ${ }^{3 C 1122}$ | ${ }^{3} \mathrm{C} 197$ |  |
| 3E1061 | 3 E 1136 | 3E1211 |  |
| 3E1062 | 3E1137 | 3 E 1212 | 75 |
|  |  | ${ }^{3} \mathrm{3E1213}$ | 9 |
| 3C1049 | ${ }^{3}$ | ${ }^{3} 11199$ | 1.5 |
| 3 Cl 1050 | 3 C 1125 | 3 Cl 1200 | 2.0 |
| 3 Cl 105 | $3 \mathrm{Cl126}$ | 3 C 12 |  |
| 3 Cl 1052 | 3 | 3 C |  |
| 3C1053 | 3 CH 128 | 3 C |  |
| 3 Cl 1054 | 3 C 1129 | $3 \mathrm{Cl204}$ | 4.0 |
| 3 Cl 1055 | 3C1130 | 3 Cl 205 | 5.0 |
| $\left\lvert\, \begin{aligned} & 3 C 1056 \\ & 3 C 1060\end{aligned}\right.$ | 3 Cl 131 3 C 1135 | 3 Cl 206 <br> 3 C 1210 |  |

## The RADISTOR Kit <br> Twenty-Four "Certified" Replacement Resistors in a Compact Lacquered Metal Carrying Case



Bakellte Base
Phosphor Bronze Springs
For 1 W
Resistors of
3E1970-Single.
NET, Each
19d
3E1971-Douhle.
NET, Each


These kits enable the serviceman to thake practically any resistor repair regardless of any unusual value resist-
ance needed. Twestes popular value resistors are included as Collows: 1 each 1010; $250 ; 400 ; 501$ 800: $1.000 ; 2.000 ; 3.000 ; 4.000 ; 5.000$ 6,$000 ; 10,000 ; 12,5410 ; 15,000 ; 20.000 ;$ 25,$0100 ; 40,1000: 50,0410 ; 160.000 ; 75.000$.
 megohm: ${ }^{2}$ megohms. If value wanted
is not in kIt . combinations can be is not in kit. combinations ran be any exart value needed. Simple char and calculating formulae incluthed in kit. Arcurary guarantece within lomin
and most ralues are actually wlenin

## In the Metal Box

3E1233-Case only No Resistors. YOUR PRICE

Color Code Chart FREE Included is our suecial chart which tantly detcrmine resistance of any re sistor by reterring to this chart


## IRC Certified

 Resistor KitsIn Factory Sealed Boxes
Mandy Kit No. 1
20-1 Watt Resistors 3EI475-I!st. $\$ 5.00$.
YOUR PRICE ............ $\$ 3080$
Contains 20 metallized units of the Contains 20 metallized units of the
most used sizes. Nlakes it fossible for most ustd sizes. Nakes it doing repair and replacement work to secure hund values. Docket size. Contalns $10.000 .15 .904 .20,0011.5 .0100 .50 .000$, $60.000,70.0010 .75 .000,100.000,200.000$
Handy Kit No. 2 3E1476-1, ist, 57.00. YOUR PRICE
20 replacement watt, rexistors: $000 ;$

Handy Kit No. 3 20 Midget $1 / 2$ Watt Resistors
 $\mathbf{3 E I} 478$
YOUR PRIGE

## Handy Kit No. 4

12-5 Watt Resistors

$3 E 1479$
YOUR PRICE
\$3.24

## Handy Kit No. 5

12-10 Watt Power-Wound Resistors. Safely Replaces
voltage dividers.


## 0, (1) 111

$3 E 1481$-List
\$4.68

## Handy Grid Bias Kit

## 3EI477-ILI YOUR PRICE

Contalns 10 assorted Itesistors of 1
watt. w watt and Jower Wire Wound (5-wati) types, reguired to bias the rat $45-50-47$, contalns resistamice
ralues that ean be used as grid subpressors.

New IRC No. 6
Combination Kit


## Assorted

# IRC Metallized Resistors 

|  |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |


| Sturk Number | Ohtns | $\left\lvert\, \begin{gathered} \text { Noek } \\ \text { Number } \end{gathered}\right.$ | Ohms |
| :---: | :---: | :---: | :---: |
| $3 E 1280$ | 50 | 3E1445 | 1,000 |
| 3E1281 | 100 | 3E1446 | 12.500 |
| $3 E 1282$ | 200 | 3E1447 | 15.1000 |
| $3 E 1283$ | 250 | 3E1448 | 20.0460 |
| 3 E1284 | 300 | 3E1449 | 25.000 |
| 3E1285 | 350 | 3E1450 | 30,000 |
| 3E1286 | 401 | 3 E1451 | 40.1000 |
| 3E1287 | 5010 | 3E1452 | 50.060 |
| 3E1288 | 600) | $3 E 1453$ | 80, 600 |
| 3E1289 | 750 | 3E1454 | 6.5 .000 |
| 3E1290 | 850 | 3E145S | 70.010 |
| 3E1291 | 1,000 | 3E1456 | 75.000 |
| $3 E 1292$ | 1.250) |  | Megohms |
| 3 E1293 | 1.500 | 3E1457 | $0.1$ |
| 3E1294 | 2.060 | 3 E1458 | 0.15 |
| 3E1295 | 2.250 | $3 E 1459$ | 0.2 |
| 3E1296 | 2,500 | 3 E 1460 | 0.25 |
| 3E1297 | 3.0000 | 3 E1461 | 0.3 |
| 3 E1298 | 3.5100 | 3 E1462 | 0.4 |
| 3E1299 | 4.000 | $3 E 1463$ | 0.5 |
| 3 E1440 | 5.000 | 3E1464 | 0.75 |
| 3 E1441 | 6.040 | 3E1465 | 1.0 |
| $3 E 1442$ | 7.5190 | 3E1466 | 1.5 |
| 3E1443 | 8. 010 | 3 E1467 | 2.0 |
| 3 E1444 | 10.0610 | 3 E1468 | 3.0 |

IRC 1 Watt



Metallized Auto Radio Suppressors


Special Ford Type 24C




| $\underbrace{}_{\substack{\text { SE1369 } \\ \text { SE1370 }}}$ | ${ }_{160}$ |  | \% 51.000 |
| :---: | :---: | :---: | :---: |
| 3E1379 | 5 |  | (1) |
|  |  | ${ }^{3} 1$ | ${ }^{7}$ |


|  | 1.350 | 311414 | 194.(00) |
| :---: | :---: | :---: | :---: |
|  | 2, | ${ }^{3 \times 1415}$ | 2010 |
|  | 2,550 |  |  |
| ${ }^{3 E 1386}$ | 3.11010 | ${ }^{511419}$ | 400,01001 |
| ${ }_{\substack{3 E 1387 \\ 31388}}$ | 3. 3.510 | ${ }^{3 E 1420}$ | \%(1).190 |
|  | (tion | $3 E 1422$ | 7tation |
| ${ }_{\substack{361391 \\ \text { E1392 }}}$ |  | ${ }_{3}^{3 E 1423}$ | 18 |
| 退退3933 | \%,00 | ${ }^{3} 18125$ |  |
|  | (1, 1,5000 |  | 3.0 |
| ${ }^{3} 151396$ | cisis.ind |  | 6.0 |
|  | 20.17010 |  |  |
| 361400 $3 E 1401$ | (in |  | 8.0 10.0 10.0 |



| $\begin{aligned} & \text { Standard Cable Type } \\ & \text { Medallized } \end{aligned}$ |
| :---: |
| For insertion in suark whu peillue. Cantuat in mected $3 E 1486-1 \mathrm{st}$, 40 c . YOUR PRICE |
| Standard DistributorType |
| IOCC -2 |
| $\begin{aligned} & \text { 3EI487 List, 40c. } \\ & \text { YOUR PRICE } . . . . . . . . . . .24 C ~ \end{aligned}$ |

IRC 2 Watt


Pigtail TypeLength 1 I


|  | Ohms | $\begin{aligned} & \text { siock } \\ & \text { Sumber } \end{aligned}$ | Ohms |
| :---: | :---: | :---: | :---: |
| $3 \mathrm{E1500}$ | 50 | 3 E1520 |  |


| Stock Number | Ohms | Stock <br> Nutiber | Ohms |
| :---: | :---: | :---: | :---: |
| 3E1355 | 50 | 3 E1323 | 20, $110 \times 1$ |
| 3 E 1300 | 1(4) | 3E1324 | 25, (110) |
| 3 E1356 | 200 | 3E1325 | 30.060 |
| 3E1301 | 250 | 3E1326 | 32.00\% |
| 3 E1302 | 270 | 3E1327 | 40.000 |
| 3E1357 | 301 | 3E1328 | $45.0(6)$ |
| 3 E1358 | 350 | 3E1329 | 50.0100 |
| 3 E1359 | 400 | $3 E 1330$ | 51.1101 |
| 3 E1303 | 5110 | 3E1331 | 60.000 |
| 3E1360 | mo) | 3E1366 | 6.5.014) |
| 3 E1361 | 750 | 3 E1332 | 70.1001 |
| 3E1362 | 850 | 3E1333 | 75.1161 |
| 3E1304 | 1.000 | 3 E1334 | 99.6 (\%) |
| 3E1363 | 1.250 | 3 E1335 | 100.0109 |
| 3E1305 | 1.500 | 3E1336 | 150.0100 |
| 3E1306 | 2.000 | $3 E 1337$ | 180,00\% |
| 3 E 1307 | 2.250 | 3 E1338 | $200.010 \%$ |
| 3E1308 | 2.5011 | 3E1339 | 240,01010 |
| 3 E1309 | 2.700 | 3 E1340 | 11) |
| 3 E1310 | 2,940 | 3 E1341 | 300.0100 |
| 3 E 1311 | 3,(101) | 3 E1342 | 330,010 |
| 3 E1312 | 3.500 | 3E1343 | 400 (016) |
| 3 E1313 | 4.010 | 3E1344 | $4!0.000$ |
| 3E1314 | 5.000 | 3E1345 | 500,010 |
| 3 E 1315 | 6.010) | 3 E1346 | 750, (1010) |
| 3 E1316 | 7.000 |  | Megohms |
| 3E1364 | 7.500 | 3 E1347 | 1.0 |
| 3E1317 | 8.000 | 3 E1348 | 1.5 |
| 3 E1318 | 9.000 | 3E1349 | 2.0 |
| 3 E1319 | 10,010\% | E1350 | 2.5 |
| $3 E 1365$ | 11.000 | 3 E1351 | 3.0 |
| 3 E1320 | 12.50) | 3 E1352 | 3 \% |
| $\begin{aligned} & \text { 3E1321 } \\ & \text { 3E1322 } \end{aligned}$ | 15.000 | 3E1353 3E1354 | 4.0 |

New IRC Fused Dual Resistance Indicator

hearing slider to the seate desiresi.
lowe range. 100 to 10,000 olimg high
lange 10 tion to 100 and lange 10 .tion to $100.0 n 010$ olmis. I.ittel-
$\qquad$
$\qquad$
$\qquad$
Featured Applications
$\qquad$
As "known" resistance liranch of a
wheatstone bridge circuit.
New IRC Volt-Ohmmeter

New IRC Volt-Ohmmeter


Invaluable for accurate servicing through the point-to-point method. Exclusive Vacuum Relay. Extral largo $3^{\prime \prime}$ etched srilc. Bakellte ave. Special moulded knob. One freciston wire wound readings. exclusively. Very compart-fits easlly $3 / 30 / 300 / 600$; Kesistabre $r$ gervice Range $0 / 1.000 / 1010,000 / 0 h m s$ and E E 474 -List $\$ 4250$ YOUR PRICE

## -CONTINENTAL CARBON Inc. |h

## Certified Molded Carborite Resistors

 1000 Volt Ceramic Coat Insulation The finest first quatity molded carhon reststors. Theiring a 1000 volt Insulation. This style of construction permits thetn to be mounted ciose in contact with "Ifie" wires or pieces of the haratus, without danger of shorting. coating is rery tough, will not chip off and connecting wire fulty. One the thened the connecting wire tulty Only the tinned lead wires away from the body are bare. These ef-ficient and accurate resistors ure highly recommended for all renair work. While slightly higher in price. their superior quallty and
performance make them worth more than the verformance make them worth more than the added cost. The crelusive mantifacturing pro-
cesses usci by Continental have reduced the effects of load. ake. temperature and humidity Modern laboratory machines and methods reModern laboratory machines and mats that do not pass the rigid Continental standards of accuracy. Quietness: Their exclusise mechanical construction and the climinated noisy operation.


Non-inductive: Stu
Nonacity. R. i. Aurdy constructlon. Over-size current carrying


Specify Size and Resistance By Stock Number

| $\begin{aligned} & \text { Thatt } \\ & \text { sumbler } \\ & \text { Number } \end{aligned}$ | $\left\lvert\, \begin{gathered} 1 \text { Watt } \\ \text { Stock } \\ \text { Sumber } \end{gathered}\right.$ | Resist. <br> Ohms. | $\left\lvert\, \begin{aligned} & \text { Stock } \\ & \text { sumber } \end{aligned}\right.$ | $\begin{aligned} & \text { Watt } \\ & \text { Stork } \\ & \text { Number } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 3E78 | 3E | 150 |  | 3 E |
| 3E7801 |  |  |  |  |
|  | 3E7842 | 500 | ${ }_{3}^{3 E}$ |  |
|  |  | 50 | E7817 |  |
| 3E7805 | 3 E | 1.000 | 3 E |  |
| 3E7806 3E7807 |  | 1,750 | 3E7820 | 3E78 |
|  |  |  |  |  |
| 3 37809 | $3 E 7849$ | 2.5011 | 3 E 7822 |  |
| 3 E 7810 |  | 3.1 |  |  |
|  | 3 E7851 | . 500 | E78 |  |
| E7812 | 3E7852 | 4,01 | E782 | 885 |



## Continental Certified

Carborite Molded Resisters

## 3 Watt



## 1000 Volt Ceramic Coating Insulation

Same high prade quality and style of construction as above $1 / 2$ watt and 1 watt
but 3 watt capacity. Body size-Dlameter

## List Price YOUR PRICE. EACH

## $21 c$

Specify Resistance by Stock Number


| Numbe | Ohnis. | Number | Onms. | Number | Ohtms. | Number | Ohms. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3E7880 | 750 | $3 E 7885$ | 10.000 | $3 E 7890$ | 60.000 | 3 E 7895 | 2500.000 |
| 3E7881 | 1.000 |  | 12.500 | $3 E 7891$ | 75.000 | $3 E 7896$ | 300.000 |
| 3 E 7882 | 2.000 | $3 E 7887$ | 15.0100 | $3 E 7892$ | 100.000 | $3 \mathrm{E7897}$ | 400 , (0)0 |
| 3 E7883 | 5.000 | 3E7888 | 25.000 | $3 E 7893$ | 1.50.000 | $3 E 7898$ | 500.000 |
| 3E7884 | 7.500 | 3E7889 | 50.000 | 3E7894 | 200, 000 | $3 \mathrm{E7899}$ | 1 Mcg . |

## Continental Ignition Interference Suppressor

 High quality lanition noise Suppressors develoged to afford eomplete ab sorption of motor interference with motor. "Carbonite" element assures permanent satisfactory performance despite heat. vibration. or molsture.


3E1800
YOUR
PRICE
Price
234
The new Texo-terminal spark plug
suppressor. The terminal can be bent to mount the suncess

siza $\theta$
YOUR
PRICE
3 Sist . 40 c .
238
New Buick, Packard and Chrysler. Type Fllinv spark plue suppressor. The
supnressor takes the place of the surnessar anes and the iknition cable.
terminal

## Bakelite Spark Plug Suppressor

3E1805
List: ${ }^{30}{ }^{30}$
PRICE. 18¢
Resistance tyne. Bakelite body. Has threaded insert for serewing Suppressor directly into spark plug. Threads
 rour - $\quad 23 \mathrm{c}$ Distributor suppressor. Will fit all 3E18033-
List 40c.
YOUR PRICE ..................................
Ca!nle sunpressor.
wheets requirements where it is necessary to cut the imni-
tion cable at any volnt and install a suppressor.

## 

 $\underset{\substack{\text { Your } \\ \text { PRICE }}}{ }$ Sin Insulated Container Auto Filter Condenser Tyne
GB0sC
For installations where the condenser 'annot be lolted directly to groumd. sulated lead coming out of each end. Capacity $1 / 2 \mathrm{mpd}$. Measures
3E I 8 I 3 .
3EIBIB-IA
YOUR PRICE

Auto Radio Noise Suppression


## Sources of Radiated Interference

A- Spark Plug Cables: $\quad$ thlts are properly filtered, since it is A high frequency oscilhating current freguently set up hy loose electrical is set up by the discharge across the Suppressors effectively keep this from reaching the radio set. Inmproved rereption can be secured by placing
suppressor in each spark plup on installations having a suppressor only at ${ }^{2}$. Coil to Distrlbutor Cables. supbressor here absorbs oscillating tween distributor nolnts and rotor. Perfl down instrblutor rotor or add 3- Low Tension Breaker to Coils:
Install Type GB025. GB05, or GB05B Filter Units. lispecially necessary bulk-head.
4- Generator Commutator:
Noise introduced to electrical sustem by sparking at brushes, Clean brushes to minimize and install Types GB05.
GBI, Units. where greatest mochanical Units. Where greatest mochanical
strength is desired. with terminal of lead wIre on battery side of generator cutout. If nolse jersists when laling motor, install second condenser across 5- Horn:
sbark at ho
fercnce that armature patases interGBI or GBIA Filter Unit across terminals will usually climinate all 6- Radio 6-Volt Inout: Miscellaneous noise entering the receiver through the nower input can be effectively eliminated by installing in the "A" lead to the recelver the Type
GBOSDH Dual Canacity and induct ance Filter Unit. Such interference may nersist. although all electrical discharges. Improves the tone guality of many auto-radio installathons with orrect filter capactiles. Miscellaneous "Wirlng in Car Body : duced into the electrieal system wlli be radiated from every wire that is not enclosed by metal. Dome light. lng that jasses near the radin antenna cause this interference to enter the radio receiver. The offending wires at be located by disconnecting. ono nects to the light switch, ammeter, or starter switch. When a wire is found ertence is connection of which the inonnert a Type GB05 Filter Unit from $t$ io sround. It this loes not remore the nolse, a Type GBt or Type GOSH Rapacity and Intluctance FYe GBosc Filter Enit has been designed or apolirat tons of this type where it s impossible to connect the metal conainer of the other troe units to grounded metal bart of the rar and
till hare it close to the radiating circuit. Electric Windshield Wiper, Electric Fan, or Hot Water Heater Suarking of commutators and switch ooints in such accessories cause inter of Type GB025, GB05, or GBI Fil er Cnits. Make minsitiations as close the deyise as nossible. The larger the canacliy of the Fiter used. the nation ectre whil be the nolso ellm the use of a Type GBo5H Capacits

|  | Diagram at left shows Type GBO5DH Capacity-Inductance Fiter consisting of two $1 / 2$ mfd. Conilensers and Filter Choke. Dlagram at right is of Type GB05H having $1 / 2 \mathrm{mfd}$. Condenser and Filter Choke. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## Auto-Filter Condensers

For elimination of radio installations, where capaclity alone is sufficient to fliter out the from the generator commutator, elec-

| Standard Filter Condensers |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| container sealed agal |  |  |  |  |
| moisture and oil, One side |  |  |  |  |
|  |  |  |  |  |
| tainer which has a flange |  |  |  |  |
| for bolting to the chassis. |  |  |  |  |
| making direct electrical mor |  |  |  |  |
| tact to ground. The ozier |  |  |  |  |
|  |  |  |  |  |
| leal with convenient screw lug. |  |  |  |  |
|  |  |  |  |  |
| Stork |  | Capty |  | You |
| Number | Number | Mfd. | Prla |  |
| $3 E 1806$ |  |  | 50 | 29c |
| $3 E 1807$ | GB05 |  | 60 c | 35 c |
| 3E1808 | (G3) ${ }^{\circ}$ | 1 | $75 \%$ | 44 |

## Super-Duty Filter Condensers

Recommended for instal
lattons in the motor compartment or other places moisture are encountered. Has metal contalner, measur ing
$11 / 4{ }^{2} / 2^{\prime \prime}$ in diameter. with mounting strap going all around. One sille conother furnished with flexother furnished with tles-

|  | Cone | C |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Number | Vumiter | Mifd. | Price |  |

Capacity and Inductance Auto-Filter Units
For use where nolse suppresslon prob Fims cannot be solred by the flltering effect of capacity alone. Especially effective where car ligiting wirlng radiates interference into the antenna These units are usually connected be ween the light system switeh or am meter and the leads to lights and accessories.
3E1811 PRICE
YOUR
Type GBOSH
58¢
Consists of $1 / 2$ mid. Conden
choke sultable for carrying hoke sultable for carrying up to 5 amps. Housen in insulating contalner with thref insulated tlexible leads.

$3 E 1812$ YOUR

889
Type GBOSDH
Consists of two $1 / 2 \mathrm{mfd}$. condensers and a filter choke. Iloused in a metal case which makes connection to ground. Two flexible insulated leads connect to the circuit. Which is opened for insertion of the filter. Size $2^{\prime \prime} x$ $2^{\prime \prime}$ x $1 /{ }^{\prime \prime}$. Used to fllter power suplighting circuits not completely filtered by choke and single condenser
unlts.

ELECTRAD Precision
Wire Wound Resistors


Designed for uso in high grade test instruments, laboratory equipment and custom built apparatus. the construction of a 1000 ohms per volt mult. range voltmeter with any good quality $0-1$ milliameter. Actually bridge-tested and guaranteed to be accurate within $1 \%$. Space wound with highest quality enameled resistance wire in layers on
Isolantite ind impregnated with moisture resistling combound to insure against variation due to moisture ithsorption or temperature fluctuation.
Non-inductive-low distributed capacity due to high Insulation between turns and multhple layer


| Stock Number | Resist. | $\begin{array}{\|c\|} \hline \text { Max. } \\ \text { Yolto } \\ \text { Poten- } \\ \text { flat } \end{array}$ | $\begin{aligned} & \text { Cur- } \\ & \text { rent } \\ & \text { M. A. } \end{aligned}$ | $\begin{aligned} & \text { I.lst } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $3 E 8341$ | 1 | 8 | 3875 | \$0.75 |
| $3 E 8300$ | 1. | 1.2 | 1225 | . 75 |
| 3E8344 | 2.08 | 1.77 | $\begin{array}{r}887 \\ \hline 8\end{array}$ | . 75 |
| 3E8301 3E8346 | 5. | 2.7 | 548 387 | .75 |
| 3 E8347 | 25. | 6.1 | 245 | . 75 |
| $3 E 8349$ | 30. | 6. 82 | 220 | . 75 |
| 3E8350 | 33.33 | 7.1 | 210 | . 75 |
| $3 E 8302$ | 45 | 8.25 | 182 | \$0.75 |
| $3 E 8353$ | 50. | 8.6 | 173 | . 75 |
| $3 E 8354$ | 190 | 12. | 122 | . 75 |
| 3E8303 | 150 | 15. | 100 | . 75 |
| $3 E 8355$ | 200 | 17. | 86 | . 75 |
| $3 E 8304$ | 400 | 25 | 61 | . 75 |
| 3E8356 | 500 | 27. | 55 | . 75 |
| $3 E 8305$ | 700 | 32.4 | 46 | 50.80 |
| 3E8357 | 750 | 34. | 44 | . 80 |
| $3 E 8358$ | 1,000 | 38. | 38 | . 80 |
| 3E8306 | 1,450 | 40. | 37 | . 85 |
| 3E8307 | 1.500 | 45. | 33 | . 85 |
| $3 E 8359$ | 2.500 | 61. | 24 | . 85 |
| 3E8360 | 3.500 | 65. | 23 | 50.90 |
| 3E8308 | 4.000 | 79. |  | . 90 |
| 3E8361 | 4.450 | 83 | 18 | . 90 |
| 3E8309 | 4.500 | 84 | 18 | . 90 |
| $3 E 8362$ $3 E 8363$ | 4.950 6,000 | 86 87 | 17 | .90 |
|  |  |  |  |  |
| 3 E8310 |  |  | 14 |  |
| 3 E8311 | 9,950 | 122 | 12 | .95 |
| $3 E 8366$ | 10,000 | 125 | 12 | . 95 |
| 3 E8312 | 12.500 | 137 | 11 | 1.00 |
| $3 E 8367$ | 14,950 | 150 | 10 | 1.00 |
| $3 \mathrm{E8368}$ | 20.000 | 173 | 8.6 | 51.25 |
| 3E8369 | 25,000 | 194 | 7.7 | 1.25 |
| 3 E8313 | 30,000 | 212 |  | 1.25 |
| 3E8370 | 35,000 | 229 | 6.5 | 1.25 |
| 3E8371 $\mathbf{3 E 8 3 7 2}$ | 40,000 | 245 | 5.1 | 1.25 1.25 |
| 3 E8372 | 50.000 | 274 | 5.6 | 1.25 |
| 3E8314 | f0,000 | 300 |  | 51.50 |
| 3 E8315 | 75,000 | 336 | 4.4 | 1.50 |
| 3 E 8316 | 90,000 | 375 |  | 1.75 |
| $3 E 8373$ | 100,000 | 387 | 3.8 | 1.75 |
| 3E8317 | 125,000 | 433 | 3.4 | 2.00 |
| $3 E 8318$ | 140,000 | 450 | 3.2 | 52.25 |
| 3E8374 | 150,000 | 475 | 3.1 | 2.25 |
| 3E8319 | 175.000 | 510 | 2.9 | 2.25 |
| 3E8375 | 200.000 | 548 | 2.7 | 2.25 |
| 3 E8320 | 225.000 | 580 | 2.5 | \$2.50 |
| $3 E 8376$ | 250.000 | 610 | 2.4 | 2.50 |
| $3 E 8377$ | 300.000 | 670 | 2.2 | 2.75 |
| $3 \mathrm{SB378}$ | 400.000 | 750 | 2.2 | 2.75 |
| 3 E 8321 | 450.000 | 750 | 2. | 2.75 |
| 3E8379 | 500,000 | 750 |  | 53.25 |
| 3 3E8322 | 600,000 | 770 | 1.6 | 4.00 |
| 3 E 8323 | 750,000 | 750 | 1.3 | 4.00 |
| 3E8324 | 400,000 | 1000 | 1. | 5.00 |
| 3E8325 | 1 Meg . | 1000 | 1. | 5.00 |

Removable Ferrule Terminals Furnished without ferrules with $1 / 2$ in. tinned end of resistor.
3E8299-Ferrules List, per Pair. $15 c$ YOUR PRICE, per Pair.

$$
47 c
$$

$$
50 c
$$ wire llealls. Can be converted above by berewing ferrulo into each

## $53 c$

56c
$59 c$
73c
$\underset{\substack{\text { 882 } \\ \text { sin } \\ 1.80}}{88}$
E. 32
1.47
2.64
E. 91
2.94


ELECTRAD TRUVOLT Wire W ound Adjustable Resistors
Hish auality non- ortdaznn 10 w temp. 1000 Volt Insulation crature co-efflelent resistance wire, swace
wound on heat resisting ashestos insulated flexible core which in turn is wound on thread cut groove channels in spectal high rensile st rength fre-proof white lava tuhes. Advantages are high power dissipation due to natural alr coolling design, easy connection of taps, and durabillty. lmproved adjustable clip permits tapping at any desired point. Jrotective fiber in.
sulating sleeve. Mounting brackets included
Type A-10 Watts 3/8" ${ }^{\prime \prime} 13 / /^{\prime \prime}$ Long

| Stock N1Im. | Realst. <br> Ohme | $\begin{gathered} \text { Cur- } \\ \text { rent } \\ \text { M. A. } \end{gathered}$ | $\begin{aligned} & \text { Max. } \\ & \text { Volts } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 3E150 | 1 | 3150 | 3 |
| 3E151 | 2 | 2200 | 4.5 |
| $3 E 152$ | 2.5 | 2000 | 5 |
| 3 E153 | 3 | 1800 | 5.5 |
| $3 E 154$ 3 E155 | 5. | 1400 | 8. |
| $3 E 155$ |  | 1150 | 8.5 |
| $3 E 156$ | 10 | 1000 | 10 |
| 3 E157 | 15 | 815 | 12 |
| 3E158 | 20 | 700 | 14 |
| 3 E159 | 25 | 630 | 16 |
| 3E160 | 30 | 570 | 17 |
| 3E161 | 50 | 450 | 22 |
| 3E162 | 75 | 360 | 27 |
| 3E163 | 100 | 315 | 31 |
| 3E164 | 200 | 220 | 45 |
| 3 3165 | 300 | 180 | 55 |
| ${ }^{3} \mathbf{3 E 1 6 6}$ | 400 | 158 | 63 |
| 3D167 | 500 | 141 | 80 |
| 3E168 | 800 | 112 | 89 |
| 3 E 169 | 1000 | 100 | 100 |
| $3 \mathrm{E170}$ | 1250 | 89 | 111 |
| $3 \mathrm{E171}$ | 1500 | 81 | 122 |
| 3E172 | 2000 | 70 | 141 |
| 3E173 | 2500 3000 | ${ }_{5}^{63}$ | 17.58 |
| 3E174 | 3000 | 56 | 173 |
| 3E175 | 4010 | 50 | 200 |
| 3 E176 | 5090 | 45 | 222 |
| 3E177 | 7500 |  | 274 |
| $3 E 178$ 3 E 179 | 10000 15000 | 31 | 316 388 |
| 3E179 3 E180 | 15009 20000 | 26 20 | 388 <br> 395 |
| 3 E 181 | 25000 | 16 | 400 |

Adjustable Sliding Clips

| Stock | Ohms | Stock vumber | Ohms | $\begin{gathered} \text { Stock } \\ \text { Number } \end{gathered}$ | Ohms | $\begin{gathered} \text { Stock } \\ \text { Number } \end{gathered}$ | Ohms | YOUR PRICE, EACH... ${ }^{\text {St }}$ <br> TEN FOR ....................98c |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Ohms |  | Ohms |  | Ohms |  |  |  |  |  |  |
| $3 E 400$ | $1 / 4$ | $3 E 412$ | 15 | 3E425 | 200 | 3E439 3E440 | 700 750 | Number | Ohms | Number | Ohms |
| $3 E 401$ | $1 / 2$ | 3E414 | 20 | 3E426 | 22.5 | 3E440 | 750 800 | 3E455 |  |  |  |
| 3E402 | 1 | 3EA15 | 25 | $3 E 427$ | 250 | 3 E441 | 800 | 3E455 | 0 | $3 E 464$ | 50 |
| 3E403 | 13 | $3 E 416$ | 30 | 3E428 | 275 | $3 E 442$ $3 E 443$ | 900 1000 | 3E456 | 10 | 3E465 | 60 |
| 3E404 3E405 | 2 | $3 E 417$ $3 E 418$ | 36 40 | 3E429 | 300 350 | $3 E 443$ $3 E 444$ | 1000 1250 | 3E457 | 12 | $3 E 466$ $3 E 467$ | 70 80 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 3E406 | 4 | 3E419 | 50 | 3E433 | 400 | $3 E 445$ | 1500 | 3E459 | 18 | 3E468 | 100 |
| 3E407 | 5 | 3 E 20 | 75 | 3E434 | 4.50 | $3 E 446$ | 1750 | $3 E 460$ | 20 | $3 E 469$ | 150 |
| 3E408 | 6 | 3E421 | 100 | $3 E 435$ | 500 | $3 E 447$ | 2000 | 3 E461 | 25 | $3 E 470$ | 200 |
| 3E409 | 8 | 3 E 422 | 125 | 3E436 | 550 | 3E448 | 2250 | $3 E 462$ | 30 | 3 E 471 | 300 |
| 3E410 | 10 | 3 E423 | 150 | 3E437 | 600 | 3E449 | 2500 | 3 E463 | 40 | $3 E 472$ | 400 |
| 3E411 | 12 | 3E424 | 175 | 3 E438 | 650 | 3E451 | 3000 |  |  |  |  |

## OHMITE

DEGREES


Resistance wire units wound on refractory norcelain core. temperature rement. $100^{\circ}$ if safely carry temporary loads of amplffiers for
pairing sections of voltage dirlders in power pack of receliers and for tzans-


| 10 WATT |  |  |  | List, Each 35c. YOUR PRICE |  | $219$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ock Num. | Olims | lock Num | 0 hms | Stock Num. | Ohms! | Stock Num | n. Ohms |
| 301599 $3 C 1600$ |  | $3 C 1610$ 36161 | $\begin{aligned} & 25 \\ & 30 \end{aligned}$ | $3 C 1621$ $3 C 1622$ |  | $3 C 1632$ $3 C 1633$ |  |
| 3 Cl 1601 | 2 | 3 Cl 612 |  | 3 Cl 623 |  | C163 | 5 , 000 |
| 3 Cl 1602 3 Cl | ${ }_{4}^{3}$ | $3 C 1613$ 3 C 1614 | ${ }_{50}^{40}$ | 3C1624 |  | 3C1635 |  |
| $3 C 1603$ 3 C 1604 | 4 | 3C1614 | 75 | $3 C 1625$ <br> 3 C <br> 1626 |  | $3 C 1636$ <br> 3 Cl | $7^{7.5001}$ |
| 3 Cl 1605 | 7.5 | $3 \mathrm{Cl} \mathrm{S}^{16}$ | 101 | $3 C 1627$ | 1.2mi | $3 \mathrm{Cl}{ }^{\text {a }}$ | 12.nn |
| 3 Cl 1606 | 10 | 3 Cl 1617 | 125 | 3 Cl 1628 | 1. | 3C1639 | 15.000 |
| C1607 |  | $3 C 1618$ 3 3 |  | 3C1629 |  | $3 \mathrm{3Cl}$ |  |
| $\begin{array}{r}3 C 1608 \\ 3 \mathrm{Cl} \\ \hline\end{array}$ |  | $3 C 1619$ $3 C 1620$ |  |  | ${ }_{2}^{2.517101}$ | 3 C | 000 |
| Center Tapped 10 WATT |  |  |  |  |  |  |  |
|  | 10 |  |  |  |  |  |  |
|  | 15 |  | 40 |  |  |  |  |
| 3E1659 | 20 | 3E1662 | 50 | 3E1665 |  |  | 276 |
|  |  |  |  |  |  |  |  |
| ock Num. | Ohms | lock Num. | Ohms | \| Stork Num | n. Oin | ms | List T ¢ic. |
|  |  | $3 \mathrm{3C1647}$ | 55.004 | 3C1652 | 280.0 |  | YOUR |
| $3 \mathrm{3C1643}$ | 35.1100 |  | ${ }^{60.000}$ | - ${ }^{3} \mathrm{C} / 653$ |  |  |  |
| $3 C 1644$ 3 Cl 3 | +40,000 | $3 C 1649$ 3 C 1650 |  |  |  |  |  |
| $3 C 1646$ | 50.000 | 3 Cl 165 | 75,000 | 3C1656 | 6100 |  |  |



## New Candohm Replacement

## Armoured Resistors Wire Wound

Used by leading set manufacturers. Designed espeedally for replacement of or-
dinary type resistors. Wound on genulne dinary type resistors. Wound on genulne akelite core, covered with 1500 volt insulation-outer steel case protects unit from breakage or abrasion. Guaranteed 5\% accurate.

## 1 Watt

Below 12.500 ohms. Size $1 / 2 \times 1^{\prime \prime}$-Above 10.000 ohms. Size $1 / 2 \times 1 / 2^{\prime \prime}$

| $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | Ohms | $\begin{aligned} & \text { stock } \\ & \text { Number } \end{aligned}$ | Ohms | siock Number | Ohms |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $3 \mathrm{E4900}$ | 100 | 3E4909 | -00 | 3E4918 | 00 |
| ${ }_{3} \mathbf{3 E 4 9 0 1}$ | 150 200 20 | 3E4910 | 750 | 3E4919 | ${ }^{33000}$ |
| 3E4903 | +250 | 3E4912 | 1000 |  | 51000 <br> 8000 <br> 8 |
| 3E4904 | 300 | 3 E 4913 | 12.0 | 3 E 4922 | 8000 |
| 3E4905 | 350 400 | 3E4914 | ${ }^{15000}$ | SE4923 | 1.15000 |
| ${ }_{\text {3E }} \mathbf{3 E 4 9 0 6}$ | 400 <br> 500 |  | - | ( ${ }^{\text {3E4924 }}$ | \% |
| ${ }_{3} \mathbf{3} 4908$ | 600 | ${ }_{\mathbf{3 E 4 9 1 7}}$ | 2500 | 3E4926 | $25(1) 10$ |

List Price, 25e.
YOUR PRICE


| 21/2 Watt |  |  | 11/2 Watt Center Tapped |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stock <br> Numbe | Olums |  | $\begin{aligned} & \text { stock } \\ & \text { sumber } \end{aligned}$ | Ohms |  |
| $\begin{aligned} & 3 E 4927 \\ & 3 E 4928 \\ & 3 E 4929 \\ & 3 E 4930 \\ & 3 E 4931 \end{aligned}$ | $\left.\begin{array}{l}30000 \\ 35001 \\ 40000 \\ 4.5000 \\ 50000\end{array}\right\}$ | $\begin{aligned} & \text { Size } 15 \times 2{ }^{2} \text { ist } 35 c \\ & \text { YOURPRICE } \\ & 17 \end{aligned}$ |  |  |  |
| 10 Watt <br> Size $3 / 4 \times 13 / 4^{11}$ |  |  |  |  |  |
| $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | Ohms | Stock | Ohms | $\begin{aligned} & \text { siock } \\ & \text { sumber } \end{aligned}$ | Ohms |
| 3E4940 | 1) |  | 500 | 3E4960 | 4010 |
| 3E4941 | 20 50 | 3E4951 | 7600 | 3E4961 | 4510 <br> 5010 |
|  | 100 |  | ${ }^{1000}$ |  | 6000 <br> 7500 |
| 3E4944 | 150 | 3E4954 | 1200 | 3E4964 | 7500 |
|  | $c200250200$ | ${ }_{3}^{3 E 4955}$ | 1500 2000 | $3 E 4965$ 3 E4966 | 10000 |
| 3E4946 | - | 3E4956 | 2500 | 3E4966 | 150011 |
|  | 3500 |  | 3000 3 3 3 |  | 奖0001) |
| 3E4949 | (19) | 3E4959 |  |  |  |

List Price 40 c .
YOUR PRICE
Candohm Original Equipment Resistors


Exact duplicate of the originsi Can-
dohm units used in the sets listed dohm units used in the sets listed
below. Candohm part number shown in listing is identical to number stamped on metal shell of original unit to be replaced. Where resistor to be replaced has no number send unit to us properly tagged with name of
set mamucturer.

| $\begin{aligned} & \text { Mart } \\ & \text { Num. } \end{aligned}$ | Resistance Fach saction | $\begin{aligned} & \text { Slock } \\ & \text { Nilm. } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Part } \\ & \text { Nam. } \end{aligned}$ | $\begin{aligned} & \text { Resistance } \\ & \text { Each scetion } \end{aligned}$ | $\begin{aligned} & \text { Stock } \\ & \text { Num. } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Belm | on |  |  | $\text { U. } 5 \text {. }$ | Radio and Te | levisio |  |
| 12.58 | 350 | 3E4984 | 20 c | 1752 | 00-8400 |  | \$1.56 |
| 12261 | $\left\{\begin{array}{c}15000-2500 \\ 150-350\end{array}\right.$ | 3E4985 | 69 c | 1059 | 10700 $4700-8400$ | 989 | 1.56 |
|  |  |  |  | 50 | (10700) |  |  |
| Crosi | ey Radio Corp. |  |  | $\begin{aligned} & 2303 \\ & 2381 \end{aligned}$ | $1000-2640$ $8000-8000$ | $\left\|\begin{array}{l} 3 E 4990 \\ 3 E 4991 \end{array}\right\|$ | 394 694 |
| 20176 | (10-10-10 | 3E4970 | 494 | $2381$ | 8000-8000 | 3E4991 | 694 |
| 20.452 | $10-460$ $320-225$ | 3E4971 | 69 6 | 2811 | (550-60) ${ }^{\text {(2000 }}$ | 3 E4992 | 694 |
| b | +2000-1750 |  |  |  | $\{1200-1000$ |  |  |
| 20409 | 1000 | 3E4972 | 49 c |  | 50-500 |  |  |
| 211.55 | 3250-3250 | 3E4986 | 49 c | 9811A | $\left\{\begin{array}{l}550-600-600 \\ 12(0)-1(00)-500\end{array}\right.$ | 3 E4993 | 694 |
| 21956 | 3160 | 3 E 4987 | 394 |  |  |  |  |
| $2 \times 471$ | $\xrightarrow{25000-8.500}$ | $\left\|\begin{array}{l} 3 E 4938 \\ 3 E 4973 \end{array}\right\|$ | 398 598 | 3111 | $\left\{\begin{array}{l} 250(1-420-600 \\ 1500-1000-500 \end{array}\right.$ | 3 E4994 | 784 |
| 22574 | $\{1790-2150$ | 3E4974 | 59¢ | 3360 | 00-1000 | 3E4995 | 88 |
|  | $(1220)-4.5$ |  |  |  | $\left\{\begin{array}{l}11000-3000 \\ 1100-3200-180\end{array}\right.$ |  |  |
| 28755 | 246-28 | 3E4975 | 78 c | 3476 | $\left\{\begin{array}{l}1100-3200-180 \\ 225-2.50-200\end{array}\right.$ | 3 E4996 | 78 c |
|  |  |  |  | 3621 | 200-2(0)-225 | 3E4997 | 784 |
|  |  |  |  | 4145 | $\{300-10600$ | 3E4998 | $59 ¢$ |
| $\begin{aligned} & 6719 \\ & 7818 \end{aligned}$ | 2000-140-500 | $3 E 4976$ | $39 \%$ |  | 10000 |  |  |
| 8292 | 2000-350-500 | 3E4977 | 398 |  |  |  |  |
| 9239 | $\{7000-40$ | 3E4978 | 69¢ | 4353 | \{ 5000 -100 | 3 E4999 | c |
|  | $\left\{\begin{array}{l}13000-300 \\ 408-134-1800\end{array}\right.$ | $3 E 4979$ | 694 | 5463 | $5000-1800$ $400-1400$ | 3E4895 | 59. |
| 10145 | $\begin{aligned} & 408-134-1800 \\ & 360-9000-10000 \end{aligned}$ | $3 E 4979$ | 694 | 5463 | $\left\{\begin{array}{l}\text { 800-4200-250 }\end{array}\right.$ |  |  |
| 10252 | 10.000 | 3E4980 | 294 | 5807 | $\{400-1400$ | 3 E4896 | 49c |
| 10535 | 300-1500-500 | 3E4939 | 396 |  | $500-4200$ $60-17500$ | 3 E4897 | 396 |
| Inter | national Kad |  |  |  |  |  |  |
| $\begin{aligned} & \text { R } 302 \\ & 1 R 303 \end{aligned}$ | $\begin{aligned} & 1500 \\ & 310 \end{aligned}$ | $\begin{array}{r} 3 E 4981 \\ 3 E 4982 \end{array}$ | $\begin{aligned} & 29 ¢ \\ & 78 ¢ \end{aligned}$ | $\begin{aligned} & \text { Zentt } \\ & 63-25! \end{aligned}$ | ${ }^{\text {h }} 300-200$ | 3 E4898 | 69¢ |
|  |  |  |  |  | 1845-60.5 |  |  |
|  | $\begin{aligned} & \text { Victor } \\ & 315 \end{aligned}$ | 3E4983 | 78 c | 63-25: | $\begin{gathered} 900-2410 \\ (3300-(100) \end{gathered}$ | 3E4899 | 59¢ |

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# Centsalab <br> <br> RADOLEK REPLACEMENT 

 <br> <br> RADOLEK REPLACEMENT}

## New Standard Replacement

 RADIOHM VOLUME CONTROLSCentralab with its unequalled experience in the design and manu farture of over 18.000 . 0 ol volume controls for set mannfacturers
and replacement has develoned a new inprowed Hadlohm. A newly designed patented non-rubbing contact turns sinomthns, Whaft, easy to sab to lit practically every set appllation. Case diameter $13 / 8 \mathrm{In}$. depth o in ., shatt $2 y \mathrm{in}$. Iong minled plat. The Switch Model is eruipped with C-H underwriters
 switch tsue 18


| Heststance |  | Cirve <br> Num. | $\begin{aligned} & \text { Number } \\ & \text { with } \\ & \text { Switch } \end{aligned}$ | $\begin{aligned} & \text { Number } \\ & \text { I.ess } \\ & \text { Switch } \end{aligned}$ | lisi inCiruit suinher(See Jinge (3N) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Ohths | Taper |  |  |  |  |
| 5010 | Unit. | 1 | 62-118 | 72-118 | 9, 15.20 |
| I. 01610 | Itale. | , | 62-107 | 72-107 | 9. 1\%.20 |
| 2,6100 | UniP. | 1 | 62-101 | 72-101 | 4, ?, 17, 19, 20 |
| 3,000 | TJulf. | 1 | 62-108 | 72-108 | 4, $0,10,30^{\circ}$ |
| 4.000 | Unlf. | 1 | 62-109 | 72-109 | $4,1,19,20$ |
| $5,0(0)$ 5,0100 5 | t"nif. | t | $62-110$ $52-204$ | 72-110 | 4.9, 19, 20 |
| 5,000 10.000 | 1. I11. | * | 52-204 | 70-204 | 4, 10, 20 |
| 10.040 | 1.. 11. | 3 | $62-114$ $62-113$ | 72-114 | 4, $9,10,11,19,20$ |
| 10,000) | R. 11. | 4 | 52-205 | 72-113 | 's, ${ }^{\mathbf{3}} \mathbf{7}$, |
| 10.006) | 1. H1. | 6 | 62-100 | 72-100 | 4.19,20 |
| 15.000 | 1.. 11. | 3 | 62-115 | 72-115 | 5, 7.8 ${ }^{20}$ |
| 15.1009 | 11.11 | 4 | 99-006 | 79-006 | 2, 5, 7, 8 |
| 20.0109 | 1. 11. | 3 | 62-119 | 72-119 | 5, 7, 8' |
| 25.160 | 17nif. | 1 | 62-111 | 72-111 | 4. 3, 10, 11. 19, 20 |
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| 25.01119 | I. 11. | 3 | 62-102 | 72-102 | 5, 7. 8 |
| 50.6010 | Tulf. | , | 62-103 | 72-103 | 4. 19.20 |
| 50.000 | 1.. 11. | 5 | 62-117 | 72-117 | $4,5,6,15,16,10$ $20,21$ |
| 75.000 | 1. H. | 5 | 62-123 | 72-123 | $\begin{aligned} & 4,6,15,16,19 . \\ & 20,21 \end{aligned}$ |
| 75.600 | R. IH. | 4 | 52-202 | 70-202 | 2, 18.8 |
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| 3 mery. | I. H. | 6 | 62-132 | 72-132 | $1 i^{\prime}$ |
| All standard Radiohms are 3 terminal (potentiometer) type. |  |  |  |  |  |
| Where 2 terminal control is requited use center ind one outside |  |  |  |  |  |
| terminal Taper is more important than mavimum resistance. |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| the oppos | ite page. | 'Tupie | al elrcuit | applicatio | ¢ on Page 68 |


| Neve Svitels Covere Plate |  |
| :---: | :---: |
| For all Centralab Standard Radiohms Any plain Radiohm listed above may be converted to the switch type by reblacing the back cover with this new switch coverplate. Approved switch. |  |
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| Volntire Control firide |  |
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|  |  |
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| trol with switch. Exactly du- | 600 ohm strip. |
| ally and mechanically but | R-1742 List, 75t. |
| not necessarily in appearance. | YOUR PR |

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| Model <br> Reretver | Resist. <br> Ohms | $\underset{\substack{\text { Electrad } \\ \text { vunber }}}{ }$ | Your | $\begin{aligned} & \text { Cem- } \\ & \text { tralitb } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ | Radolek <br> Control <br> Number | Your Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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Volume, Tone, Sensitivity and Hum Controls
With the ald of you servicemen who have called to our attention errors In our former 1 istings. we offer a more complete and accurate Guide. The Radolek Replacement Controls.


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## Senior Potentiometers

 and Gain ControlsWhere acturacy of control is important the
Senior Gain Control is superior for unitorm volume attenuation beriuse of its targe size and the care ustil or manhfacturing. He Bakelite case os mate tight ahainst dost bushing insulated from all tre ainsomery permanemt. Shaft and uuts for mantiar and with controls are potentiometers equarially taver for undform. Gatar altemurtion of audio abmilitler, and mas lue caltiorated in decllb, is long. Shatt $1 / 2 " x 1 / 2 "$ long

List I'rice, $\$ 3$
YOUR PRICE
\$17

| Llst ${ }^{\text {Prit }}$ YOUR | $\begin{gathered} \$ 3.50 . \\ \text { icce. . } \end{gathered}$ | 171 |
| :---: | :---: | :---: |
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| 24-084 | 2500000 | 50 1) |
| $24-085$ $24-086$ | 100.000 500.000 | 50 18\%. |



| Potentfometers |  |  |  |
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| Stork |  |  |  |
| Num. | Ohms | N゙u | Ohms |
| 24-108 | 200 | 24-050 | 50.000 |
| 24-110 | 410 | 24-100 | 100,006 |
| 24-111 | 2.000 | 24-200 | 200.000 |
| 24-112 | 10.000 | 24-500 | 500,000 |
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## How to Gelect the Proper Attenuator

Resistance of "Pad" should equal Impedance of Circuit or Line. Where possible use a " $T$ or Constant mp . Fader type control as in individual speaker control on a multi-speaker circuit. use tombination "it" Pad Straight Resistance Faders are used

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Model
THOS. A. EDISON, INC ${ }^{\mathrm{R2} 200}, \mathrm{C}^{2}, \mathrm{Mi}$ ) $\mathrm{R} 1 . \mathrm{IR2}, \mathrm{JC}, \mathrm{JR}$, C1. ("2, M11, R1, J2, JC. JR.

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Kesist Ohnis


| Hesist. Ohnis |
| :---: |
| 50 M |
| 2000 |
| 3000 |
| 511 |
| 10M |
| 5M1 |
| 10M |
| 500 M |
| 500 1 |
| 500.11 |

## Special RCA Reference Chart

## Of General Electric, Graybar and Westing

 house Receivers Built By RCA Victor You can easily find the correct control Por any General Electric,Graybar or Westinghouse receiver. Locate on this chart the Graybar or Westinghouse receiver. Locate on this chart the to the RCA Vietor Histing on pages 69 and 70 of the Radolek replacement volume control gulde.

 shaft is $1 / 4^{\prime \prime}$ diameter, $13 / /^{\prime \prime}$ long. Mount in single $\%$ hole on any panel not over som thick. All units are potentiometer type and have no switches.

## Single Unit Super Tonatrols

Stock Reslistance
Ohms


## RADOLEK REPLACEMENT



## VOLUME CONTROL GUIDE

New ELECTRAD Tapped "TT" Attenuator Constant Impedance New high quality T Pad utilizing wire wound non.inductive

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$344,360,363,390,393$, (Tone) $344,360,363$, (C.A.V.C A(d).)

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| :--- |
| 85 | 85, 86, 800, 998, (Tone)

## HOWARD RADIO CO.

${ }^{13510} \mathrm{DC}$. ( ${ }^{0101}$.)
210, SH245, (ireen Diamond 8 ,
SGA, SGC, (Vol.)
sGB, Miniature. (Vol) 5, 35-47, 40, 40-47, EX, H. $35,35-47,40,40-47,400,420$, ${ }_{4.5}, 60$, AVh, $^{1}$, ${ }^{\text {M, (Tone) }}$ $35 \mathrm{~A}, 4,60$, A VII, AVO, (Vol.) 20, 25, 30, 32, (Vol.) 420), L, M, (Vol.) 3.5A. AVO. (Tone) 33, (Vol.)
CINTERNAT:L KADETTE

| Resist. ()haik | 1:lectrad Number | Your Price | $\begin{aligned} & \text { cen- } \\ & \text { tratab } \end{aligned}$ | Your Price | Radolek Control Control | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Con't |  |  |  |  |  |  |
| $\begin{aligned} & 50 \mathrm{M} \\ & 50 \mathrm{M} \end{aligned}$ | (181-553 | 50.66 .66 | $\begin{aligned} & 41-060 \\ & 41-1660 \end{aligned}$ | $\begin{aligned} & 50.73 \\ & .73 \end{aligned}$ | $\begin{aligned} & 3 E 3061 \\ & 3 E 3061 \end{aligned}$ | $\begin{array}{r} 50.56 \\ .56 \end{array}$ |
| $\left[\left.\begin{array}{c} 6500+1 \\ 160131 \end{array} \right\rvert\,\right.$ | 12I-4441'C | 1.19 | 55-014 | . 88 | 3E3062 | . 72 |
| 90 | 121-43? | . 66 | 72-117 | . 61 |  |  |
| 85. 1 | RI-2.40P | . 79 | 55-014 | . 88 | 3E3065 | . 72 | resisturs with a triple gang tap-switch of new design with self cleuning contacts. Absolute quict attenuation is obtainable

ln 11 steps. Ideal for high guality $\begin{gathered}\text { steps. A. Ideal for high } \\ \text { gid }\end{gathered}$ application. 8 watt copacity.

List Price, $\$ 12.50$.
YOUR
PRICE, EACH,..... \$235


ELECTRAD Mode1 U Constant Impedance Volume Control



## Royalty "L" Pad Attenuator



Exact Replacements for Majestic
Majestic Models $15,15 \mathrm{~B}, 150,151,153$, wood, Havenwood, Sherwod, Ellswood, Fyfe ume Control 11,500 ohnts blus 26 b ohm blas resistor with switch. 55.010. List. $\$ 1.80$. YOUR PRICE

## 88c

Volume Control-Models 25, 251, 253, 251,
1 st Mtudels $13 r e n t w o o d$, Brucewood, Cheiten-
wood 154, Fyfewood, 10,000 ohm control with switeh 55014. List, $\$ 1.80$. YOUR PRICE

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## VOLUME CONTROL GUIDE

## Mordel

| 1 |
| :--- |
| 24. |
| 41, |
| 30, |
| 11 |
| 11 |
| 45 |
| 37 |
| 38 |
| 40 |
| 18 |

## Special Replacement Controls for RCA-VICTOR-RADIOLA



Sneelal 2.000 ohm wire wound valume control Exacty dupliand miechanical speciftcat lons. R1-401-1.1st. $\$ 1.50$. YOUR

Radtola R44, R46AC, R47 Tapped volume control $1500+$
R1-403-List. $\$ 1.50 .979 \$$
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## Radiola Models R18AC <br> R180C, R33AC, R33OC, R51AC, R510C, $7-26$,

R51AC, R510', $7-26$
2.000 ohm volume control
2.000 ohm volume control.
RI-402-1.1st, $\$ 1.50 .798$
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## Radiol

Spertal

- h m
commer
bentical taper
and electrical soecifcations
hysleal ancarance ifferent.
72-013-List. \$1.50.
YOUR PRICE
738
RCA Victor ModalsR15,
RE 17, R42, R48, GE-T4i
REA17, RAR
Graybr
GB678

WestingWR4 ${ }^{\text {Ho }}$
Spectal twin volume control 50.000 ohms eacl: sectiont. Exactly replaces the or
3E3080-List, $\$ 3.00$.

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QUR21, R23,
RO23, RAE 26
13.000 ohm volume control tapped at 3,000 obmas, Exactly replac
RI-385-List, $\$ 1.25 .6 \leqslant \mathbf{S}$
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## Electric

## RADIO SERVICE

will lring wubstantal netal case, anticue gold Hinished frame, glass panel with trinsparent red lettering akainst opacue black hackground. Two 6 inch tubular butbs inside case moride strong, evenly distributed pelling attractiveness elther day or night. Clogely resembles pelling attractireness either das or cxpensive neon sikn $31 / 2$ appearance. deep. Complete with tiso 25 long. $5^{1 / 2}$ in. high, $3!/ 2$ in, deep.
watt bulbs and 6 Ft , cord with plug.

A GENUINE NEON SIGN IS LISTED ON PAGE 16.

## RADOLEK REPLACEMENT

\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline Motjel Hecen'er \& Respist.
Ohnss \& Filectrad Number \& \[
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\] \& Your \& \begin{tabular}{l}
IRadolek \\
Control \\
Number
\end{tabular} \& Your Price \\
\hline R.C. A.-VICTOR, INC. 12AL:68, (Vol.) \& \[
\begin{gathered}
\text { Con't } \\
50 \mathrm{M}
\end{gathered}
\] \& 12I-205 So \& 50.59 \& 72-103 \& 50.61 \& 3E3022 \& 50.49 \\
\hline 15, RE16, RE16A, R1:17, HE57 RAE68. (Phono.) \& \%0 \& RI-384 \& . 66 \& 48-050 \& . 98 \& \& \\
\hline R14, For 60 es.., (Vol.) \& 0011 \& F13-271 \& 1.5 \& \& \& \& \\
\hline R15, RE17, 1242, R48, For 60 \& 5015 \& F33-228T \& 1.59 \& 74-526 \& 1.22 \& 3E3122 \& 1.04 \\
\hline CM, (Vol), (Tone) \& 22500 \& 121-2N0 \& 1.59 \& 6i2-111 \& \({ }^{1.82}\) \& \& \\
\hline 1116, 7-10, (Vol.) \& 225 \& 131-400 \& . 92 \& 48-0196 \& . 98 \& \& \\
\hline RAF68. R80, R89, R86, (Vol) \& 4000 \& \({ }_{\text {R1 }}^{\text {R1-381 }} \mathbf{- 2 0 5}\) \& . 79 \& \(72-109\)
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\hline 12AE68, R80, 1882, 1886. (Tone) \& 409I \& 121-205 \& . 59 \& \& . 61 \& \& \\
\hline 1242, For 60 ey.. (Vol.) \& 10. \& FB.570T \& 1.59 \& \& \& \& \\
\hline R47, (Tapped Vol.) \& \[
\left\{\begin{array}{l}
1500+ \\
1400
\end{array}\right\}
\] \& I21-403 \& . 79 \& 72-108 \& . 61 \& 3 E3124 \& \\
\hline RE34, RE35, RE39, RE57, KH73, (lone) \& 2 Meg. \& RG-489 \& . 79 \& 72-132 \& . 61 \& \& \\
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\hline \(1844,1246 \mathrm{AC}\), (Vol) \& 2900 \& 121-403 \& . 79 \& 72-108 \& . 61 \& 3E3124 \& . 49 \\
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\left\{\begin{array}{c}
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\] \& \& \& 1220900 \& 1.47 \& \& \\
\hline \& 600. 30 \& \& \& , \& \& \& \\
\hline in78A, RAE84, (Tone Tapped Vol.) \& \[
\begin{gathered}
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\] \& \& \& 1210902 \& . 86 \& \& \\
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3F3124

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\hline 1320, 1322, 1324, 1390. 1400 \& (5000) + \& \& \& \& \& \& <br>

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& 70-205
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\hline $$
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\hline | 218. (Tone) |
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| Sears Roebuck - Con't on | \&  \& \[

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\begin{aligned}
& \text { RI-205 } \\
& \text { age }
\end{aligned}
$$
\] \& . 59 \& 72-117 \& . 61 \& 3E3022 \& 2 . 49 <br>

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\end{tabular}

## VOLUME CONTROL GUIDE

 circuit. Nax. cay. . 005 ; Min. . 00005

A complete unit. No addltional eoulpment necesary. Where a single power tube 1 used, terminals on controf control to the two grids.
rhe practically liminates nolse and static of all kinds. Housed in one plece bakelfe shell with metal backplate $1 / 4{ }^{\prime \prime}$ diam. Shaft length $1 / 2$ including $1 / 2$ " long threaded buvhing which
$\begin{array}{r}\text { 3E3 i99 LIst. } \$ .150 \text {. YOUR PRICE } \\ \text { TEN FOR......... } \$ 3.95 \\ \hline\end{array}$
$\$ 3.95$
42 c
Frost Wire Wound Volume Controls Very smooth wiping contact made by high pressure self cleaning contact arm. Stralght line resistance, no taper, case


\begin{tabular}{|c|c|c|}
\hline \[
1 / 4 \prime \mathrm{sl}
\] \& \multicolumn{2}{|l|}{\begin{tabular}{l}
Frost Series "2880" \\
Controls \\
Carbon potenilometer type. Bakeltie case. Roller type contact very smooth and quiet. Case diam. 1\%/7" \\
\(2^{\prime \prime}\) long.
\end{tabular}} \\
\hline Ohms \& Swltch \& Switch \\
\hline 5.000
25000 \& 3E3382 \& 3E3391
3E3394

SE3 <br>
\hline 75000 \& $3 E 3387$ \& 3E3396 <br>
\hline 100.000 \& 3E3388 \& $3 E 3397$
SE3 <br>
\hline 250,000 \& 3 E 3390 \& <br>
\hline rour Each \& \& 690 <br>
\hline
\end{tabular}

Special Stromberg-


RI-32-LIst. \$1.25. YOUR PRICE 666 10.000 ohm Vol. control with rear extension inbl. RI-1437-list.
YOUR PRICE Madels 641 642 Models
20,000 ohm Vol. Control with long shatt
R1.31-LIst. $\$ 1.25$.
YOUR PRICE
800 ohm Vol. Control with R-1436 list. $\$ 1.00$. $5 \mathbf{3}$ R-1436 PISICE
YOUR PRICE 534


United Bosch
Models 28, 29. 250.000 ohm volume montrol threaded extended shaft. Identical eleetrirall and mechan-

924

RADOLEK REPLACEMENT


VOLUME CONTROL GUIDE


## Carter Midget Controls

| Midget Pote | Pote |  |  | Midget |  | Rheostat |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stock <br> Number |  |  | ms |  | Ob | Stock |  |
|  |  |  |  |  |  |  |  |
| 3 C | 10 | ${ }_{3}^{3 C 3418}$ |  |  |  |  | 25 30 |
| ${ }^{3} \mathrm{3C3415}$ |  | ${ }^{3} \mathrm{C} 3420$ | 1000 | C | 15 |  | 40 |
| 3416 3417 | 200 | 3 C 3421 | 150\% |  |  | ${ }_{3}{ }_{3}$ | 50 |
| 3 C 3117 | 200 |  |  |  |  | C | 75 |



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| :---: | :---: |
| Rhcostat |  |
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|  |  |
| thick. $1 / 4$ "n dlam. Shaft extends |  |
| 11/"' ${ }^{\prime \prime}$ |  |

RADOLEK Heavy Duty
New Fused Carbon Resistance
Carries 5 Watts at Any Seting
Used by I o a d ing Set
Manufacturers. Espectally
adapted for use in clr.
sipation is sufficiently heary to break down ordinary types of Volume Controls. Will earry 5 watts continuously with arm set at any point of resistor segment. This is nearly 5 times the capacity of the conventional control.
solld moulded resistor element of bakelitecarbon mixture, formed hy baking under terrific nressure. Sliding



| Restst Ohms | $\begin{aligned} & \text { Nunber } \\ & \text { Lufus } \end{aligned}$ | $\begin{aligned} & \text { Number } \\ & \text { With } \\ & \text { Swltht } \end{aligned}$ | $\left\|\begin{array}{c} \text { T:aper } \\ \text { (Sgec } \\ \text { (Sg } 63 \end{array}\right\|$ | $\begin{array}{\|c\|} \text { Taper } \\ \text { Curve } \\ \text { Num. } \end{array}$ | $\begin{aligned} & \text { Used in Circuit } \\ & \text { Number } \\ & \text { (See page 68) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 400 | 3E-3500 | 3E-3520 | Unlf. |  | 9, 17, 20 |
| 5010 | 3E-3501 | 3E-3521 | Unif. | 1 |  |
| 1.000 | 3E-3502 | 3E-3522 | Unlf. | 1 | $9,17,20$ |
| 5.000 | 3E-3503 | 3E-3523 | Unif. | 1 | 4, 9, 19, |
| 10.000 | 3E-3504 | 3E-3524 | L. 11. | 3 | 5. |
| 10.000 | 3E-3505 | 3E-3525 | 12.H. | 4 |  |
| 10.000 | 3E-3506 | 3E-3526 | Unit. |  |  |
| 50.000 | $3 \mathrm{E}-3507$ | 3E-3527 | Unit. | 1 |  |
| 100.000 | 3E-3508 | $3 \mathrm{E}-3528$ | Unit. | 1 |  |
| 250.000 500000 | $3 \mathrm{E}-3509$ $3 \mathrm{E}-3510$ | 3E-3529 | Unif. |  |  |
| Frost Dual Controls <br> HAn High quality tandem units <br> Controls two semarate insulated circulis. ITntform <br> taper. Bakelite case diam. 1 弱" |  |  | Centralab <br> VolumeControls |  |  |
|  |  |  |  |  |  |
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depr. Wakelte case diam. 1 弱" YOUR PRICE.
188 long.

| Stock <br> Number | Unit Panel | $\begin{aligned} & \text { Serond } \\ & \text { Unit } \\ & \text { Olins } \end{aligned}$ |
| :---: | :---: | :---: |
| 3E-3331 | 10,000 | 50,000 |
| 3E-3332 | 10) 0000 | 25,0010 |
| YOUR EACH | ICE, | 79 |



## Frost

## Potentiometer

12,500 ohm. Rol-
ler contact
bon elcr
depth cnt
$15 / 8$
$1 / 2$
$3 / 8$
3


# Exact Duplicate Replacement Condensers <br> Paper Foil Type Unless Otherwise Specified 

## ATWATER KENT Condenser Blocks

 Models 37 and 38 ncluding Chokes P5100 YOUR
PRICE
\$169
Contains 3 mid. fllter block and 3 chokes. two hikh voltage filter chokes and one speaker choke. Sis color coder insulated
inal. S1
Part No. 9575 for Battery Set 1 $4 \times 1 / 2 / 2$ Two leads
P5 580 List. $\$ 1.25$. YOUR PRICE 71C
Part No. 9497 for Models 37, $38,39,40,42,46,52$ $3 \times 237 \times 1 / 2$ Three leads
P5497-List. $\$ 1.50$.
YOUR PRICE
59C
Part No. 14097 for Models 55, 55C, $55 F$
25 mid. bypass condunser siz P5930 List

714


25-.25-25 mid. bypass condenser,
ifili exactly replace part number 2832
PHILCO Filter Condenser

P7237YOUR
\$2,45
Exact dupll-
cate of oririth greater margin of safety. Has
8 sections as follows: $1-.01$ Mfd. 600
$V . \quad 1-.1$ Mfi.. 100 V.. $1-\%$. Mfd.
200
400
Mfd. 600 V ltectangular metal con-
Philco Midget Electrolytic
Part No. 10709 i 8 mifd. 350 working volts.
Drawn Drawn rectangular metal
container with mounting Plange. Size $3 \mathrm{~h} \times 13 \times 7 \%$ infles. Three insulated $11{ }^{\prime \prime}$ 3E9000-Us \$1.45 YOUR PRICE

85

## FADA Filter Condenser

## 

MAJESTIC
Filter Condensers


Exact dublicate Majestic replacement condenser blocks. 13uilt the ${ }^{10}$ the original specifications they fit exactly nereased safety factors. All terminals

Part No. 7P6 for Model 70 Total 9 mitd. Five lug terminals. Container $9 \times 1 \times 24 /{ }^{1}$ inches. $7 P 6-L i s t$.
YOUR PRICE $\mathbf{\$ 1 . 9 0}$ Part No. 8P6 for Model 180 Chassis 8P3 and 8P6 Power Packs
Total 9 mid. Six lug terminals. Conainer $9 \times 4 \times 21 / 4$ inches 8P6-LIst $\$ 12.00$.
YOUR PRICE
\$3.70
Part No. 9P6 for Model 90 Power Packs

$9 \mathrm{P6}$-List. $\$ 9.00$.
rminal
YOUR PRICE
$\$ 1.90$

## Majestic By-Pass

350 D. C. Working Volts P1382-1Alst. S0.50. $28 \mathbf{2 8}$

Part 5050-. 6 mid. b
P| 393-I $\$ \mathrm{st}$. $\$ 0.85$.
YOUR PRICE
Part $5140-2$ mid. hywass. $13 \times 1 \times 7 / 4$
P $1394-1$ ist. $\$ 0.55$.
YOUR PRICE


YOUR PRICE
Part $5233-1$ mid. by
PI 409-List. $\$ 0.20$.
YOUR PRICE

Part 5236-. 02 nifd. hy
PI407-IAst, $\$ 0.20$.
YOUR PRICE ......
Majestic Replacement Electrolytic

## Part No. 10662 Es $6.8 \mathrm{~m} / \mathrm{d} .450 \mathrm{w} . V.$. Cardionard Con-

talner 4 ysx :sxi. Three lug term Inals. 3E900I-I.dst, $\$ 1.50$.

88t

## Majestic Pirate Chest

Models
380-381
Part No

8 mid. tho wif electrolytic con-
 3E9002 List, $\$ 1.35$.
YOUR PRICE
794
Majestic Electrolytic Replacement
 stuil mounting; contajner mer.
Mounts in single $\%$ hol Larke lock nut clanips securely
 Two $10^{\prime \prime}$ Insulated trexible
\$3.15
Crosley Part $B$
Crosley Part B30017
 3E9010-List. \$1.45. YOUR

## Crosley Paper and Foll <br> Replacement Condensers

Model 77 Part W20446 1-.5-. 1 ilter size $2 \times 2 \times 1$ to". Thret lug erminas.
P5754-List. \$1.50.
YOUR PRICE
634
Model 54 Part W7753 -.5-. Bypass size 2x2x1起". Three lug terminals
P5832-list. \$1.50.
YOUR PRICE
48C
3E9006-List. $\$ 0.60$
YOUR PRICE
354
Crosley Models 163, 400, 402
Part W 28068
Cardhoard containe


204x1/exit. Two lug terminal
YOUR PRICE ...............
564
167, 169
Part W29150A
Triple section 7 mid. 450
W. $\mathbf{V} .-6 \mathrm{mid}-400$
Wid. $25 \mathrm{~W} . \mathrm{V}$.
luminum
Inverted
luminum container.
hounting for single 7/a"
hole. Container common neg-
ative. N'ize $4 \% \times 1 \%$. Three 4 g terminal.
$39008-1$.



Part W30419
Dual section electrolytic 8 mid. 250
aluminann container. stud mounting for
single $7 /{ }^{\prime}$ " hole. Container insulated.
 3E9009-List, $\$ 1.10$. YOUR PRICE

65¢
U. S. Radio \& Television Filter
 $12^{\prime \prime}$ leads. Dimensions: heiaht depth 2
long ${ }^{2}$,
mounting
P733-
YOUR PRICE

U. S. Radio Apex Model 37

Part 854
5.5 mid . filter condenser slze $5 \times 3 \frac{1 / 2}{2} \times 2$ Eifht lug terminals. Eractly dupllrates the original condenser block-P4322-List. $\$ 5.00$.
\$2.82
U. S. Radio Model 26 Apex Gloritone

Part 2235
Special multiple section hypass $1=$ duplirate of the original part. Eight insulated clexible leads and one lug

P7530 LISt \$3.00.
\$1.69
your price
U. S. Radio and Television

Models 46, 47-Part No. 975 Totat caparity ${ }^{5.6}$ mfd. 5 insulated mor ended ${ }^{1} 2^{\prime \prime}$ leads. Anpearance and dimensions exactly the same ${ }^{\text {the }} \mathbf{~ P 9 7 5 - -}$

Part W6428-.5-.5 Bypass 2x1 Ax*' Three lug terminals.
P5896-List. \$1.25.
YOUR PRICE 5
Part W21456-.1-.1-.1 13ybass 2xl 48 x

Part W5496-. 1 Bypass $11 / 2 \pm 5 /{ }^{\prime \prime}$. Two lug terminals.
P5898-list. $\$ 0.50$.

Part W20186-.25-.3-.25 Bypass 2x

Part W22412-.1-.1-.1-.1 Bypaile 2tix
$1 / 4 x 3 / 4$ ". Four lug terminals.
P7399-List. $\$ 1.10$.
YOUR PRICE
46c
Part W23736-.25-.5-.25 Bypait 21/6x
2x $74^{\prime \prime}$. Four lug terminals.
YOUR PRICE 75
SPARTON
FilterCondenser
Blocks
Constructed to
duplicate the spe-
clfications of the
oricinal blocks.
Egual or superior
to the original
units. wherever
posible, the safe-
ty margins have
been increased. AC62. AC7 and AC63. Total capaeity 3 mid. 7 color coded ${ }^{15}$ leads. - Didenth $21 /{ }^{\prime \prime}$ Mounting serews are dentrs2" for $6 \% 2^{2 \prime}$ mounting bole
centers. PRICE ........... $\$ 3.25$
YOUR PRICE
P79A-For inodels AC69A. 73A. 89. and 78 A . Total capacity 7 Yo mifd. 8 color coded $10^{\prime \prime \prime}$ leads. Dimensions. YOUR
PRICE
\$2.95
P7290 For Sparton Model 930 Receivers. Total cabacity 6.1 Infd.
5 insulated eolor coded ledas. Dlmenslons $51 / 4^{\prime \prime} \mathrm{h} / \mathrm{gh}, 3 \frac{14}{} /{ }^{\prime}$ wide. $2 \frac{142 "}{}$ deep.
YOUR PRICE 95¢
Sparton By-Pass
Exact replacement for
Sparton recelvers-9 ${ }^{\prime \prime}$
lonk-18 ar diameter.
screwe on and lor 92
slot at side. Fibre case
Wth hermetlcally sealed
nds, Pancr and fol
typo. 1928-31 models.

tock

3E5292
 trolytic condenser. Round ated. Size $4^{1 / 4}$ ¹ $^{1 / 8}$. Complete with mounting ring. wo nositive lug terminals. rminal

Hisoy

## Exact Duplicate Replacement Electrolytic <br> Condensers for Midget Sets

art Num. 6487, for Victor Models 37, 38, 120, 220; Gen-Elec., K63. An exact duplicate of the original in elec 350 rolts : 10 mfd. 150 wolts ; 4 mfd , 22 volts. Cardboard contalner $33 / 4 \times 13 / 4 \times x 11 / 2$ " 3 E9012 YOUR PRICE
\$1.82

Part Num. 7589, for Victor Models 28, 110, 111, 115; G-E Model's K52, K53, K58. 3E9013-


## \$1.03

Greater safety factor than the original. $\begin{array}{cccc}\text { mfi. stand und } & 450 & v . & \text { cardboard container }\end{array}$ with mounting tabs. $33_{1} \times 11 / 2 \times 1^{11}$.
Part Num. 6518, for Victor Models 22W, 22S; G-E Models L50. L5
$3 \mathrm{E} 9014-1$ List. \$1.55 938
Six inch flexible leads. color coded Cardboard container with mounting

Part Num. 6511 RCA Victor 22W, 22S G-E Models L50, L5I 3E9015-LIst. \$1.60
YOUR PRICE
944
$10-8 \mathrm{mid} .35 \mathrm{~F} .4 \mathrm{mpl} .250$ v. Cardboarl contalner $3^{3 / 5} \times 1$ hx1 ra in. Single mounting tab. Five tnch color coded
flexible leads. Insulated.
Part Num. 3538 RCA Victor 17M, 18W, 27 G-E Model K40A

$4-4 \mathrm{mfd} .140$ volts. Tubular cardflexible leads.
Part Num. 6513 (old Num. 3536) RCA Victor $17 \mathrm{M}, 18 \mathrm{~W}$, 27 General Electric K40A 3E9017-Idist, 75c. YOUR PRICE
YOUR PRICE
$5-5 \mathrm{mfd} .35 \mathrm{rol}$
 container, $21 / x^{5 \pi / 8} \mathrm{in}$. Bare plexible leads.
Part Num. 66143, for RCA Victor Model R28P
$3 E 9018-$

## 53c

4 mfd .150 v. $4 \mathrm{mfd}^{2} 300$ v. Cardmounting tabs. Lug terminals.

RCA Victor Part Num. 10711

RCA Victor Part Num. 66140 3E9020-I.1st. S1.55.
YOUR PRICE ............ $\mathbf{~} \mathbf{1} \mathbf{4}$ 4-4 mifd. 175 w.r. Tubular carboard
 bare wire leads. Used in a number
of Ro'A Victor A.C.-D.C. and compact recevers.
RCA Victor Part Num. 66140-2
 bare wire leals.
3E 902 i-List Price, $\$ 1.15$ YOUR PRICE

67 C
Gillfillian Part Num. 10267
3E9031-
Yist $\$ 1.35$.
YOUR 794
PRICE. 79
$16-8 \mathrm{mfd} .150$ working volts. Cardboard container with mounting tabs.

## Part Num. A407. for International Kadette Standard Model

 3E9022-
$1-4 \mathrm{mfd} .175$ F. Carclboard contafner $33 / 6 \times 11 / 4 \times 3 / 4$ in. Color coded insulated Part Num. A408, for Kadette Stardard Model

3E9023-

$5-5 \mathrm{mpd} .35$
rolt. Cardboard container Color coded flesthle insulated leads Exactly diplicates the original part. tional Kadette Models A and $B$


4-10-10 mfd. -175 . Cardhoned can flesible Insulated leats.
Kadette Part Num.

$$
3.3 \mathrm{mfl} . \quad 106 \mathrm{w} . \mathrm{r} .
$$

 214x11/4x $x^{5 / 4}$ in. Color Coded flexible insulated $12{ }^{\prime \prime}$ leadles.
$3 E 9025$-J.ist Price. 95 c . YOUR 564


International Kadette Part Num. A427 $3 E 9026$-List lrice. S1.20

TYOUR
PRICE $3.5-3.5$ mfd. 100 v.: 3.5 tainer 2x] Anx in. Four
color cueded
5 inch flexible
Part Num. HC3I for Emerson
Models 20A, 25, 25A, $3 E 9027-1$
l.1st. 51.00.

## 59C

$4-4 \mathrm{mfl}, 200$ rolts. Cardbonnd contalncr with single mounting tab. Three flexible insulated wire leads
color coded.
Part Num. HC32 for Emerson
Models 20A, 25, 25A $5-5 \mathrm{mfd} .35$ rolts. Cardboarl container with single mounting coled.
3E9028-List, 75c.
YOUR PRICE
44
Part Num. KC68 for Emerson
Model 250 W
$4-8.16 \mathrm{mfd} 175$ rolts.
3E9035-List, \$1.80. \$1.06
YOUR PRICE

## 

hoard container $4 \times 31 / 2 \times 11 / 8$ with
mounting lugs identienl to the original unfi. Nis insulated ilexible color
coded leads.
Colonial Model R9181 3E9030-
YOUR
PRICE.

## 598

Wrorking
Tubular cardboard mantainer inch with center stran mounting.
Neven inch insulated flexibic leads

## 

## MALLORY ELKON

## Dry Electrolytic

## Replacement Condensers

Surge-proof and "self-healing." hstand high operating tempera-tures-absolutely dry-may be mount$d$ in any position

## Tubular Aluminum Containers



|  |  |  | Tub <br> placen ers. temp out. | lar By-P <br> In Cardb <br> int partricige <br> ealed with <br> rature. <br> $2^{2}$ <br> $\mathbf{L}_{2}$, | $\begin{aligned} & \text { SS C C } \\ & \text { ird } \\ & \text { ble dr } \\ & \text { ecial } \\ & \text { finne } \\ & \text { Diame } \end{aligned}$ | dens <br> es <br> electrol <br> to <br>  | $\begin{aligned} & \text { rs } \\ & \text { le con- } \\ & \text { thst nnd } \\ & \text { ill not } \\ & 1 / 4^{\prime \prime} . \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stork } \\ & \text { 天"umber } \end{aligned}$ | Cap. Mfis. | Volts <br> D. C | Your Price | $\begin{aligned} & \text { Stock } \\ & \text { 天unber } \end{aligned}$ | $\begin{aligned} & \text { Can. } \\ & \text { Mfd. } \end{aligned}$ | $\begin{aligned} & \text { Volts } \\ & \text { D. C. } \end{aligned}$ | Your Price |
| 3D5681 | 50 | 5 | 44 c | 3 D 5690 | 8 | 150 | 44 c |
| $3 D 5682$ | 10 | 25 | 29 c | 3 S 591 | 2 | 200 | 32 c |
| 305683 | 25 | 2.5 | 38 c | 305692 | 4 | 200 | 38 c |
| 305684 | 10 | (1) | 38 c | 3 D 5693 | 8 | 200 | 47 c |
| 305685 | 25 | 50 | 47 c | 3D5694 | 2 | 300 |  |
| 305686 | ${ }^{5}$ | 100 | 32 c | 305695 | 4 | 300 | 41 c |
| 305687 | 10 | 100 | 41 c | 3 D 5696 | 8 | 300 | 57 c |
| 305688 305689 | 25 | 100 | 56 c 35 c | 3D5697 | 2 | 450 | 38 c |

Wurlitzer Part Num. 11007
3E9032-
YOUR PRICE ... 4d
10-10 mitd. 25 WV . Hound aluminum container with conter mounting shand lag Wurlitzer Part 10656 3E9033
YOUR PRICE \$1.12
$12-16 \mathrm{mfl} .150$ w.f.: $10 \mathrm{~m}(\mathrm{cl} .25$

Lyric Part No. 10678PE
3E 9034 -List, \$1.25. YOUR PRICE

4-8 mifd. 300 working volts. Cardboard confexible insulated leads color coded.

Furnghed in universal ubright or inverted containers soace. Negative terminals grounded to ean. Standard container size lugs or $6^{\prime \prime}$ leads. mounted in a/" hole. D. C. working roleage

nensers. Sealed with sueciot ortrolstic conbigh temperature. 2 inch tinned leads will not Stock v. Cardhoard container $2 \%_{4} \times 15 / 8 \times 1 / 6$

# Keystone Dry Electrolytic Condensers <br> Fully Guaranteed-Built to Give Constant Capacity 



# KEYSTONE Electrolytic Condensers 

All Dry－Built to Give Constant Capacity

Dry Electrolytics in Round Metal Cases
With Flush Lus－Type Mounting Screws 50 D．C．Working Volts－ 500 Volt Peak Container Insulated－Leads Insulated
 with sides of case．Mounting centers $11 / 4 \mathrm{~m}$ ，For Inverted mount－
ing where studs must eicar material beer insulated．Six inch plexible leads；high voltage rulion and brad inviation．Where grounded container is desired phe neg－ ative lead should be grounded difect to chassis．
 2
4
8
$4-4$
$4-8$
$8-8$

Dry Electrolytics in Tubular Fibreboard Case With Flush Lug－Type Mounting Screws
 hish melthng tough folse luard tulular empainerz sealed with With high voltage rubber and braid insulation，Lerads tinned for



| $\begin{aligned} & \text { Cind. } \\ & \text { Mifil. } \end{aligned}$ | $\begin{gathered} \text { Polarity } \\ \text { Lavides } \end{gathered}$ | Contanner Size Inches | $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | $\underset{\text { Priste }}{\text { List }}$ | Your Price | $\begin{aligned} & \text { Ten } \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | N－1P | 119 $\times 2$ \％／6 | 3E5749 | \＄0．75 | c |  |
| 4 | 1N－1p | $1.4 \times 2$ \％ | 3E5750 | 0.85 | 329 396 | 53.04 3.70 |
| $\stackrel{8}{4-4}$ | 1N－1P | 11，$\times 4.1$ | 3E5751 | 1.50 | $45 ¢$ | 4.33 |
| 4－8 | 1N－2P | $1 . \times 4$ | $3 E 5752$ <br> $3 E 5753$ | 1.30 | 576 | 5.45 |
| 8－8 | 1N－2P | $21.84 \%$ | 3E5754 | 1.60 | 694 | ${ }_{7.62}$ |



Dry Replacement Electrolytics－Universal Upright
Top Connected－Complete with Mounting Brackets
450 D．C．Working Volts－ 500 Volt Peak
These multiple section dry clectrolytios are rery popular for reblicement of wet electrolyties used In earlier rodel re． cevers．Wach section is a ebarate condenser and all nez－ afwe termithals are grounded in the aluminum ontainer．
Hermetically sealed against molsture．Tnaffected by wide temperature cariations．Solder－lug terminals．Combiete with


| Dual Sections |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8－8 | 16 | 21241自 | 3E5740 | 1.80 | ． 87 | 8.25 |
| 9－9 | 18 |  | 3E5741 | 2.00 | 1.05 | 9.95 |
| 5－1．5 | 20 | $21.2 \times 41 \%$ | $3 E 5742$ | 2.30 | 1.10 | 10.40 |


| Triple Sections |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2－4－8 | 14 |  | 3E5743 | 2.90 | 1.05 |  |
| 8－8－8 | 24 | $3 \times 48$ | 3E5744 | 2.70 | 1.29 | 12.15 |
| 9－9－18 | 36 | 3 84 | 3E5745 | 3.75 | 1.79 | 16.90 |



|  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Dry Electrolytic Condensers


Ire flexible leads．One lead negative，one posilive．For bypass，fiter and （＂Bias these tubulars provide high caparity at low const


| Cap． Ift． | Work Volts | D.C. | $\stackrel{\text { Size }}{\text { Leih.-Dla. }}$ | $\begin{aligned} & \text { Nock } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { lisis } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Ten } \\ & \text { For } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.5 | 300 | 400 | $15.6 \times 16$ | 3E5792 | \＄0．45 | \＄0．16 | \＄1．50 |  |
| 0.5 | 400 | 500 | 15 的 $\times 12$ | $3 E 5793$ | ． 55 | ． 19 | 1.82 |  |
| 1 | 300 | 400 | $1.5 \times 13 / m$ | 3E5794 | ． 50 | ． 24 | 2.20 |  |
| 1 | 4011 | 500 | $1{ }^{3} 8 \times 13$ | 3E5795 | ．55 | .27 | 2.57 |  |
| 2 | 400 | 500 | 113 石 $\times 13 / 8$ | 3E5796 | ． 65 | ． 31 | 2.85 | ？ |
| 4 | 500 | 6015 | $113,16 \times 13$ | 3E5797 | ． 75 | ． 34 | 3.19 | $11$ |
| 4 | 400 | 500 | $1^{1} .4 \times 2 \frac{1}{4}$ | 3E5798 | ． 75 | ． 35 | 3.34 |  |
| 1 | 200 | 250 |  | 3E5799 | ． 50 | ． 22 | 2.10 |  |
| 2 | 2011 | 250 | $1^{1}+{ }^{13}$ 㐋 | $3 E 5800$ | ． 5.5 | ． 24 | 2.28 |  |
| 2 | 125 | 175 |  | 3E5801 | 50 | ． 22 | 1.95 |  |
| 4 | 125 | 175 | $13 x^{13} 18$ | 3E5802 | ． 60 | ． 24 | 2.20 |  |
| 8 | 12.5 | 175 | $1 \times 2{ }^{1}$ | 3E5803 | ． 70 | ． 29 | 2.76 |  |
| 8 | 125 | 175 | 11，$\times 21 /$ | 3E5804 | ． 7.5 | ． 31 | 2.95 | Heprey |
| 10 | 12．5 | 175 | $1^{1} \times 2 \times 14$ | 3E5805 | ． 85 | .33 | 3.15 | － |


| $\begin{aligned} & \text { Can. } \\ & \text { Mid. } \end{aligned}$ | container Slze Inches | $\begin{gathered} \text { Siock } \\ \text { Xumber } \end{gathered}$ | $\begin{aligned} & \text { I,ist } \\ & \text { I'rice } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Ten } \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | $2{ }^{2} 4 \times 115{ }^{15} \times 8$ | 3 E 5860 | 50.65 | 50.23 | 52.15 |
| 4 | 4，$\times 118$ ， $6 \times 8$ | $3 E 5861$ | － 75 | ． 2.26 | 2.50 |
| 8 |  | $3 E 5862$ | ． 95 | ． 30 | 2.90 |
| $4-4$ $8-8$ | $4{ }^{414 \times 10 \times 15}$ | $3 E 5863$ $3 E 5864$ | 1.20 | ． 47 | 4.45 |
| 8－8－8 | $43 \mathrm{x} 21 \times \times 170$ | 3E5864 | 1.90 | ． 85 | 5.25 8.40 |

Low Voltage Tubular Dry Electrolytics



## Compact Dry Electrolytics

450 D．C．Working Volts－ 500 Volts Peak This new series of compact high roltage diry electrolyties is a boon 10 the serviceman when rebairlag midg


| $\begin{aligned} & \text { C:ap. } \\ & \text { Mfu. } \end{aligned}$ | $\underset{\substack{\text { Size }}}{\substack{\text { Container }}}$ | Stock Number | $\begin{aligned} & \text { List } \\ & \text { Irice } \end{aligned}$ | Your Price | Ten For |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.5 | $2 x^{15 x 1} x^{7}$ 灰 | 3E5820 | \＄0．80 | \＄0．22 | \＄2．10 |
| 1 |  | 3E5821 | ． 85 | ． 26 | 2.45 |
| 2 |  | 3ES822 | ．95 | ． 29 | 2.75 |
| 4 | 27 隹119x 11 ／ | 3E5823 | 1.15 | ． 35 | 3.30 |
| 8 |  | 3E5824 | 1.35 | ． 47 | 4.55 |

Midget Filter and Bypass Dry Electrolytics

## For Midget Set

Special low voltage－Fibreboard Cases sertion dry electrolytics for midget and A．D．C．recelvers．Furnished with 6 inch insulated flexibite icads in molsture－ proof thbreboard contalners with mount－
$\qquad$

| $\begin{aligned} & \text { ("ap. } \\ & \text { Mrd. } \end{aligned}$ | $\begin{aligned} & \text { Prak } \\ & \text { Folls } \end{aligned}$ | Politrity of leadis | $\underset{\substack{\text { Containe } \\ \text { Size }}}{ }$ | $\begin{aligned} & \text { Ntock } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { Isst } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Ten } \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4－4 | 200 | 1N－2P |  | 3E5825 | S0．85 | \＄0．44 | 54.15 |
| 4－4 | 200 | 2N－1P | $13 \times 13 \times 23$ | 3E5826 | ． 85 | ． 8.44 | 4.15 |
| 5－8 | 200 | 1N－2\％ | $111 \times 13 / 88$ | 3E5827 | 1.10 | ． 51 | 4.80 |
| 8－8 | \％00 | 1N－2p | $11 / 4 \times 1$ 柘×23／3 | 3E5828 | 1.25 | ． 63 | 5.87 |
| $8-8$ | 200 | $2 \mathrm{~N}-2{ }^{2}$ | $14 \times 13 / 6 \times 2 / 6$ | 3E5829 | 1.25 | ． 63 | 5.97 |
| 12－4 | 200 | 1ぶ21 | $114 \times 15 \times 28$ | 3E5830 | 1.15 | ． 59 | 5.62 |
| 12－8 | 500 | 1ベ－21 |  | 3E5831 |  |  |  |
| 16－8 | 200 | 1N－21 | $11+\times 190841 \%$ | 3E5832 | 1.50 | ． 72 | 6.23 |
| 4－4 | 35 | 1N－2p | 近 $\mathrm{x} \mathrm{y}_{168} \times 1$ 鿬 | 3E5833 | － 75 | ． 27 | 6.95 2.52 |
| 5－5 | 35 | $1 \times ゙-2 \mathrm{P}$ | \％${ }^{1} 90 \times 15$ | 3E5834 | ． 80 | ． 29 | 2.75 |
| 4－8 | 3.5 | 1N－2p | $3 \times 34 \times 2$ | 3E5835 | ． 85 | .35 | 3.31 |
| 8－8 | 35 | 1 N－2 3 | $3 \times 3{ }_{4}$ | 3E5836 | ． 90 | ． 47 | 4.45 |

Tubular Condensers for Midget Sets Low Voltage Dry Electrolytics
Multiple section dry electrolyties in moisture． nroof fit－reboard tubular containers．For mbage set replocement．Container has tab at each end

| Cap. Mfel. | Peak <br> Volts | Polarity of Irails | $\begin{aligned} & \text { Container } \\ & \text { Slze } \end{aligned}$ | Stuck Number | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | Your Price | $\begin{aligned} & \text { Ten } \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4－4 | 35 | 1N－2P | 11 价 $\times 2.36$ | 3E5837 | 80.85 | \＄0．27 | \＄2．52 |
| 5－5 | 90 | 1ヘ－21 | $11 \times \times 23 / 4$ | 3E5838 | ． 90 | ． 47 | 4.44 |
| 8－5 | 200 | 1N゙－21 | $11180{ }^{1}$ | 3E5839 | ． 95 | .51 | 4.80 |
| 8－8 | 210 | $1 \mathrm{~N}-2 \mathrm{P}$ | 1＇9x2 ${ }^{\text {a }}$ | 3E5840 | 1.20 | ． 63 | 5.97 |

Tubular Dry Electrolytics
Fibreboard Case－200 D．C．Working Volts
A．C．－D．midget set rephacements．Tubulir flibreboard lainers，monsture－proof and hermetically sealed at each end． 6 noh inalated flexithle leads tinned for easy soldering．Single haits hare one positive，one negative lead rach end：dual sections with man mesatio and tho positire leads．Espectally designed with higher working voltage limits than enndensers customarils： used in the midget sets． 6 Inch Leads．

| Cifd． | Contidner <br> Size | Stock <br> Number | List <br> Prife | Your <br> Price |
| :---: | :---: | :---: | :---: | :---: |


| 4 |
| :---: |
| 6 |
| 8 |
| $4-4$ |
| $4-8$ |
| 8.8 |

$3 E 5841$
$3 E 5842$
$3 E 5843$
0.65
.70
$E 5843$
$E S 844$
$E S 845$


Special Dry Electrolytic Condensers In Fibreboard Containers
450 D．C．Working Voltage $n$ Fibreboard Containers
450 D．C．Working Voltage
Spectal ralue dry electrolytios of considerably hetter quality than usually offered at these prices．Full capactiy and safely rated but not the same grade as Keystone Condensers，Mol ture－prone Cabners．wix hen insulated wire leads．

I

## Special Dry Electrolytic Replacements

## Aluminum Containers－450 D．C．Working Volts

First duallty mondensers offered at a specinl low priec．Conserva arls．container negative．but not quite equal to lieystone stand ards Container negative．Single units have lug terminal．daal bole mounting．Large locknut clamps unit securely to phassis is inse


## Keystone By－Pass Condensers

## Tubular Condensers



## Multiple Tubular

 Condensers

Metal Foil and Linen Paper Paraffin impregnated，hermetieally non－induetive winding：each section remains non－Inductive． 1 t／a＂bare wire wire seetion leads．
400 D．C．Working Voltage

| $\begin{aligned} & \text { Stork } \\ & \text { Number } \end{aligned}$ | $\left\lvert\, \begin{gathered} \text { Container } \\ \text { Size } \end{gathered}\right.$ | Cul. Mid. | Price Each |
| :---: | :---: | :---: | :---: |
| 3E5460 | 2 |  | 164 |
| 3E5461 | $1 . \mathrm{x} 1^{1 /}$ | ．01－．01－01 | 216 |
| 3E5462 | 11每×13 | $1-$ | 194 |
| 3E5463 |  | 1－． 1 － | $26 \%$ |
| 3E5464 |  | 1－． | 345 |
| 3E5465 | $15^{1 / 16} 52^{3}$ | 1－．1－．1－．1－．1 | 416 |
| 3E5466 | 18， $\mathbf{1 6}^{6} \times 23$ | 25 | 26 |
| 600 | D．C．Working Voltage |  |  |
| Stork | Container inize | Cap．M1fl．Bach Eec． | $\left\{\begin{array}{l} \text { Price } \\ \text { Each } \end{array}\right.$ |
| Number |  |  |  |
| 3E5470 | $1{ }^{5} \times{ }^{4}$ | （01－．01 | 216 |
| 3E5471 | $1{ }^{1} x^{15} /{ }_{6}$ | ．01－．01－．01 | 26 c |
| 3E5472 | $2^{3}+\mathrm{X}^{13}$ ， 16 | ．1－．1 | 24 c |
| 3E5473 | $2{ }^{2} \times 156$ | 1－．1－． 1 | 346 |
| 3E5474 |  | 1－．1－．1－． 1 | $41 \%$ |
| 3E5475 | $2^{3} \times 1$ | 1－． $1-.1-.1-.1$ | 516 |
| $3 E 5476$ |  | 2．3－25 | c |

## Special Value

By－Pass and Filter Condensers $1 / 2$ Mid．
300 V D．C
300 Y．D．C．working can is $1 . \mathrm{g}$ in．Metal

 easy．

## Best Quality Paper Type

 By－Pass Condensers Metal Cased Pobular amons servicenien an experimenter． and satisfactory service．Ifermetically sealed in metal containers．Metal foil $3 \times 1 \frac{18}{18}$ inclics．

| $\begin{aligned} & \text { Stock } \\ & \text { number } \end{aligned}$ | （Caps | D．C．Working | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| $3 E 5206$ | 05 | 400 | 144 |
| 3E5200 |  | 4010 | 15 ¢ |
| 3E5201 | 25 | 400 | 19 |
| 3E5202 | 5 | 404 | 226 |
| 3E5207 | ． 05 | 600 | ¢ |
| $3 E 5203$ | 1 | 600 | \％ |
| $3 E 5204$ | ．25 | 660 | $2{ }^{\text {c }}$ |
| 3E5205 | ． 5 | 600 | 32 |
| 3E5208 | ． 1 | 1001 | 296 |
| By－Pass Condensers <br> Lugs from End Non－Indiuetiso＂paper＂ condensers sealed in metal cans．Sizo 1 ligx 5 x 2 inches． |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| $\begin{aligned} & \hline \text { Stock } \\ & \text { Number Mipls. } \end{aligned}$ |  | $\begin{aligned} & \text { D. } \text { Working } \\ & \text { Voltage } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
|  |  | 400 | $30 ¢$ |
| 3E5217 ${ }^{\text {¢ }}$ | 2 | 400 | 49. |
| 3E5211 | ． 5 | 400 |  |
| 3E5212 | 25 | 600 | 22 e |
| $3 E 5213$ | ． 5 | 600 | 316 |
| 3E5214 3E5218＊ |  | 600 600 | 448 720 |
| ＊Note一Supplied cans． |  |  |  |
|  |  |  |  |


| By－Pass Condensers |  |  |  |
| :---: | :---: | :---: | :---: |
| Lugs from Side |  |  |  |
| Non－！nductlye ＂paper＂Cundensers sealed in metal <br>  |  |  |  |
| Fitock Number |  | D．C．Working Coltage | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| $3 E 5220$ |  | 400 | 30 e |
| 3E5221 |  | 400 | 32 c |
| 3E5222 | 25 | 600 | 225 |
| $3 E 5223$ $3 E 5224$ |  | 600 600 | 314 44 |

## Combination By－Pass Condensers <br> 

New，improved fhbre casing，having metal ferriles whin－Inductive．

mbination By－Pass Condensers

| $11_{2}$ |
| :--- |
| $\mathbf{I}_{2}$ |
| $10 n$ |

Diam．
Metal Case By－Pass with Lugs Combiat
rapacities and bigh voltages in a minimum space．Hiph resistance baper ifelectric．chemically fimpregnaten ug of can $7 / 8 \times 3 \times x 1$ in in

| Stork Num． | Code <br> N゙um． | Cap. | $\begin{aligned} & \text { Work. } \\ & \text { Volt. } \end{aligned}$ | Orice |
| :---: | :---: | :---: | :---: | :---: |
| 3 E5030 | A－10 |  | ， |  |
| 3E5031 | A－402 | 25 | 400 | 276 |
| 3E5032 | A－403 | 5 | 400 | 33 c |
| 3E5033 | A－601 | ． 1 | 300 | $27 ¢$ |
| 3 E | A－ | 25 | （i0） | 32 |
|  |  | By－Pass and Filter Condensers with End Lugs |  |  |
|  |  | uct |  |  |
|  |  | Type A．Size： $1+\frac{3}{3} x$ 3／4x2 inches．Mta． Hole centers 1 13 and $2: \frac{1}{2}$ inches． |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| ， | Code |  | W． |  |
| N | N゙um | M |  |  |
| $3 E 5040$ | A－404 |  | 400 | 4 c |
| 3E5041 |  | 5 | 400 | 33 c $37 c$ |
|  | A－603 | ${ }^{.25}$ | 600 600 600 | 27 c 39 c |
| 3E5043 | （ $\begin{array}{r}\text {－} 603 \\ \text {－1062 }\end{array}$ | ． 5.5 | 600 1000 | 39 c 475 |
| By－Pass and Filter with Side Lugs |  |  |  |  |
| 5 |  |  |  |  |
|  |  | Type AA．Size Ifinx ${ }^{3} 4 \times 2$ inches（same |  |  |
|  |  |  |  |  |
|  |  | by－pass condensers）． |  |  |
|  |  | Mto．${ }^{\text {inches．}}$ |  |  |
|  |  |  |  |  |
|  |  | Can | Work |  |
| Num． | Nun． |  | volt | Price |
|  | AA－10 |  | 400 | 4 |
| 3E5051 | AA－203 |  | 400 | 33 c |
| 3 | A A－302 | 2.5 | 400 | 27 c |
| 3E5053 | A A－303 | 552.5 | 660 | 399 |
| 3E5054 | AA－402 |  | 100 | 474 |



Potter By－Pass

## 

Fasily wired In circui rely anchoted tinned wire leads cered with a tough durable＂rubiber in $21 / 2 "$ Long． $3 / 8 \%$ to $1^{11 / 2}$ proof． $11 /$

| Stoch Nimbier | Capaclty Mfd． | D．C． Workithe Voltige | Your Price |
| :---: | :---: | :---: | :---: |
| 3D5000 | （0） 1 | 400 |  |
| 3D5001 | ． 010 | 400 | 20 |
| 3 D 5002 | .001 | $4(1)$ | 3 |
| 3 D 5003 | ． 0106 | $4(10)$ | EACH |
| 3D5004 | ． 0060 | 600 |  |
| 3 D 5005 | 01 | 400 | 14 c |
| 3D5006 | ． 01 | 6110 | 14 c |
| 3D5007 | ． 02 | 400 | 14 c |
| 3D 5008 | ． 02 | 600 | 17 c |
| 3D5009 | ． 05 | 400 | 17 c |
| 3D5010 | （0） | fir） | 29 c |
| 3D5011 | 1／10 | 200 | 15 c |
| 3D5012 | 1／10） | 3010 | 19 c |
| 3 3 5013 | 1／10 | 400 | 20 c |
| 3D5014 | $1 / 10$ | 610） | 30 c |
| 3D5015 | ！ | 2015 | 19 c |
| 3D5016 | 1 | 4 （1） | 27 c |
| 3D 5017 | $1 / 2$ | 290 | 24 c |
| 3D5018 | 12 | 304 | 30 c |
| 3 D 5019 | 1／2 | 4110 | 30 c |
| 3D5020 | ， | 2901 | 31 c |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Compact Units In Metal Cans With 6－Inch Insulated Leads

| Stock <br> Num． | Coile Num． | $\begin{aligned} & \mathrm{Cap} . \\ & \text { sid. } \end{aligned}$ | Work． <br> Volts | Your <br> Price |
| :---: | :---: | :---: | :---: | :---: |
| 3E5075 | XA－101 | 1 | 200 | 150 |
| 3E5076 | X $\mathrm{A}-102$ | 2.5 | 200 | 19 c |
| 3E5077 | 人 $\mathrm{A}-103$ | ． 5 | 200 | 220 |
| 3E5078 | NA－201 | 1 | 300 | 186 |
| 3E5079 | スA－202 | ．25 | 30\％ | 204 |
| 3E5089 | 大 $\mathrm{A}-301$ | ． 1 | 400 | $22 C$ |
| $3 E 5081$ | －A－401 | 1 | 600 | 26¢ |

## Certified Filter Sections and Mica Condensers

FLECHTHEIM
Non-Inductive Uncased
Filter Condensers


Flechtheim Type H. S. M.


For continuous oper 600 V . A.C., R.M.S. For all amplifers بsiny, type 41.45 similar heary hat dut
amplitier tubes. Metal colltainers. blark tin. minnals. Cork tyserver
rating.

| $\begin{gathered} \text { stork } \\ \text { Numbur } \end{gathered}$ | $\begin{aligned} & \text { Cap } \\ & \text { aitd } \end{aligned}$ | Size Inches | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 3 D 5350 | 105 |  | 50.67 |
| [ $\begin{aligned} & 3055351 \\ & 305352\end{aligned}$ | 4 | 2013, ${ }^{2 \times 1}$ | .73 .81 |
| 305353 | \% | $2 \times 1{ }^{165}$ | 90 |
| 305354 | 1.11 |  |  |
| 3053555 305356 | 20, |  | (1.89 |
| 305356 <br> 30535 | 4.1 |  | (1.89 |
| 305358 | 4 n | $2 \mathrm{x} 2^{2 \times 1} \times 22^{4}$ | 3.02 |

Flechtheim Type AZ Midget Tubular Condensers


BARGAIN Low Capacity Mica Condensers

polymet-micamold

> | Siock |
| :---: |
| Sinmber |

> 305478
> 305479
> 305480
> 305482
> 305486

Potter Replacement Condensers Sections

The rery hichest quality llae of con materials used market. Only the finest Processed in the most scientillic manner its kind in the world. I'aper libelcctric sealed in molsture-proof metal contafiners.
Jhese condensers oltages under proper working condfions.

| Stork Number | Code Number | $\begin{aligned} & \text { Cup. } \\ & \text { Mifl. } \end{aligned}$ | I) C. 1'ust | 1). C W orking Voltage | Size | List <br> Príre | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 C 5150 | 104 | 1. | $400{ }^{\prime}$ | 200 | 115 x 3/6x3 | 81.25 | 5.69 |
| $3 \mathrm{CS151}$ | 105 | 2. | $400{ }^{\prime}$ | 200 |  | 1.75 | 5.69 |
| 3C5152 | 107 | 4. | 400 V | 200 |  | 3.75 | 1.60 |
| $3 C 5154$ | 30.' | 2. | $7-0 \mathrm{~V}$ | 400 | $1 \times 2 \times 4{ }^{3}$ | 3.00 | 1.20 |
| $3 \mathrm{CS156}$ | 404 | 1. | 1000 V | 6100 | $1916 \times 11168438$ | 2.00 | 1.30 |
| $3 C 5157$ | 405 | 2. | 1000 V | 600 | $13^{3} \times 33848$ | 3.50 | 1.95 |
| $3 C 5162$ | 507 | 4. | $2000{ }^{2}$ | 1000 | $23_{4} \times 1 y_{2} \times 4318$ | 10.00 | 6.00 |
| $3 C 5163$ | 603 | . 5 | 25001 | 1250 | $11 \times 218 \times 43$ | 2.75 | 1.85 |
| 3 C 5170 | 707 | 4. | 3000 V | 1500 | $31 \times 7 \times 438$ | 13.50 | 9.11 |
| $3 C 5171$ | 803 | . 5 | 40100 | 2000 | $13 \times 31 / 2 \times 3 \% 6$ | 4.50 | 3.31 |

## Moulded Bakelite Condensers

## 

| $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { Capi } \\ & \text { Mifil } \end{aligned}$ | $\begin{aligned} & \text { I.ist } \\ & \text { I'rice } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| $3 C 5575$ | . 100 l | 30 d |  |
| $3 C 5576$ | .00025 | $30 ¢$ | EACH |
| $3 \mathrm{CS577}$ | . 00035 | 30 d | - |
| $3 \mathrm{CS578}$ | . 10005 | $30 ¢$ |  |
| $3 C 5579$ | . 00075 | $35 ¢$ | 11c |
| $3 \mathrm{CS580}$ | .01) 1 | 354 | 116 |
| $3 \mathrm{CS581}$ | . 0015 | 3.5 | 13 c |
| $3 \mathrm{CSS82}$ | . 0102 | 40 ¢ | 13 c |
| 3 C 583 | . 0025 | 45 c | $15{ }^{\text {c }}$ |
| 3C5584 | . 003 | 500 | $16 ¢$ |
| $3 \mathrm{CS585}$ | . 104 | 50 | 216 |
| 3 C 5586 | . 005 | $50 ¢$ | 18 c |
| 3 C 558 | . 0106 | 60 c | $22 c$ |
|  |  | Sangamo Mica Condensers |  |
| (e) sfi | 4 |  |  |
|  |  |  |  |

Mulded in smonth brown bakelite.
Extreniely flne llmits of accuracy. Will
retaln their capacity under all condiretain their capacity whider all condi-
tlons. Absolutely witer and damp
S

| Stock | Map. | $\begin{aligned} & \text { L.int } \\ & \text { Price } \end{aligned}$ | Your |
| :---: | :---: | :---: | :---: |
| ${ }^{3} \mathrm{C} 5605$ | notos | S . 60 | $35 ¢$ |
| 3 <br> $3 C 5609$ | . 01000 | \%00 | 3 |
| 3 C 5610 | . 0102025 | 160 | 35c |
| ${ }_{3}^{3 C 5612}$ | 0005 | 60 |  |
| + ${ }^{3 C 5613}$ | ${ }^{.0015}$ | 60 60 | 355 $35 c$ $35 c$ |
|  | (10) | ${ }_{6}^{60}$ | - $38 ¢$ |
| 5617 | .0103 | 85 | 50 C |
| ${ }_{3}^{3} \mathbf{3} 56518$ | .004 | 85 85 | Soc |
| ${ }_{3} \mathbf{3} 5620$ | .006 | 1.00 | 59 c |
| ${ }_{\substack{3 \\ 3 \\ \mathbf{3} 56521 \\ \mathbf{C S 6 2 2}}}$ | 01 | 1.20 | $71 e$ 824 |
| ${ }_{3} \mathbf{C 5 6 2 3}$ | . 015 | 1.60 | 92c |



Aica Complete Assortment! 35 Units-Assorted Sizes Mircamold and l'olymet Midget Tyne Nira ronulonsers a" illustrated at ifft
some with mount ing holes in audd tion to lugs. Sultable is "mad" condeners In critiral superheterodyne HRht ponstruction Mrevents prociligir "drift" and redures effeet of onwanted shations drifting in after reectiver
has been tunced to destred stalion. Kit
 010106 Ifd 0000355 3E5600-YOUR PRICE
PER K1T ( 35 units)


## 

## 

| Stock | Cat. | Stock | Cap. |
| :---: | :---: | :---: | :---: |
| Num. | Mrd. | Num. | Mifd. |
| 3 C 5535 | . 00001 | 3 C 5540 | 0001 |
| ${ }^{3} \mathrm{C} 5536$ | . 000025 | 3 C 5541 | . 00015 |
| $3 \mathrm{C5537}$ | .000035 | 3C5542 | . 0002 |
| 3 C 5538 | . 00005 | 3 C 5543 | . 000025 |
| 3C5539 | .000075 | 3 C 5544 | . 000035 |
|  |  | 3C5545 | . 0005 |

Uncased Replacement Condenser Sections

antred for one full year-tree Guar placement when used under proper conditions. scientifically designed cess of that recuiled to wither ex test rcuuirements. I'ure linen pajer "HANG-UP" TYPE

| Compound 'obated with \% Inch leadstinned 'uush lack' wire: |  |  |  |
| :---: | :---: | :---: | :---: |
| 300 D. C. Workin |  |  |  |
| Cauacity |  |  |  |
| tock N゙o. | Mfd. | Size | Each |
| $3 C 5250$ | $1 / 2$ | $2{ }^{2} \times 1 / 2 \times 1 / 4$ | c |
| $3 C 525$ |  | $23.43 \times 18$ |  |
| 3 C 5252 | 2 |  | 296 |
| C. Working Voltage |  |  |  |
| Capacits <br> Price |  |  |  |
| Stork No | Alfu. | Size In. | Each |
| $3 C 5253$ | 1/2 | $2_{23} 3_{1} x^{3} x^{3 / 8}$ | 9 C |
| $3 C 5254$ | 1 | $2^{3} \times 1{ }^{1 / 2} \mathrm{x}^{3}$ | 9 c |
| $3 C 5255$ | ${ }^{2}$ | $\mathrm{yH}_{4} \times 2^{1} \mathrm{x}$ | 54 c |
| O D. C. Working Voltage |  |  |  |
| Caparits |  |  |  |
| Stork No. | Afd | Size In. | Each |
| $3 C 5256$ | 1/2 | $2^{7} \times \bar{x}^{7} \times \times 1 / 2$ | 28 c |
| $3 C 5257$ | 1 | $2 \mathrm{~T}_{4} \mathrm{x} 2 \times 3 / 4$ |  |
| $3 \mathrm{C5258}$ | 2 | $2{ }^{7} \times 1 / 4$ |  |
| C. |  |  |  |
|  | Caparity |  | Price |
| rk | Mfd. | Sizo In | E |
|  |  | $4 \times 2 \times 1{ }^{1 / 4}$ | 0 |
| C5262 | 2 | $4 \times 21 \times 11 / 2$ | 1.22 |



[^0]
## New CONTINENTAL－IGRAD High Voliage Paper Condensers



## New Type E Units

## Cardboard Containers

For replacing defective electrolytic sectlons in filter systems．Cardboard contalners．same shae as standard D．C．Working Voltage， 450一Peak， 600

| $\begin{aligned} & \hline \text { Stock } \\ & \text { Num. } \end{aligned}$ | Maps． |  | Yeur |
| :---: | :---: | :---: | :---: |
| 3E8900 | ${ }^{4 *}$ |  | 30．56 |
| $3 E 8901$ $3 E 8902$ | ${ }_{8-8 *}^{8 *}$ | x ${ }^{\times 13}$ | ${ }_{1.12} .6$ |

D．C．Working Voltage，500－Peak， 800

| Stock | Capy． | L．${ }^{\text {Stze }}$ W．${ }^{\text {In．}}$ T． | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | $\begin{array}{\|lrl} \hline \text { Price } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
|  | ${ }^{2 *}$ | 4 $16 \times 136 \times 11$ | \＄1．10 | So |
| SE8904 | ${ }^{\text {4＊＊}}$ |  | 30 | 8 |
| 3 E8906 | ${ }_{8}{ }^{*}$ | ${ }_{4}$ | 65 | ${ }^{.97}$ |
| 3E88907 CE8908 | ${ }_{8-8 *}^{4 *}$ |  | 2.25 2.75 | ${ }_{1.62}^{1.32}$ |

All values are equivalent to electrolytic condenser capacities of the same rating， condenser capacitios action．
due to improved filter action

To Replace Electrolytic Units

Improved reception and freedom from future break－ downs can be assured by replacing defective elec－ age mith CONTINENTAL－IGRAD high－voit－ great resistance to they offer They have the same outside dimansions they offer．They have same outside dimensions easy crange

## Type IE Inverted Stud Mounting

To replace Electrolytics．Same size and appearance as
Rinte．
Round
standard
aluminum Noits．Round aluminum containers D．C．Working Voltage，450－ Peak， 600


| Stock Number | Cany． Midas． |  | ${ }_{\text {Preme }}^{\text {Price }}$ |
| :---: | :---: | :---: | :---: |
|  | ${ }_{8}^{4 *}$ |  | ｜${ }^{\text {S0．62 }}$ |
| D．C．Working Voltage，500－Peak 800 |  |  |  |
| Stock | Capy． | $\begin{aligned} & \text { Size In. } \\ & \text { Lokth. Dia } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| 3E8912 ${ }_{\text {3E8913 }}$ | ${ }^{4 *}$ | 486x ${ }_{4} \times 1 \%$ | （S0． <br> 1.08 |

Type UE Universal Upright Units
For replacing Electrolstics．
Round aluminum cans， liound aluminum cans，Same
size and appearance as stand－ size and appearance as stand－

ard electrolvtics．Fits stind－ ard ring Mtg．clamps．Non－ D．C．Working Voltage， Stock Capy．Size In．Your | Num． | Mirds． | L．Dial | Price |
| :--- | :--- | :--- | :--- |

 3 E8918 8－8＋8＊${ }_{4}^{4}{ }^{3} \times 3$
$\qquad$

D．C．Working Voltage，500－Peak 800 Stock | Stock | Catpy． | Size Im. |
| :--- | :--- | :--- |
| Number | Mfds． | L．Dia． | Mrds．



 | $\begin{array}{c}\text { List } \\ \text { Price }\end{array}$ | $\begin{array}{c}\text { Your } \\ \text { Price }\end{array}$ |
| :---: | :---: |
| $\mathbf{8 1 . 5 0}$ | $\mathbf{5 0 . 8 8}$ |
| 1.80 | 1.06 |
| 2.40 | 1.41 |
| 2.90 | 1.70 |
| 4.75 | 2.79 |
| 3.50 | 2.06 |
| 5.00 | 2.94 |
| 7.00 | 4.12 |

 Values are equivalent to electrolytic con－ denser capacities．


## Replacement Condensers Uncased

Ideal for replacing ＇blown＇condenser block sectiont in titter circults or bower units．Compact． 400 Volt

| olt |  |  |  |
| :---: | :---: | :---: | :---: |
| Stock Number | $\begin{aligned} & \text { Cup. } \\ & \text { Mid. } \end{aligned}$ | Dinfensions Ht．W＇d．1）． | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| 307524 | ． 1 | 111／6x ${ }^{1 / 6}$ | \＄0．20 |
| 3D7525 | ． 25 | $11 / 3 \times 13 \times 3$ | 26 |
| 3D7526 | ． 5 | ${ }^{111} 16 \times 11 / 5 x$ | ． 39 |
| 307527 307528 | 1. |  | .59 1.00 |
| $\begin{aligned} & 307528 \\ & 307529 \end{aligned}$ | 1. | 41／2x148x 3 | 1.00 .50 |
| 307530 | 2. | $4 L_{2} \times 1^{13} \times 4^{1 / 2}$ | 70 |
| 600 Volt |  |  |  |
| 3D7531 | 5 |  | \＄0．25 |
| 307532 | 25 | $1110 \times 168$ | ． 32 |
| 307533 307534 | ． 5 |  | ． 68 |
| 307534 307535 | $2 .$ | 1，40x21，${ }^{1}$ | 1．68 |
| 307536 | 1. | $4^{1 / 2} \times 1 \frac{1}{3} \times 1 / 2$ | 59 |
| 307537 | 2. | $412 \times 13 \times 1$ |  |
| 800 Volt |  |  |  |
| 307538 | ． | 111／6x $7 / 8$ | 26 |
| 3D7539 | ． 25 | 11／4x $\times 13 \times$ | 8 |
| 307540 | ． | $412 \times 15 \% \times 15$ | 7 |
| 3D7541 | 1. | 4 $12 \times 1$ x $\times 56$ | ． 65 |
| 1000 Volt |  |  |  |
| 307542 |  |  | .29 |
| 307543 | ． 5 | $4{ }^{15} \times{ }^{3} 3^{2} \times \mathrm{x}$ | ． 79 |
| 3D7544 | 1. | $41 / 2 \times 374 \times 1 / 8$ | ． 79 |

## Cartridge Condensers

ervice ra－
ancement
High qualley
and wide arallahle for practically range of sizes araliante for practically
all circuits．Non－inductire．Mgh in sulation resistance．

| 200 Volt |  | 400 |  | Volt |
| :---: | :---: | :---: | :---: | :---: |
| Stock | Your］ | Cany． | Stock | Your |
| Num． | Pric | Mifds． | Num． |  |
| 3 E8929 | 5.09 | 001 | 3 E8943 | 5.1 |
| 3E8930 | ． 09 | ． 002 | 3 E 8944 | 10 |
| 3E8931 | ． 09 | ．015 | 3 E 8945 | 10 |
| 3E8932 | ． 09 | ． 006 | $3 E 7634$ | 10 |
| 3E8933 | ． 09 | ． 01 | $3 E 7635$ | ． 10 |
| E8993 | ． 09 | ． 015 | $3 E 7636$ | ． 10 |
| 3E8935 | ． 10 | ． 02 | $3 E 7637$ | ． 11 |
| 3 E 8936 | ． 10 | ． 03 | 8 |  |
| 3E8937 | ． 11 | ． 05 | $3 E 7639$ | 12 |
| 3 E8938 | ． 12 |  | $3 E 7640$ | 14 |
| 3E8939 | ． 14 | ． 15 | $3 E 8946$ | ． 16 |
| 3 E8940 | ． 16 | ． 25 | 3E7641 | ． 21 |
| 3 E8941 | ． 24 | ． 5 | 3E8947 3 E8948 | ． 32 |
| 3 E6942 | ． 18 | ． $01-.01$ | 3E8948 | ． 19 |
| 600 V | Volt |  | 1000 | Volt |
| 3 E 8949 | \＄．11 | ． 001 | 3E8953 | 5.12 |
| 3 E7643 | ． 11 | ． 006 | 3 E 7648 | ． 12 |
| 3 E7644 | ． 11 | ． 01 | 3 E7649 | ． 12 |
| $3 E 7645$ | ． 11 | ． 02 | 3E7650 | 14 |
| 3E7646 | ． 13 | ． 05 | 3E7651 | ． 21 |
| $3 E 7647$ | ． 14 | ． 1 | 3 E 8955 | ． 29 |
| $3 E 8951$ | ． 24 | ． 25 |  |  |



## AEROVOX

Dry Electrolytric Condensers
Dry self healing．Depentiable 525 volt D．C．peak roltage． Surge proot．May he moun
diete with mounting rings．

Type E－Upright Mounting

| Stock Number | Capacity <br> Wach sec． | $\begin{gathered} \text { Size } \\ \text { Din. IIt. } \end{gathered}$ | $\begin{aligned} & \text { List } \\ & \text { I'rice } \end{aligned}$ | Your Price |
| :---: | :---: | :---: | :---: | :---: |
| $3 \mathrm{D7547}$ | 2 | $1^{3} \times 2.848^{3}$ | \＄1．35 | 50.44 |
| 307548 |  | $1{ }^{3} \times 1 \times 23$ | 1.55 | ． 50 |
| 307549 | 4－4 | $215 \times 46$ | 2.70 | 1.00 1.35 |
| 307550 307551 3 | ${ }_{6}^{5-15}$ | ${ }_{13} 3^{2} \times 48$ | 4.10 1.80 | 1.35 .59 |
| $\begin{aligned} & 307551 \\ & 307552 \end{aligned}$ | ${ }_{8}^{6}$ |  | 1.80 1.45 | ． 59 .62 |
| 307553 | $8-8$ | $2 \frac{1}{2 \times 41 / 6}$ | 3.25 | 1.06 |
| 307554 | ${ }_{8-16}$ | 212346 | 4.10 | 1.62 |
| 3 l 7556 | 10 | 136446 | 2.25 | ． 91 |
| $3 \mathrm{D7558}$ | 16 | $24_{2} \times 4$ | 2.80 | 1.20 |
| $3 \mathrm{D7561}$ | $2-3-8$ | $3{ }^{341}$ | 4.10 | 1.70 |
| 3 D 7562 | 2－8－8 | 3 x 36 | 4.40 | 1.82 |
| $3 \mathrm{D7563}$ | 4－4－4 | $3 \times 41$ \％ | 3.95 | 1.50 |
| 3D7564 | 8 8－8－8 | $3 \times 44$ | 4.90 | 1.59 |
| 3D7565 | 8－8－16 | $3 \mathrm{x} 4{ }^{1}$ | 58.5 | 1.88 |
| $3 \mathrm{D7566}$ | 9－9－18 | $3 \times 41 /$ | 0.70 | 2.20 |
| 3 P 7567 | 8－8－8－8 | $3 \times 416$ | 6.55 | 2.12 |
| 3 D 7570 | 9－3－18－18 | $3 \times 414$ | 9.00 | 3.09 |

Inverted Mounting Container－525V．D．C．Peak
Insulated type－is provided with Insulating hoss segregating

| case from chassis．$\quad$ Grounded |
| :--- |
| INSULATED |


| $\begin{aligned} & \text { INSULATED } \\ & \text { Ntork } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { GRDUNDED } \\ & \text { Sumb } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \mathrm{Mtd.} \\ & \mathrm{Cap} . \end{aligned}$ |
| :---: | :---: | :---: |
| 307571 | 3D7580 | 2 |
| 307572 | 3D7575 | 4 |
| 307573 | 307576 | 8 |



## Replacement Electrolytics For A．C．－D．C．Midgets

| Identical to the original units． Cardhoard con－ talners（＊）De－ notes Common Terminal is |  |  |
| :---: | :---: | :---: |
| Positive．On all others Common Ter－ minal is negative． |  |  |
| $\begin{aligned} & \text { ork } \mathrm{Cany} \\ & \text { mber Misds } \end{aligned}$ | div. |  |
| Working Voltage 25 Volts $3 E 89565-5 \quad 114 \times 114 \times 236 \quad 50.44$ <br> 3E8957 10－10 11／4×114 $\times 2$ 2／7 |  |  |
| $g$ | oltage 15 |  |
|  |  |  |
| 3E8959＊4－4 | ${ }_{8}^{3} \times 2$ |  |
| 3E8960 4－8 |  |  |
| 3－8961＊12－4 | 有x |  |
|  | $114 \times 14{ }^{1} \times 2 \times 294$ |  |
| Working | olt |  |
| 3E8963＊4－4 | $1 / 4 \times 14$ |  |
| 3E8964 4－4 | 1 | 53 |
| $3 \mathrm{EB965} 4$ | ， |  |
| 3 E8966 8－8－4 | $1_{14} \times 1$ | 1.06 |
|  |  | 1.12 |
| 69 12－4 |  |  |
| 3E8971＊16－8 |  |  |
| EE972 1 |  |  |

## Compact Electrolytics

In Cardboard Containers
 minal．

| $\begin{aligned} & \hline \text { Stock } \\ & \text { Number } \end{aligned}$ |  | Your |
| :---: | :---: | :---: |
| D．C | rking Voltage 50 | Volts |
| 3E8974 | $511 / 4 \times 11$ 的 $\times 2.26$ | 294 |
| 3E8975 | 10 114x11 $6 \times 2$ | 386 |
| 3E8976 | $2514 \times 1{ }^{3} \times 2$ | 476 |
| D．C．Working Voltage 150 |  |  |
| 3 E 9977 |  | $35 ¢$ |
| 3E8978 | $11 / 4$ | 414 |
| 3E8979 | 11／4x11年x2 | 444 |
| D．C．Working Voltage 200 Volts |  |  |
| 3E8980 |  | 32 c |
| 3 E8981 | 116x140x246 | 324 |
| 3E8982 |  | 388 |
| 3 E 8983 | $11 / 8 \times 11_{16 \times 23}$ | 414 |
| 3E8984 |  | 474 |
| D．C．Working Voltage 300 Volts |  |  |
| $3 E 8985$ | $2116 \times 14 \times 225$ | 35 c |
| 3 E8986 | $41^{16} \times 110^{1} \times 23$ | 414 |
| E8987 | 6 14x1809256 | 50. |
| 3¢9988 | \％ | 53 c |



By Pass Condensers
 Meta！Case Hermetically inductively
wound Siz wound．Sil

## $\frac{\text { Conservative }}{200 \text { Volt }}$

400 Volt

| stock <br> Num． | $\left\lvert\, \begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}\right.$ | Capy <br> Mfds | $\begin{aligned} & \text { Mrock } \\ & \text { Num. } \end{aligned}$ | Your Fi！e |
| :---: | :---: | :---: | :---: | :---: |
| 3 E8989 | $25 ¢$ | ． 05 | 3E7500 | 274 |
| $3 E 8990$ | 284 | ． 1 | 3E\％501 | 296 |
| 3 E8991 | 346 | ． 25 | 3E7502 | 354 |
| $3 E 8992$ | 428 | ． 5 | 3E7503 | 44． |
| 3 E8993 | 38. | ． $1 * 1$ | $3 E 7564$ | 404 |
| $3 E 8994$ | 444 | ．25－． 25 |  |  |
| 3E8995 | 505 | ．1－．1－．1 | $3 E 7506$ | 56 |
| 500 Volt |  |  | 600 Volt |  |
| stock Num． | $\left\|\begin{array}{l} \text { Your } \\ \text { Price } \end{array}\right\|$ | $\begin{aligned} & \text { Cupy } \\ & \text { Mfds } \end{aligned}$ | stock <br> Num． | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| $3 E 8996$ | 28． | ． 05 | 3E7507 | 29 |
| $3 E 8997$ | $32 ¢$ | ． 1 | 3 E7508 | 35 |
| 3E8998 | 38. | ． 25 |  |  |
| $3 E 8999$ | $42 c$ | ．1－． 1 | $3 E 7510$ | 44． |

Metal Case By－pass Condensers


Sprague Emergency Kit 3E7729－L．Ast， 55.50
YOUR PRICE，Only．．．

## $\$ 327$

sprague＂600＂Emer－ kency Kit contains five electrolytic capmelty．Dry cardboard case．Pigtall tuids，type．Une each of following： 8 Mrd．ied and＇ 1 Mid．Working alage 4is peak 600

## Double

Emergency Kit In semarate cardilinard cases with pigtall leads ${ }^{8} 8$ volta＇working＇potentiai＇and 600 volts 3E7730－YOUR PRICE

## Individual Handy Units


High Capacity，Low Voltage
Cardboard Cased Condensers


Tubular type．with pligtall leads color－coded．E．C Designed to stand the high temperatures of
midget A．C．－D．C．receivers．Dry EJectrolytic


AC－DC Dry Tubular Electrolytics

ance to above Units Universally used in
present receivers which perste direstly fron the line without tueg－sid power trans （nywer．Will with statul tuldt tempera ure of m tidget $A$ C－D．C．rameilut．Pig push－back wize
Cut shows dywinal
example of Three fun

## Foltage Tubulars cennected with mounting stras

 Used as subsidute for exaet renlacement．| stock No． | Mig． No． | $\begin{aligned} & \text { Cap } \\ & \text { nid. } \end{aligned}$ | Volts | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3E8470 | ST－22 | 2 | 400 | \＄ 3.80 | \＄0．36 |
| 3E8471 | ST－42 | 4 | 20 | 70 | .42 |
| 3E8472 | ST－82 | 8 | 240） | ． 90 | ． 54 |
| 3 Esd73 | $\mathrm{s}^{\prime} \mathrm{l}^{\prime}-122$ | 12 | 20） | 1.05 | 63 |
| 3E8674 |  | 16 | 200 | 1：20 | ． 72 |
| $3 E 8475$ | N4．41 | 4 | 100 | ． 10 | .36 |
| 3E847 | ST－ | 8 | 100 | ． 75 | .45 |
| 3E847成 |  | 12 | 100 | 90 | ． 54 |

Famous Sprague Midgets

| Twenty million sold． Eveacelled as seneral by－palss and grid con－ densers．Non－Induc－ |  | 5－bum |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| tive．Mounting hole centers $z$ inches． |  |  |  |  |
| TEST VOLTAGE－1000 FOLTS |  |  |  |  |
| Stock | Casilog | Capacity | lilimit | Your |
| Number | Number | Mfd． | Price | Price |
| 3E7715 | MC－31 | ． 0901 | \＄0．25 | 30.16 |
| 367716 | MC－325 | 010025 | ． 25 | ． 15 |
| 3 E 7717 | M1：－34 | 0 OH 4 | ． 2.5 | ． 15 |
| 3 E 7718 | $\mathrm{Mc}-35$ | （0ne5 | ． 2.5 | ． 15 |
| 3 E 7719 | 入1－－21 | （\％11 | ． 25 | ． 15 |
| 3 E 7720 | ＞1C－24 | ． 1114 | 25 | ． 15 |
| 3 E 7721 | 11c－25 | ． 105 | 2.5 | ． 15 |
| 3E1722 | \1（ -26 | ． 016 | ． 23 | ． 15 |
| $3 \mathrm{ET723}$ | MC－11 | （0） | 25 | ． 15 |
| $3 E 7724$ | AC－12 | ． 02 | ． 30 | ． 18 |
| $3 \mathrm{Cl725}$ | ${ }^{1} \mathrm{C}-15$ | ． 0.5 | ． 30 | 48 |
| $3 E 7726$ | MC－16 | ． 06 | ． 35 | ． 21 |
| 3E7727 | MCS 1 | ． 1 | 35 | ． 21 |



## GUARANTEE

Sprague（E．C．）Electrolytic Condensers are Guaranteed
For use on contincaus working voltage of $\$ 25$ 04 volts Power Factor（Watts divided by as times amperes）in sprague condensers is less than $10 \%$ ．This means that you get the same filtering aciion with a Sprague 8 Mfd．E．C．unit as with 12 Mrd．of capacity in ardinary electrolytic condensars Therefore the actual cost of Sprague capacity is $331 / 7^{\circ}$ 。 less than erdinary electrolytic condensers

Dry and Wet Electrolytics（E．C．） In Cylindrical Aluminum Cans


DRY－Manufacturer＇s Type A．C Mount in any position－Working Voltage 475 Peak 600


Auto Radio Filter Condenser SpragueTypeA．R A Nteel Jacketed Noise itay edncenser tith bracket teritannertly relded to tole 解cl．c perature and heat fond
 ordinary condensers．

Stock Cap．Moneth List 3E7731
$3 E 7731$
$3 E 7732$

ith special mount gh flanges and tl ned push－back insu
lated leads．In at ractive ajuminized blue markings．Neit elling of makes


## Sprague Capacity

 IndicatorFrom 16 to

## .00025 Mfd． 56 Steps．

## 3E7733－ <br> Your Price， $\mathbf{\$ 8 . 9 0}$



The Sprague Capacity Indicotor increases the of friency of any service laboratory，The Cabacity molern selectar knobs，band convenient pin jaidss，it Hutajns the popular sizes of standard capacities
 rallowipg order：0．10025 3fd． 0.001 Mfd．． 0.00
 Mrd．Thas secang felector switch connects the fol
jowing 4 ins yolts in this order： 1 Mfatr 2 Mful． 4 Mfd．．A Mfd．． Mid．， 10 Mfd．， 12 g／fif， 15 infd．As any of the combined， 56 possible canacitus，povering most ca

## 51092 With each order for ten or mare

 reuuct ind as long as our sumply lasts．includem SPRAGUE TELL．U－HOW CONDENSER GUIDE

## Double Spaced Dual Midget Condensers

Designed for efficlency at ultra high frequencies or either recelving or tratsinitting. Wide spaciug etweon phates materdally aids frequemey stability. a necessary in $\overline{6}$ meter work. An ideal condenser or rombart joter transmitters using tubes ub tween adjacent rotor and stator blates is .07bj"
 eusy mind accurate funing. Other sueclicatlons are standard excent for omission of the shield plate. Stock
3 C7238 Code MCll-35.X \$3.50 \$2.06
Cavaeity per section 33 mfd . max., 6 nmf . min.

New Hammarlund Band Spread
 Midget Condensers sulation reduces dielectric losses to beratare and thomidity. A brush tyine pour tean cfiping contact eliminates objectionable induetle rempance. Accurately fited bearings at both encls of the condenser provide for long life, gulet operasoldered brass plates elininate ribration and effect lowest series resistance. All parts elther sol and provisions are made for both slingle hole panel mounting and base mounting

General Specifications: Plates are $0220^{\prime \prime}$ bras
with . fo $10^{\prime \prime}$ airgap between plates. Standard con dumers fuclude soons and are made to increase raplacity by clockwise rotation. Ithdisidually testwl for breaktlown on 500 volts A.C. and parked w Code Num.
and MMf.
Number and MMf.
Cap.
Candy

List
1 1rice
$\$ 3.30$
3.00
2.75
2.50
2.25
2.25
0.00
1.60
1.80
1.50
1.40

## Your

$\begin{array}{lllll}3 C 7215 & \text { MC-325M } & 43 & 12 & \text { Price }\end{array}$
$3 C 7215$
$3 C 7216$ $\begin{array}{llllll}3 C 7216 & M 0 & 3510 & 3.00 & 1.76 \\ 3 C 7217 & M C 20011 & 27 & 10 & 2.15 & 1.62\end{array}$

## 3 C 7218

$3 C 7218$
3 C 7219
$3 C 7219$
$3 C 7220$
$3 C 7220$
$3 C 7221$
$3 C 7221$
$3 C 7222$
$3 C 7222$
$3 C 7223$
3 C 7224
3C7225

Improved Hammarlund

## New Hammarlund Dual <br> Midget Condensers <br>  <br> A high quallty, small  and "areful const ruction inw ide for greatest electri- cai and mectiantical efficiency In all types of short wave <br> tuning condenters. The entire cond

Compensating Neutralizing Condensers


For use in circuits whe small. variable capacity
needed fo
bensatins


Minimum Capacities from 3 to 5 mmfd .

| Insulated Flexible Coupling <br> An insulated flexible coupling derice for ganging condensers. Shog. wi., $3 C 7265-1 / 1 s t, 60 \mathrm{c}$. YOUR PRICE |
| :---: |
|  |  |
|  |  |
|  |  |



Equalizer
an neutrabizing or balexceptionally wide rupacits ranke. For ectualizing the ase mount. mica dielectrte 3C7266-H0-35-2 io $35^{\prime \prime}$ mimfds.
Hot, YOC. YOUR PRICE
14¢
3G7267-EC 80-20 to 100 minlds.
ist, GOC. YOUR PRICE

## "Star" Midget Condenser <br>  low prlced midget for set hulders, experimenters and laboratories. sizes for short sare tuning, regeneralion.

 smooth as velvet in operation. its, low los, natural bakelite Insulation non-core stve aluminum plates. basy single hole mounting " shaft. Indwidually packed with 1 " Bakelite knob. Slze 1 量" deep behind panel, depending on capacity.

Quality . 00015 Mfd. Midget Condensers


A high utuality small size condenser. Tispectally lesigned for all types of short wave recelvers and denser employing elther a one or two-gang conand mer. Ranid construction provides for electrical nd merhandeal efliciency. Accurately fltted ball liearings at end of condenser ghaft provide for long life. quiet oneration and stability of calibration. ors models hase counter clockwise rotation. trim mers on left slde, and a $18 \mathrm{~B}^{\prime}$ long. $1 / \mathrm{s}^{\prime \prime}$ diamet 307284150 MMf. Single Gang


3 Gang . 00015 Mfd. Midget Condensers

likcuit at the same time. is constructed exactly isted above. Counter-clockwise rotation. trimmers 150 Mmf . Three Gang
3E7283-Size: Helght $178^{\prime \prime}$, wuth $3^{1}$ in lase. I.ist 1 'rice, $\$ 3.25$.
YOUR PRICE ..................... $\mathbf{8 8}$

## Thordarson Vernier Condenser

 Capacity . 001 Mfd. $3 D 7307$UDT Plates
YOUR PRICE
 fainst luody capacity ouble cone adjustable metourle cone adjustable directly to the shielding base plate whthout any throughout. Lowest possible zero capacity and
diolpctric loss. Fispecially Laseful for the reception of long waves or for construction of wave traps

 Shiplded betwern sections. Heapy alumlnum hates. ${ }^{3}$ finch diam. sieel shaft. Self adjust ang lyearings at botil ents of the shaft smoot Width $3^{1}$

Hammarlund Padding Condensers

compensaling and padding purpover. A cumblact allhigher capacity units ure ondensers. I solantite.

The phat bronze llexible plate is shaped to provide strafaht-lineranacity increase. idjusting screws have machine cut threads and celf-aligning conical seats. Solkier dipned ter minals. Fixed blates are securely anchored. जक्तन $\qquad$ 3E 7260
$3 E 7260$
$3 E 7262$
$3 E 7262$
3E7263
3E7264
our

# Quality Variable Condensers 



The Condensers described on this page are the finest made. They are the first quality product of the originators of the variable Gang Condenser carrying a section with specially shaped plates for tuning the oscillator of Superheterodyne circuits, and the Company which supplies the majority of the largest nationally known Radio Set Manufacturers. Their long experience in this field is reflected in the superior workmanship and advanced mechanical and electrical features to be found in these fine units: Frames and shields of heavy cold rolled steel finished in bright cadmium plate, heavy aluminum plates, ball bearing shafts, new vernier mechanism; and extremely accurate calibration-capacity variation between gangs plus or minus $1 \%$. There is a type for every replacement or constructional need available. Note: All Condensers Illustrated are of Clockwise Rotation.


## Low Shield Superheterodyne Model

Spectal oscllator section at rear of conlenser for cuning the ondillator of superheterodyne receivers whithout the use of a badding system. For quency. Maximum cabarity of IK.F section . 000365 mfd . Nintmum capac-

| Clockwise |  | Rotation |  |
| :---: | :---: | :---: | :---: |
| Stock <br> Number | Num <br> Gimga | Trimmers OH: | Your <br> Price, Each |
| $\begin{aligned} & \text { 3D7350 } \\ & \text { 3D7351 } \\ & \text { 3D7352 } \\ & \text { 3D7353 } \end{aligned}$ | 2 2 3 3 | $\left.\begin{array}{l}\text { light } \\ 1 \text { eft } \\ \text { light } \\ \text { left }\end{array}\right\}$ | $\begin{array}{r} \$ 1.11 \\ 1.67 \end{array}$ |

Low Shield T.R.F. Models(Capacity:, 000365 mfd. Max., .000020 mfd . Min.)


## High Shield Superheterodyne Model

Ifas special section at rear for tun- minimum: . 00002 mfd . Capacity of ing oscillator of superheterolyne cir- oscillator sertion, maximum: onno3s system. lesigned for $1 t 5$ K.C. In- end plite: 4x3 is In. Length: 2-gank
 R. $F^{\prime}$. sections, maxinum: 000365 mfl .,

| Slork Number | Num. Githgs | Trimmers on: | Your Price, Each |
| :---: | :---: | :---: | :---: |
| $3 \mathrm{D7374}$ | 2 | light | \$1.18 |
| 3D7375 | 2 | Ineft |  |
| 3D7376 | 3 | Right | $1.76$ |
| 3D7377 3D7378 | 3 | leift | $2.35$ |
| $3 D 7378$ 3D7379 | 4 | Hight | 2.35 |



HighShieldT.R.F.Models(C apacity: . 000365 mid. Max... 00002 Mid. Min.)



## New Compact Condensers

Superheterodyne and T.R.F. Models
SUPERHETERODYNE MODELS for use with 175 KC i.f..
 mfd. Maximum of oserilatar setion .0002i5 mfle, minimum . 000013 mifl. Covers 1800 to $53 . \mathrm{k}$ k. When used to rover thits range the r.f. Inductance should be 210 m .11 . and osctlator inductance 166.5
 Ball bearing shaft $3_{6}$ " diameter
Clockwise Rotation

| $\begin{aligned} & \text { sturk } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { Numb, } \\ & \text { Cianks } \end{aligned}$ | $\begin{aligned} & \text { Triminers } \\ & \text { on: } \end{aligned}$ | $\begin{gathered} \text { Your Price, } \\ \text { Each } \end{gathered}$ | stowk | $\begin{gathered} \text { Num. } \\ \text { Cianks } \end{gathered}$ | $\begin{aligned} & \text { Trimners } \\ & \text { on: } \end{aligned}$ | $\underset{\text { Yourprice }}{\substack{\text { Each }}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 307310 \\ & 337310 \\ & \text { 3D7311 } \\ & \text { 3D7312 } \\ & \hline 3 D 7313 \\ & \hline \end{aligned}$ | 2 2 3 3 3 |  | $\begin{array}{r} \$ 1.00 \\ 1.47 \end{array}$ | 3D7314 3D 7315 3D 7316 3 D 7317 | 2 3 3 |  | $\begin{array}{r} \$ 1.00 \\ 1.47 \end{array}$ |

T. R. F. Models

Maximum capacity .000365 mfd . Minimum capacity 000016 mfd . Clockwise Rotation

\section*{| stuek |
| :---: |
| Numbler |
| 3D7318 |
| 3D7319 |}

3 C 7319
307321


| Trimmers |
| :---: |
| $\left.\begin{array}{l} \text { Risht } \\ \text { feff } \\ \text { light } \end{array}\right\}$ |

Counter-Clockwisc Rotation

| stock | Rotatio |  |  |
| :---: | :---: | :---: | :---: |
|  | Num <br> cians | Trimumers , on: | Your Price. Each |
| 30722 <br> 307323 <br> 3D732 <br> 3D7324 | 2 2 3 3 3 | (tight | $\begin{array}{r} \$ 1.00 \\ 1.47 \end{array}$ |

## New 6 to I Ratio

## Vernier Variable Condensers

A new ingenious arrangement in the shaft of these pondenscrs provides for a vernier cirive which eliminates the use of costy vernier

 struation detalls, uhysiral of the Neve Compact Varlable Condensers npplicat ions
ilsted abore.

## Superheterodyne Models

| Clockwise Rotation |  |  |  | Counter-Clockwise Rotation |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | Kum. | $\begin{aligned} & \text { Trimmury } \\ & \text { om: } \end{aligned}$ | Your Price, Each | $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { Num, } \\ & \text { Cingks } \end{aligned}$ | $\begin{gathered} \text { Trimmers } \\ \text { on: } \end{gathered}$ | $\begin{gathered} \text { Your Price } \\ \text { Each } \end{gathered}$ |
| 3D7334 3D7335 3D7336 307337 | 2 2 3 3 |  | $\$ 1.13$ 1.60 | 3D7338$3 D 7339$ <br> 3D 7340 3D7341 | 2 2 3 3 | $\left.\begin{array}{l}\text { Ripht } \\ \text { left } \\ \text { liththt } \\ \text { Left }\end{array}\right\}$ | $\begin{array}{r} \$ 1.13 \\ 1.60 \end{array}$ |
| T. R. F. Models |  |  |  |  |  |  |  |
| 3D7342 3D7343 3D7344 <br> 3D7345 | ( | $\left.\begin{array}{l}\text { Right } \\ \text { Left } \\ \text { 1eftht } \\ \text { Left }\end{array}\right\}$ | $\$ 1.13$ 1.60 | 3D7346 3D7347 3D7348 3D7349 | 2 2 3 3 | $\left.\begin{array}{l}\text { light } \\ \text { linht } \\ \text { Ripht } \\ \text { left }\end{array}\right\}$ | $\begin{array}{r} \$ 1.13 \\ 1.60 \end{array}$ |



New 456 K. C. Condenser
Tunes from 1800 o 535 K.C
ShwoGang long. 3 tapy ines mount. ing holes In hintolin on sides to town feet
 Wide, laz" bigh. Maxl-
mum capacity of R.F. sertlon . 0003 क5 mfd . Minfmum caparity . 00001 h Minimum bivole nid

fluning on the low waves qular bradeast band.
Rotation

| 307327 | Left | Clockwise |
| :---: | :---: | :---: |
| 307326 | Right | Clockuriso |
| 307329 | Reft | Counter |
| YOUR PRICE |  |  | Stock No. Trimmers on


| 307331 | Left | Clockwise |
| :--- | :--- | :--- |
| 307330 | Right | Clockwise |
| 30733 | 1eft | Counter |Counter ClorkwiseCounter Clorkwise$\$ 1.13$

Each

## Single Gang

 Condensers

## Low Minimum

Cadmium miated. End late 3 㪁 $\times 21 / 8^{\prime \prime}$. IHeavy ohosphor bronze roter connertions. shielded minlmum rompensators whth grounded adjusting screw Steel shaft $\frac{1 / 8}{8}$
Inch diameter-ball bearings.

Short-Wave Plug-In Coils Short wave coils are not Just cylinders wound
with wire. These new Coils are the result of with wire. These new Coils are the result of
research by competent engineers. Wire correctly spared on each individual roil for efficiency-outperform other coils. A form with a solid backing for the winding insures the wire staying on the form as originally wound and prevents a change of inductance. Higher frequency colts have plated wire. All coils are for use
maid. short-wave condenser.

## 

3E6680-
Regular standard 2-cireuit 4 prong base calls Requar standard 2-eireut
1- imary and secondary on each coil. $15-200$ 3E6668-Ultra Short Wave Coil. Range 9.5 YOUR PRICE

53c
3E6681-Broadcast coils same as
YOUR PRICE, Set of prong
5 Prong Coils
88¢
Regular standard $\mathbf{2}$-eireuit $\mathbf{5 - p r o n g}$ base. Primary and secondary on each same as above but 5 -prong base interchangeable with band spread coils. 15 3E6670 -set
YOUR PRICE

## $t$ of 4 colts.

$\qquad$ last
\$1.47
3E6671 -broadcast rolls same as abc
190-550 meters. $\qquad$ \$1.03
Regular standard 3-eircuit 6-prong rolls. Primary meters.
3E6672-Set of 4 coils.
\$2.04
YOUR PRICE
59c
2E meters. ${ }^{6}$ wrong.
21 pOUR PRICE
YOU
3E6673-Broadrast colts same YOUR PRICE
Set of 2 coils
Si. 18

## Band Spread Coils

Short Wave. Low loss ceranile padding condenser mounted on each coll. For use on the congested "ham" bands. spreads all bands for
convenient tuning with usual $140-150$ mind. conconvent
denser.



## Plug-In Coil Forms

 Without Windings Moulded black bakelite. In top flange is prose with colored hands of red,yellow, green. blue. One of each color form included in set. Hand rim on top of coll orin makes removal form Length 2 inches.


[^1]
## NEW ALDEN SHORTWAVE Coil Selector Unit

## For All 4, 5 and 6 Prong Coils

Use this new model roll selector in any receiver new or old and secure the utmost convenience in changing
coils. Any coll instantly coils. Any coll instantly swings into circuit by rigidly held thy the specially construct coils are combination 4,5 , and 6 socially constructed multiple mont of any kind. and hoo sockets without adjustCompact and Efficient
Knob and indicator blate mounted on the face of the panel shaw what roll is in circuit. Single units in tandem so that 8 coils can be individual, mounted into circuit an a cons indindually thrown
 int this. Two size $6 / 32$ threaded mounting holes in bottom of unit allow unit to the firmly mo holes $8{ }_{8}^{1 / 4}$ is for panel mounting. Shaft extends if" beyond

New Antenna Trimmer Assembly

${ }^{3 \mathrm{E} 6698} \mathrm{H}$
 7 to $\begin{gathered}\text { go mild } \\ \text { Insulated }\end{gathered}$ insulated
Shaft Extension Complete assembly for placing the antenna ad justment where it belongs on the front panel. 7" Long Insulated extension shaft fits adjustment
screw of trimmer condenser which screw of trimmer condenser which mounts on back
of chassis near antenna binding post. Collar and of chassis near antenna binding post. Collar and knob stumbled. Enilire assembly is $81 / 4 "$ long.
A high quality 7 to 80 matt. trimming condenser A high qually 7 to 80 mild. trimming condenser is used lest grade of infra and porcelain for
lase is used. The handiest thing in short wave.

Isolantite Short-Wave Coils


Wound on a non-hygroscopic ceramic material Fight moulded ribs on are kent to a minimum. lIngs so they are practically air core wound. Coils are for use with a 150 ninitd. tuning condenser.
3 E8085 -Aet of Short-Wave Coils
$21 \%$ nutters. ludirldual langer of ind from 16 to are 16-3ti. $33-65,5 i-115,108.217$ individual coils List, \$4.00.
YOUR PRICE
\$2.35
35808 Prong Broadcast Coils
Nantes of indicts 2 coils. 190 to 550 meters 2 windings. List. $\$ 2.50$. YOUR PRICE
$\$ 1.47$
4 Prong Ultra ShortWave Coil 3E8087-One coil with a range of from 9.5 to Yb meters.
YOUR PRICE

79¢
$3 E 8088$ - Prong Short-Wave Coils Ranges of individual coils are: 16-38. 35-75. 73 $1: 37,13.5-200.3$ windings.
List. \$5.00.
YOUR PRICE
\$2.94
$3 \mathrm{E} 8089{ }^{6}$ Prong Broadcast Coils
Hanks of individual coils. are: $190-310$. $300-550$ 3 windings. List, $\$ 3.00$.
YOUR PRICE $\qquad$ $\$ 1.76$
6 Prong Ultra Short-Wave Coil 3E8090 -One coll with a range from 9.5 to 21


## SPECIAL VALUE

short. Wave Plug-In coil Kit


Supplied in matched sets having uniform induclance with accurate space-winding. Incorporating the roper relation of tube -diameter to wire size. Wound on treen, brown. black and red 4 prong bakelite forms covering from if to 217 meters. lances of individual tolls are: 16-36, 33-65, 573 E809


Illustration shows two units combined in Tandem. Price is for single unit.

Single Unit Price
3E6697-coll selector. Complete with escutcheon and knob. Your PRICE.

ST 26
Short-Wave Plug-In Coil Kit


Four coils wound on low loss moulded bakelite. Cover wave band of 16 to 217 nieters when tuned circuit diagrams instructions and with 16 different $3 E 2$ 74-Ultra Nhort-Wave Coil Harts list.
 Broadcast Coils. Hance 190 to 550 n
dividual ranges are $190-310$. $300-550$. $3 E 2276$-Set of 2 Coils. List. $\$ 1.85$. YOUR PRICE
$\$ 1.09$
6 Prong, 3 Windings
Have primary. secondary and tickler windings. 16 to 200 meters. Supplied with 16 circuit diagrams nd instructions.
3E2272-list Price, $\$ 3.75$.
YOUR PRIQE, Set of 4 Colts
$\$ 2.19$
$3 E 2270$-Ilea short Wave Coll.
YOUR PRICE
749
3E2271-Proadcast Colls. Range 190 to 550 meters. Individual Ranges 190-310. 300-550. YOU Price. ${ }^{\$ 2 .}$
\$1.32


## $\rightarrow$ Hammarlund Isolantite

 Coil FormsEspecially efficient for short wave (high frequency coils). Lower leakrugged. Diameter $11 / 2$ inches. $1 / /^{\prime \prime}$ wide moulded depression for primary. 2 inch winding space for secondary
with moulded holes in form for tapping at any desired point Convenpint at any desired point Confer
lent ebonized cap.
$\begin{array}{ccc}3 E 7205 & 4 & \text { in } \\ 3 E 7206 & 5 & \operatorname{pin} \\ 3 E 7207 & 6 & \operatorname{din} j\end{array} \quad$ YOUR PRICE

## R. F., I. F., and Antenna Coils, Chokes and Transformers

## I. F. Transformers



A complete line of a
transformer
nechessary for replacement new sot design,
Can be used any combination required for the I. $F$, densers are of the mica mpression tyne, on Isolantite bases and are adustable firar is furnished with each unit inductances are the lattlee wound type mounted dehydrated wood forms specialiy impregnated

1. F. Coils in Large Size Shield



| $\begin{gathered} \text { Peak Frequency } \\ \text { in Kilocycles } \end{gathered}$ | $\begin{aligned} & \text { Frequency } \\ & \text { ilange } \end{aligned}$ | Single Tuned |
| :---: | :---: | :---: |
| 465 | 442-470 | 3E6604 |
| 262 175 | $248-277$ $168-180$ | $3 E 6605$ $3 E 6606$ |
| 175 115 | $168-180$ $100-130$ | $3 E 6606$ $3 E 6607$ |
| $\text { \| YORICE EACH. } 64$ |  |  |

## Center-Tapped

For use with Wunderlich, $55^{\prime} \mathrm{s}, 75{ }^{\circ} \mathrm{s}$

| Double Tuned | 1 Pat Frequency in Kilocycles | $\begin{aligned} & \text { Frequency } \\ & \text { Mange } \end{aligned}$ | Single Tuned |
| :---: | :---: | :---: | :---: |
| 6609 | 46 | 442.470 | 3 E 66 |
| 3E6610 | 262 | 218-277 | 3E6614 |
| 3E6611 | 175 | $168-180$ 100130 | $3 E 6615$ $3 E 6616$ |
| 3E6612 | 115 | 100-130 |  |
| YOUR PRICE | $+.90 \%$ | YOUR PRICE EA |  |


| Can ixe $1 / 1 / 5 \times 3{ }^{3}$ high Mtg. hole centers 1 . |  | Can size $1_{1 / 4} \times 1 / 1 / 2$ high Mitg. hole centers 1 |  |
| :---: | :---: | :---: | :---: |
| Double Tuned | Penk Frequeney in Kilorycles | lirequency Ranke | Single |
| 7 |  | 442-4 |  |
| 3E6618 | 175 | $248-277$ $168-180$ | 3E6622 |
| $3 E 6619$ $3 E 6620$ | 175 | $168-180$ $100-1.30$ |  |
| $\begin{aligned} & \text { YOUR } \\ & \text { PRICE } \end{aligned}$ | $\text { H. } 84$ | $\begin{aligned} & \text { YOUR } \\ & \text { PRICE EA } \end{aligned}$ |  |

Center-Tapped

| Double Tuned | Peak Freanency in Kilocycles | Frequeney Ranke | $\begin{aligned} & \text { Single } \\ & \text { Tunce } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 3E6625 | 465 | 442-470 | 3 E 66 |
| 3E6626 | 262 | 248-277 | 3 E 6630 |
| 3E6627 | 175 | $168-180$ 104 | 3E6631 |
| 3E6628 | 115 | 100-130 | $3 \mathrm{E632}$ |
| $\begin{aligned} & \text { YOUR } \\ & \text { PRICE EACH. } 88 \$ \end{aligned}$ |  | $\text { YOUR EACH. } 70 \$$ |  |

Antenna and Oscillator Coils For Superheterodynes


Latoral wound antenna, and oscillator coils for superheterodyno use. 'liese can be used in bairs with antenna and $\mathbf{R}$. $\mathfrak{F}^{2}$. colls shown in other listing. The windings are dipled and have a The broadast colls are wound on ${ }^{2}$ 发"xis" speelal
dowel while the combination thort wave ind broad-
 denser. 3 663-Antenns Broadcast Coil (1750 to 550


YOUR PRICE. Each Coil.........
Oscillator Coils


## Litz Wound Antenna and

 R. F. Amplifier Coils

Wo are showing a complete ine of cois systemat icalyy listed so that the barthular herds of the Matched to a 000365 mfd . (.00035) variable con. denser. This talue condenser is used in the ina. jority of sets that are in operat lon loday. We recommend that a complete set of coils be replaced in a receiver in ofler to obtain maximum ef by just substituting one coll where the original inanctance camot be matched. In selecting cons and one $\mathrm{K} . \mathrm{F}_{-,}$iwo 16 . $\mathrm{l}_{\mathrm{F}}$ only, or one Antenna and two 18 F., etc. whatever combination desired Coils be shibped in perfectiy malched set of colls. Coils are precision machine wound and use the impervious to moisture. The broper relation between tuhe diameter and wire size has been
efticiently chosen and, regardless of the size of the coll to be substituted, the pariicular
shown will wake an excelient rebacement. nedance colls is in the primary windings. Instead of having a brimary with comphrativels fen turn tmpedance colls, the high impedance antenna coll has a lateral or honey-comb winding directly adjacent to the seconclary $\mathbf{F}$ has the lateral whalng wound on a dowe R. $\mathbf{F}$, has the lateral Whding wound on a dowe inside the coll form. Wish impedance coils are necessary whire screen.grid tubes are used In the circuits and furnigh a maximum gain froungoly the entire wave band. Litz calls can be readils substluted for binamel and furnish approximately

## Shielded Litz Coils

Low Impedance Primaries
The propier relation between the shitelding and the coil insires a minipum of loss

3 E6644 L,ow lunvedance B . F. Coll YOUR PRICE

## EACH

3E6645-High Impedance Antenna Coll
3E6646- High mindance is. F. Coll 3E6646- High limpedance 1. F. Coll YOUR PRICE

40 C
Unshielded Ant. and R. F. Coils


The same as those listed above except without shield Supplied on a standard $7 / \mathbf{n}^{\prime \prime}$ outsicde chameter by ai migh con form. Mountime enable mounting of coil ln any nosilfon.
3E7I50 Low Impedance antema Coll
YOUR PRICE
EACH
3E7 52 High Impedance Antenna Coil
YOUR PRICE
EACH
344
Solenoid Plain Enameled Coils The same as above colls except hare a plain
enameled single liyer winding. All dimensions are the same as for slmilar lltz wound colls listed abore.

Shielded Coils
3E7154-Low lupedance Antenna Coll.
YOUR PRICE
EACH
276
3E7156-M1gh limpedance Antenna Coll YOUR PRICE
EACH
3ET158-Lownshielded Coils
3E7158-Low limpeldince Amenta Coll. YOUR PRICE
EACH
3E7160 Mikh Impedance Antemna Coll. YOUR PRICE
EACH

Combination Short Wave and Broadcast Antenna and R. F. Amplifier Coils
We are showing the five most popular types of short wave coils for R. F. Sets which wajorty of uses required in bulling combination short wave and broadeast sets. In all cascs circult diagrams conclse meihod for replacing in old sets or build ing and changing over new short ware amplifiers. In cases where shunts are sjectitied, this means an additional winding adjacent to the secondary mended mended for maximum efielency in comparisun self, las been taved to provide a lower Inct ance for short ware tuntng 11 these corer the ware lemghs witited wid a stand 000365 mfd (eommonly desipnated 00035 mfl ) varlable mfd (eomn
condenser.

## Unshielded Plain Enamel


oh imped ance primary plain ename secondary with additiona Mait emamel short wave to 200 meters and 200 10550 meters comblete
 $3 E 7162$-Antenna Coll
$3 E 7163-12$
3E7163-1. F.
your price $\qquad$ 33C

## Unshielded Bank Wound



Unshielded high impedance primary bank wound litz secondary with tap on secondary for shor wave covering wave lengths 80 to 200 meters and 200 to 550 meters complete with wiring dlagram. Coll size "8" O. I. $x{ }^{21 / 4}$ long.
3E7:65-Antenna Coll $\left.\begin{array}{l}65 \text { Your Pric }\end{array}\right\} \begin{aligned} & \text { Yo Coll } \\ & \text { Each Coil. }\end{aligned}$
424
Shielded Bank Wound

## 120 to 550 Meters



Shielded hloh Impedances primary bank wound litz. Secondary tap on coll for
short wave coverage covering 120 to 200 meters and 200 to $5: 50$ meters complete with wirlng diagram. Coll size
1" 0 complete with Size of shleld can $17{ }^{\prime \prime}$

3E7:66-Antenna Coil $\left\{\begin{array}{l}\text { Your Price } \\ \text { 3E7i67-lk. F. Coll }\end{array}\right\}$ Each Coil....

## Shielded Bank Wound

Shielded high impedance primary bank wound litz secondary with shunt winding of primary for shori ware coverake. Ware length range is to 200
 lorag. Nize of shield can $17_{3}^{\prime \prime} \mathbf{O}$ O. D. $x^{2} 1_{4}{ }^{\prime \prime}$ high with two \%s spade bolts for mounting centers $1 \%{ }^{1 \%}$ Wirms dlakram Included.

High Gain Coil 80 to 550 Meters
High impedance special short wave coil both bri lateral winding secondary and short wape shunt us.
ind
lite
wire
exeption ang high "ire exception so to 200 meters and 200


[^2] scrent mountung. Wirink dlagram included. $\left.\begin{array}{l}\text { SE7170-Antenna Coll } \\ \text { 3E7171-R. F. Coll }\end{array}\right\} \begin{aligned} & \text { Your Price } \\ & \text { Each Coil.... } 59 ¢\end{aligned}$
S. W. Plug-In Octo Coils


## Coil and Matched Condenser Kits

## Scientifically Engineered

Radolek has correctly englneered the
recelver that can be constructed from eath roll kit listed on this page. Our enkineers in collaboration with the enkineers of leading coll and rariable condenser manufarturers have scientifically designed these kits and actuatly built laboratory models of the coinpleted receivers. Our tests have pioved that these sets are the tinest obainuble in their class. The colls have been especially wound and designed for the varlable condensers specified for use

## 8 or 11 Tube Superhet Kit



175 to 550 Meters 1720 to 540 K.C.) 308616

## $5 \longdiv { 9 5 }$

Complete with Variable Condenser and 2 sets of diagrame for bulldink elther an 8 or 11 tube
receiver. receiver.
Kit of 5 litz wound tenna coil. 1 -Preselector coll, 1-Oscllator coil and 2-Intermediate Freruency $175 \mathrm{~K} . \mathrm{C}$. These culls are prectision machlne wound and with them a receiver of less than 10 microvolt sensitivity and perfect $10 \mathrm{~K} . \mathrm{C}$. selectivity can be constructed.

Great Distance Range
The recelvers that can be bult front these coils are truly masters of the air. at full volume. In addilitin to in far distant stations with magic ease and entire Western Hemisphere you will enjoy the thrill of pulling in the faintest of radio slgnals breadeast by hundreds of smather and less powerful satations. bollce calls from all over the country of be baller and less powerfuly recelved. The suns; selectivity of this recelver climinates interference from even high powered local stations. A colossal achierement of engineering skill.

Tubes Used in 11 Tube Kit
Desloned for use with $1-56$. $2-57$, 4-58, 1-55, 2-2A5. $1-5 Z 3$ type tubes. A ther as an I.F. tube. A tyme 5 . is used as an as a first detector and another as an I.F. tube. A type 56 is used as an oscillator tube. A 55 as a first A.F. tube. A 57 as a squelch control and a type 58 used $A S$ a mhase reverser for oferating the $2-2 A 5$ 's resistance-coupled in mush-pull. The 523 is a full wave power rectificr. Send for list of other parts required.

## Added Features on 11 Tube Receiver

1. SQLELCHI CONTROL-or noise supyressor for yulet tuning. Eliminates nol ses encountered between stat lons when tuning.
audio frequency response ${ }^{2}$. ${ }_{3}$ audionse leverser for

## Tubes Used in 8 Tube Kit

Designed for use with 1-56, 3-58. 1-55. 2-2A5, 1-5Z3 type tubes. A type 58 is employed in the R.F. stage. also one is used as a nirst detector and another as an 1.F. tube. A type 50 is the oscllator. A 55 is used as a 2 nd
 rectitier.

## A.V.C., Tone Control, Meter Tuning

The coils and crrcuits for both receivers are iesigned to incorporate automilic volume control, tone control and rishble meter cuning. These features in atdition to the expertly engineered chassis make these receivers the finest
radio it is possible to buidg radio it
$308616-\mathrm{Kit}$ of 5 coils .000400 mfd., 3 gang cartahle condenser. Hat of YOUR PRICE
$\$ 5.95$
Desinned for construction on a size $17^{\prime \prime}$ long, $10^{\prime \prime}$ whde, $3^{\prime \prime}$ deen chassis base.

## 7 Tube Shortwave and Broadcast Superheterodyne

 75 to 500 Meters
540 to 4000 K.C.) 3 D8613
$\$ 405$
Complete with Variable Tubes Used: 1-56, 1-57, $\begin{array}{ll}\text { Tubes } \\ 2-58, & \text { 1-55, } \\ \text { 1-2A5, } & 1-80 \text {. }\end{array}$ $\mathrm{F}^{75}$ to 550 meters $(540$ to 4000 K.C.). Kit of coils consisting of 1-Antenna and l'reselector cillator coil, 2 -Intermediate 1 - Os cillator coil. 2-Intermediate Frequency coils
and i-shored at 175 K.C., coils are all precision machine wound and with them a machine selcettrity con them a receiver of microvolt sensitivity and 10 K.C. selcctirity can be constructed. Foreign brasicast cention can be sho to shore communtrations and amateur transmittlogs are all instanty available on the short wave band
A.V.C. and Tone Control

Clrcults are designed for automatic volume control and tono control. Both 3D8613-kit of 6 colls, 000365 mrd 3 barts and all diagrams.
YOUR PRICE
Deslgned for construction on Chasal Base 121" 10 . $0^{\prime \prime}$ we.

## Instructions-Diagrams-List of Materials Cut Out and Drilling Template

Three drawings are supplied with mounting each part on the chassis each coil kit. A Schematic wiring base. A drilling template is supplied. diagram. Pictorial wirlng diagram A list of the barts giving all their and Chassis layout diagram. The electrical values and specifications is pictorial wirlng diagram supplied shows the connection of every wire in its exact position and relation to each part. Ali wiring is done under the chassis. The chassis layout diagram shows the position for can properly construct these recoivers

5 Tube Shortwave and Broadcast

## Superheterodyne

75 to 550 meters
( 540 to 4000 K.C.) 308610
$\$ 375$

Complete with Variable Condenser

## Tubes Used

1-57, 1-58, 1-55 1-2A5, 1-80.

## 510 to from 1000 to 550 meters

 ( 510 to 1000 K.C.). Kit of and colis consisting of 1-Antenna and Preselector coil. l-Detector 2-Intermediate Frequency colls peaked at $175 \mathrm{~K} . \mathrm{C}$., and t - Nhort Wave Choke These colls are all precision machine wound and with then a recelrer of unusual sensitisity and selectirity can be constructed. Coast to coast reception Fonder facorable conditions can he obtalned on the regurar broatleast hand Foreign broadcast, police cals. shio to shore communication and amateu A.V.C. and Tone Control

Circuits are designed for nutomatic volume control and tona control. Both 3 D86 10 -lit of 6 coili. $.000365 \mathrm{mfd}$.3 gang Variable Condenser, Itat of Darts and all diagrams.

## YOUR PRICE

Designed for construction on a Chassis base $12 \frac{1}{h^{\prime \prime}}$ long. $8^{\prime \prime}$ wide and $21 / \mathrm{s}^{\prime \prime}$ deen.

## 5 Tube A. C., D. C. Superhet



175 to 550 Meters
 1-25Z5.
Kit of a colls consiste of 1 Antenna Coil, ${ }^{1}$ Oscillator Coil and ${ }^{2}$ Double Tuned Intermediate Frequency roll peaked at 456 K.C. These colls are
prectsion machine wound and with ehem prectslon machine wound and with them a receiver of unusual sensitivity and selectivity ran be constructed. Coast to coast recention under averake conditions
can be ontained. Police calls of many can he obtained. Police calls of many of the larger cities are avallable. In order to
condenser we supply with the coll thit must be used. 3 D8608-Ktit
308608 -Kit of ${ }^{4}$ colls, 2 Gang condenser, schematic diagram, and list of materiols.
YOUR PRICE
$\$ 2.95$
4 Tube A. C.-D. C. T. R. F.

## 175 to 550 Meters 1720 to 540 KC$)$

Tubes Used: 1-6D7, 1-6E7, 1-43, 1-25Z5.
A Schematic Diagram. and List of Parts are supplied with the ${ }^{4}$ tube and 5 tube
other diagrams are included. neither can they be supplied.
Kit of 2 coils consists of 1 Antenna Coil and 1 Hadlo. Frequency coil. These colls are precision machine wound nud with them a rerefver the edual of many and tube models can be constructed. Coder very lavorable condition coast to ditions can be receiced. Dollice calls of many of under practically any con able. In order to obtajn the hest results the condenser we supuly with the coll kit must be used.
308607 -Kit of 2 coils. 2 gank , 000365 T.R.F. Variable Condenser, Sche YOUR PRICE


Cut and Drilled Chassis Bases
Made of 18 sauge terne plate lead coated Fach size listed welded to corner bosts. drilled to fit commonent parts suecified and lists of parts furnished with matched Condenser and Coll Kits Hated above. The bright rust proof finlsh of there Bases give them a cery professional appearance, especially suita ble for custom-Set huilders.

| 11 TİBE | 8 TI'RE | 7 TITBE | 5 TUBE |
| :---: | :---: | :---: | :---: |
| Slze $10 \times 17 \times 3^{\prime \prime}$. <br> 4D 10905 <br> Your Price $\$ 2.75$ | $\begin{aligned} & \text { Size } 101173^{\prime \prime} \\ & 40 \\ & \text { 40 } \\ & \text { Your Price } \$ 2.45 \end{aligned}$ | Size $9 \times 121 / 2 \times 21 / 2^{\prime \prime}$ <br> 4D 10907 <br> Your Prica \$2.25 | Size $8.121 / 2 \times 21 / 2^{\prime \prime}$ <br> 4010908 <br> Your Price $\$ 1.95$ |

## HAMMARLUND

／solantite R．F．Choke
 quency choke is designed particularly for short wave
and ultra short ware recelvers and transmitters，but its eftl－
ciency actually extends well above the regular broadcast hand．Its compactness permits its reunting in isolated wositions well removed from stray R．F．flelds． which，together with its load characteristics，spe－ clatly＇recommend it as a grid choke for multi－stake transmitters．A sectionalized．Isolantite spool rarrifs the four windings which are moisture mroofed and protected ay radio flexible leads and remncable brackets fermit any desired style of mounting．No inctal screw passes throurh the
choke to increase losses and distributed capaclty． choke to increase losses and distributed caparlty． The choke measures $13^{\prime \prime} x^{7} y^{\prime \prime}$ ，has an inductance


## 307203 －Code CH－8

## rour Price

$65 ¢$

## HAMMARLUND

Heavy Duty Transmitting Choke
Designed
feed in ing in power trans－
mitters onerating in the kc With the exception of frequencles between $5: 3100$ ductance 2.5 mh ．Distributcd capacty less than 1.5 mmf ．D．C．resistance
ommended
D．C．
（eontinuous）
500 Over－all size（without brackets） $1 \frac{3}{}{ }^{\prime \prime}$＂dlameter $3 E 7204$ Cule CH500

|  | \＄1．03 |
| :---: | :---: |

## New HAMMARLUND


incaluable for use where
apace is at a premium
kint in weikht that it can be supported by its own
cads．For inse in any fing is desirable such as detector plate circults，all 13 plus leads and all grid return leads．Mounted on a $3 / 4$ Isolantite core．Coils to minimize the effects of atmospheric changes． Tinned copper wire leads．I，ength across rans ta
$1 \% /{ }^{\prime \prime}$ Dinmeter $1 / 2 \%$ ．Maximum recommended D．C． 125 milllamperes
3E7200－Code CH－X
YOUR PRICE
44¢


## HAMMARLUND

Improved Shielded R．F． Choke
A new shielded
general use in high galn circules．The coil unit is completely shielded in an
aluminums shell resulting in minimum external fleld and permitting compact recelper deslon without stray counling to cause instability thoroughly impregnated to prevent moisture effects The multipliclty of pies prorides both high in ductance and low distributed capacity resulting in extremely high impedance to and ware and broadcast hands．The mounting legs proviled are on $1 \frac{18}{}$＂centers．When mounting spare is limited the leas can be remored and the choke mounted ly treans of two tapped helfs on centers in the aliminum bottom plate of the cham The shield can measures $1 \frac{1}{2}$＂high by $1 \%{ }^{\text {con }}$ dide cter．Connertions made to terminals on
can．Indurtance $10 \mathrm{~m} . \mathrm{h}$. ；D．Cesistance 6



## HAMMARLUND

High Impedance $R, F$ Chokes
Have a large inductance with a rery low clistributed rapicity． Very effertive in both hroadrast and short wave receive B－plus and grid return leads and for It．F．filtering in general．Current carry



HAMMARLUND
Intermediate Transformers


Their senstivity sement nurposes． other characteristics are suct a to make them equally satisfactory in superlieterodynes embloying in connection with any tris econd detector．Made in six spe－ clal types for broadcast wase， hort wase and long ware receivers． grid，ituned plate type with lattice wound roils impregnated to pre Ings are used in the $465 \mathrm{~K} . \mathrm{C}$ ．short wave trans－ miea riming condensers anded on Isolantite bases and adjustable from the ton of the shield can． Leads are R．M．A．color coded and tagged for easy Installation．Secondaries are elther plain for tubes requiring split input ctrcults such as
 fluminum sheld cans measure $2 / /{ }^{2}$ outside threaded lugs on $2^{\prime \prime}$ centers．Screen grid cap and mounting nuts included．

| Stock Number | Code | 10ak | $\begin{aligned} & \text { List } \\ & \text { Irice } \end{aligned}$ | Your Price |
| :---: | :---: | :---: | :---: | :---: |
| 307270 | T－465 | $46 \overline{\mathrm{~K}} \mathrm{~K}$ ． | \＄1．05 |  |
| 3D7271 | ＇1－175 | $175 \mathrm{k} . \mathrm{C}$ | 1.65 |  |
| 307272 | T－115 | $115 \mathrm{k} . \mathrm{C}$ ． | 1.65 |  |
| Center Tapped |  |  |  |  |
|  |  | 465 KC |  |  |
| $307276$ | $\mathrm{T}^{1}-170 \mathrm{Cl}^{\circ} \mathrm{l}^{\circ}$ | $175 \mathrm{NC}$. | $1.65$ | 2 |
| 307277 | T－115－（＇T | $115 \mathrm{~K} . \mathrm{C}$ ． | 16.5 |  |
| Beat Oscillator |  |  |  |  |

HAMMARLUND＂Air Tuned＂
 5 K．C．Each Side of Peak
Intermediate Transformers
Where lint efficiency and abso－ Where abily are essential re－
lute abor guirement．＂these new laborators
type＂alt tuned＂units are an absolute iecessity．Tuned prim－ ary，tuned secondary type with
both plate and grid coils of Litz wire．They are tuned to reson－ fariable condensers of special de－
sign．The colls have the excen tional＂ 4 ＂of 115，a coubling co cfficient of $0 . \bar{i} \sigma_{c}$ ．the transform ers proriding a gain in excess of
200 per stage together with un enualled selectirity．＂Air－tuned＂
unit：actually provide increased selentirity and sensitivity sinc the benk setting is constant regardtess of cemp plifier is functioning at peak efficlency at a times．As used in the famous Comet and＇Pro＇ one quarter microvolt per meter and sefectlvity：of better than 10 k．c．ut 1060 times input．standard other tulhes of this type surh as 21 ＇s and 35 ＇s Center tapped untts are avallable for tohes re quiring spllt input circuits such as W＇underlielt
 can 18 gh
screws through the bottom of shield．
 3E7187 3E7188

Center Tapped



## Beat Frequency Oscillator

Employs air dielectric condensers and is tunable by means of a vernier comdenser to which is at－ tached a other，a 1000 or 1,00 eycle beat note（assum－ the other，a 1000 or ing the farrier is tuned precisely on the beak of ing the ratrier is annlitier）is urodueed．When so adjusted


## ＂Imp＂Miniature Size R．F．Coils



## 1．7／16＂Square 13／4＂High

Cnusually emall aluminum shielded coils with race holt mounting．Designed for superheterodyn aipliled at tho present time for AC and DC re Entirely new four bank Litz windin used．Although these coils are extremely small here is no sacritice of efficiency and they compare Forably with all colls regardless of size．At fi00 the interstage coil when measured in a single ？ 110 times input and at 1500 K ． C ．proced a fatn ow distributed capactty and permits a coverage of 540 to 1700 K．C．Fispecially constructed for uge Stork Number YOUR PRICE
$308600-$ One R．F．coll．One Ant．coll SO．95 308601 －Two
308602 －Thre

One

| 1.35 |
| :--- |
| 1.75 |



Shlelded poils are completely shiclided in alumi－ mime case $1^{3}$＂diam．， $1^{6}$＂$^{\prime \prime}$ ing．Insulated wire

| Unshielded |  | Shielded |  |
| :---: | :---: | :---: | :---: |
| Stock Number | Mllihenrle s | Stock Number | Millihenries |
| $\begin{aligned} & 3 D 6650 \\ & \text { 3D6651 } \\ & \text { 3D6652 } \end{aligned}$ | $\left.\begin{array}{l}80 \\ 60 \\ 30\end{array}\right\} 424$ | $\begin{aligned} & \text { 3D6660 } \\ & \text { 3D6661 } \\ & \text { 3D6662 } \end{aligned}$ | $\left.\begin{array}{l}80 \\ 60 \\ 30\end{array}\right\} \leq 22$ |
| $\begin{aligned} & \text { 3D6653 } \\ & \text { 3D6654 } \\ & \text { 3D6655 } \\ & \text { 3D6656 } \end{aligned}$ | $\left\|\begin{array}{cc}10 \\ 51 \\ 3 & 1 \\ 2 \\ 2 & 1 \\ 2\end{array}\right\| 360$ | $\begin{aligned} & \text { 3D6663 } \\ & \text { 3D6664 } \\ & \text { 3D6665 } \\ & \text { 3D6666 } \\ & \hline \end{aligned}$ | $\left.\left\lvert\, \begin{array}{l} 10 \\ 5 y / 2 \\ 31 / 2 \\ 2 / 2 / 2 \end{array}\right.\right\} \triangle 2$ |
| Lattice Wound Mounted Chokes <br> An R．F．Choke mounted on a bake－ lite washer with two lugs for in－ stallation and provided with an eye－ let lange enough for a $6 / 32$ screw to be used as a center mounting． |  |  |  |


| $\begin{aligned} & \text { Stuck } \\ & \text { Num. } \end{aligned}$ | $\begin{aligned} & \text { Millie } \\ & \text { henries } \end{aligned}$ | sitork <br> Num． | $\begin{gathered} \text { Milli- } \\ \text { heuries } \end{gathered}$ | $\begin{aligned} & \text { Stock } \\ & \text { Num. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $3 E 8635$ | ． 88 | 3E8641 | 7.98 | 3E8647－ |
| $3 E 8636$ | 1.33 | $3 E 8642$ | 9.25 | YOUR |
| 3 E8637， | 2.40 | 3E8643 | 10.62 | PRICE |
| 3 E8638， | 3.18 | 3E8644 | 13.90 | PRICE |
| 3 E8639 | 4.00 | 3 E 8645 | 16.00 |  |
| 3E8640 | 5.70 | 3 E8646 | 17.80 | 3E8648－6 3E8649－8 |
| Your |  |  |  | Your |

Radio Frequency Chokes
and Untuned Transformer
Unshielded chokes and trans－ formers are wound on a $1 / /^{\prime \prime}$
ly $s$ special ingregnated
dowel form with a $1^{\prime \prime}$ round
 singolts hase mounting mounting uso estra lenctl screve at the ton of the can．Shielded colls supplied with

| Stuck Nimber | Inductance | For Circuit lireguency | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| $3 E 8655$ | 700 Microhy | 4000－15000 KC | 116 |
| 3 E 8656 | 2 Mulh＇y | 151）0－4000 KC | 146 |
| 3E8657 | 2 Millh＇y | Cen．lip．Ant． | 15 c |
| 3 E 8658 | 4 Millh＇y | 456.1500 KC | 16 c |
| $3 E 8659$ | 50 Mindh＇y | 175－262 KC | 346 |
| $3 \mathrm{E8660}$ | 8.5 Mudh ${ }^{\text {c }}$ \％ | 142 KC | 624 |
| $3 E 8661$ | 15 M11Hh＇y | （U＇T）Untuned | 38. |


| Siock |
| :--- |
| Number |
| $3 E 8662$ |
| $3 E 8663$ |
| $3 E 8664$ |
| $3 E 8665$ |
| $3 E 8666$ |
| $3 E 8667$ |
| 3E8668 |

Shielded R．F．Chokes

| Inductance | For（＇ircuit Frequency | Your Price |
| :---: | :---: | :---: |
| 700 Mlaroh＇y | $4040-15000 \mathrm{KC}$ | 19 c |
| 2 Millh＇y | 1500－4000 KC | $20 ¢$ |
| 2 Millin＇y | Cen．Tath Ant． | $24 ¢$ |
| 4 Millth＇y | $454-1500 \mathrm{KC}$ | $24 c$ |
| 50 Milith＇y | 175 JC | 426 |
| 85 Millih＇y | 142 だく | $82 c$ |
| 15 Mlllih＇y | （U＇T）Untuned | 466 |

## RCA Licensed ICA Complete Short Wave and Broadcast Kits <br> Scientifically Engineered

A new line which ineorporates every model of each of these recelvers has Latest Engineering Development in been subjected to rigid tests in our short wave practice. All ICA short own laboratory as well as in outlying wave kits are designed to gire maxi- distriets and have actualiy brought in mum efficiency over the entire short Eurobean. South American and other wave and broadcast band. The stations foreign stations. The latest lyoe lubes use of a new principle of band pass highest sensitivity and the best audio spread mechanical tuning. A stork quality

## Instructions - Diagrams

## All necessary instructions and dia- of each bart in its correct place on grams are supplied with eath kit. the chassis. The point to point in

 A schematle diagram, pictorial dia- structions with each kit should enable all ineluded chassis layout diagram are will tern the pictorial diagram dealer whe the rado serviceman or the constructis hitd no experience in ers. This diapiom short-have recely. tion of each part indstructions with each kit should enable almost anyone to properly construct in only one or two hours. Radio dealers display one kit partially as sembled in your window. Sell these kits to the short-wave enthusiasts in
your vicinity.

## Universal Mascot " 1 " 1.Tube Battery Operated



Tunes from if to 200 Meters.
4E10775List l'rice. $\$ 9.95$

YOUR PRICE \$5 85
Complete kit of all parts including chas sis base and
and four
cabinet
prong colls. Less tube and batteries.

An effioient one tube receiver designed for battery oneration. An attractlve highly polished black bakellte cabinet is included with this kit. The tuning range can be extended to coter the entire broad
cast band by the use of the addtional colls listed below.

Efficiency and Compactness
The one tube recelver incornorates a new non.in. ductive regenerative control. The tuning is easy and allows a high degree of senslitity over the entire short wabe band. Brings in short-ware
stations including pollce calls, airplane calls. stations including pollce calls, airplane calls, shins at sea, etc. Complete kit of parts includes bakelite cabinet, four bront rons with three meters. Packed in an attractlre display bos. Size of set $61 / 4$ " high. $51 / 6^{\prime \prime}$ wide. $23^{\prime \prime}$ " deep.

Extra Coils for Above Kit
3E7175-[']era short-wave coll. Ware range $91 / 2$ to 21 meters. List Price, $\$ 1.00$ YOUR PRICE $\qquad$ 59 C 3E7176-Broadeast Coils. Set of 2 wiare lenkth range 19 to 310 and 300 to 550 meters. List Price, \$1.85.
YOUR PRICE
\$1.09
Batteries and Tube

Universal Mascot 662," 2-Tube Battery Operated


Tunes from 16 to 200 meters.
4E 10777 Price $\$ 17.50$.
YOUR PRICE
s1029
Complete kit of parts. ils, chas sla base, and
One of the finest panel. Less tubes and batteries. One of the finest battery operated two tube short-wave receivers. Although designell espectally for headphone receD-
tion. when monditions are farorable muderate tion. When monditions are favorahe muderate lidit
speaker reception is possible. Requires only two milliamperes from 130 solts of ${ }^{3}$ deattery which permits use of the smallest is celts and longest nossible battery life. Less than $1 / 1$ ampere flament consumption from two No. 6 dry rells. Coils with
conpenient handle grips plag in from the front of conpenient han
the panel.
Band Spread Tuning Control! Permits accurate Band Spread Tuning Control! Permits accurate
tuning on the crowded Foreign bands. Controlled tuning on the rrouded Foreign bands. Contraled weak Algnals. I'ses $1-32$ and $1-19$ dual Triode giving the equivalent of 3 thlics
Tubes and Batteries
 YOUR
$\$ 4.79$
Tuning Range Extension Coils For Mascot 2, 3, 4, Tube Sets
Addition of these colls to the Mascot Kit Sets gires a ranke of 540 to 31500 K.C.
With Special Shields and I'anel Grlps: 3E7:79-91/. YOUR PRICE $\qquad$
3E7180
\$2.35
$\qquad$ L/st Price. $\$ 7.50$
YOUR PRICE
$\$ 4.41$


## Masterful Performance

Single dial control of the R.F. and detector circults is featured as well as band spread tuning for both stazes also operated from one dial. An antenta rompensating condenser is provided to in-
sure nerfect track ing of the antenna and detector circuits. leaceneration conerol is also incorporated in this receiver tiy use of a non-Induetire resistance in series with a fixed capacity. This systent glves very smooth and preche control of rezenerntion. Connections are provided for phonograph pirk-up to allow the reproduction of phonograph records from the loud speaker of this recelver. A head phone jack is also provided in the plate clrcult of the 77 audio amplifier. The receiver can be used with either a magnetic sjeaker or dynamic speaker hafing a field resistance of 2500 ohms and a pentode 42 input transformer.

High Quality Audio Amplification
The arrangement of the circuit is such that even Teeble fureign simnals can be built up to reat solume European as well as reception from many other parts of the world is consistentily possible whth this recelver. The tybe ty tube wlth a gain
of 220 delivers an output of 3000 millwatts of ondistorted

## 8 Coils Included



The elght colls supplied plus In from the front panel into spectally shielded cans, which thoroughly isolate colls from the tube circults. A set of 2 colls for each of
the following wave bends are furnished:
2 coils-16-38 meters, 2 coils- 3 3-13i neters. ${ }_{2}$ coils -35.75 meters. 2 coils- 135.200 meters.


Front View showing convenient plug in coil Rear View emphasis neat Anished appearance.


## 5 Tube Universal Mascot Kit 105-130 Volt 60 Cycle A.C. Operated

pow A.C. all-eleetrie set that combines receiser an power park all in one unit. After rompletion of receiver it is only necessary to plug into regular quires greater tuning ahility than the less nower ful recelicers but the results which will he secured wilt equal the reception usually attrituted to tar more expensive and complicated recelvers. This who revels in the enjoyment which only perfert short ware reception can bring. Chassis size 7" high. $17^{\prime \prime}$ wide, $12^{\prime \prime}$ deep.

## Tubes Used

Thls De Luxe Model Recelver uses one trpe 78 ariable Mu Screen Grid Pentode as IB.F. Ambll fier. one tyne 37 Trinde as sensitire rekenerator detector, resistance capacity coubled to one in rath screen coupled to mod in turn is again resistance capacity coubled on the pill 'entode fifer is used in the power supply which is an integral mart of the recciver.
14E10783-Complete kit of parts consistins of: Cut and drilled chassis base. 8 -six prong colls and wire windins. an ne Pabed in an hartware display box. $\$ 39.75$.
$\$ 2449$ YOUR PRICE $\qquad$ 0ptional Accessories
3E7183-Ulera short Ware Coils. List Irrice $\$ 4.00$.
YOUR PRICE $\qquad$ \$2.35
3ET184-Broadcast Coils. Set of 4 Ware lenkth ranke of coils $190-310$ and 300 to 550
meters. List Price, $\$ 7.50$. YOUR PRICE
\$4.41
4E10784-Kit of 5 Tuises. $1-78$.
\$2.89
YOUR PRICE


Universal Mascot '4'" Kit ohm Aield Dynamic Speaker with output trans former for '42 tube.

All Electric-105-130 Volt $50 / 60$
A fascinating receiver kit to build-educational for a boy, entertaining for an adult. This kit includes all the latest improvements in amplifithe Radolek Trans Atlantie Aerial KIt especially the Radolek Irans Atiantie Aerial Kit especially
suited for thls recoiver.) Illustrathons show the suited for this recoiver.) Illustrations show the protessional aspearance of the finished Mascot on
receiver. (ne 6 F Dual Pentode-Triode Tube. one receiver. (ne 6Fi Dual Pentode-Triode Tube. one tifier constitute the mntiern tube assortment in this tifier constitute the mntern tube assorturent in this receifer. Whine recelver. it is intended for use with a small Panels size $7^{\prime \prime} \times 14^{\prime \prime}$ Chassig Depth 6\%/4".

Universal Mascot "4" Kit
14E10781-Complete Kit of Parts consisting Ifst. $\$ 30.00$. Iess Tubes.
YOUR PRICE $\qquad$ s1764 4EIO782-Tubes for Mascot " 4 " 1.6F7. 1-77

\$251

For 16 to 200 Meter Short Waves Uses Magnetle Speaker or Headphones All Electric- 105.130 volt 5060 Cycle A.C.
Appratrance simllar to the Mascot "4". Employs 1-6F'. 1-79. and $1-80$ tubes. 1'anel size $7^{\prime \prime}$ 11" I4EIO779 Comnlete Kit Tubes. List Price. $\$ 22.50$. YOUR PRICE

## Coll Shield with Base

 diameter xy/y overall
helght. Grid lead hole
in wall near top. Hases in wall near top. Jases holes to fit either its
or 1 绿" sorket centers. Shield and base hright gauge alueninum. 3C6958-coll Shleld 0720. PER SET Aluminum Coil Shields
 3CB959. It Shield phice EACH $10 ¢$ TEN FOR 86.50



12C .98 c
58.50

## Aluminum Coil Shields

ormine connection that will never vibrate nor
come apart. Can is $2 \% "$ dam., and $28 / 4$ orerall helght with base. has but hase berforated on liottom irtcht natural finlsh. 22 gauge aluminum
$3 C 6$
-0580.
-Code 0579- ${ }_{\text {PRICE }}^{\text {EACH }}$ TEN FOR

Universal Coil Shield


A Ases. Heavy many aluminuin top. Helght base dhameter 3 in with 3 mounting
holes. sold friction fit hetween top and lase. ${ }^{\text {center for leads, etc. }}$
${ }^{3 \mathrm{Bag} 84-\mathrm{C}}$ ,

8 Tube Chassis Base
 10 nk
$40 ;$
40909 YOUR SPEC
wid
 55, 57, 5 Improved NonRattle Type Threntlated shemed has press acainst the side of the tuhe to hold $t$ rigilly-dampens anonto and micto Natural finish aluminum Netal wide ranlue of base mounting sizes. Cap helght $1 \mathrm{~J} /{ }^{\prime \prime}$ slotted for ameter 1 st, She height 3y") overail helght assemhled 41/2"

| Aluminnm Stock Number | Base Mounting Centers | $\underset{\text { Erich }}{P} \geq 1$ |
| :---: | :---: | :---: |
| $\begin{aligned} & 307110 \\ & 307111 \\ & 307112 \end{aligned}$ | $\begin{aligned} & 114{ }^{\circ} \\ & 111 / 0^{\circ} \\ & 1196 \end{aligned}$ | Ten for 95e Hund'd $\$ 7.75$ |

Close Fitting Tube Shields

## Now Ventilated <br> $\rightarrow$ Tube Shields




For use where spare is limited or to replace suray-shicld type tubes. Proshlelding. Made for both smill and large size bulbs. Two parts of shield firmigngly around the tulye and are firmby heid in wade hy at clamb ring.
clamn rimg and grounding clip furnished with each shield. Suppled with a chiminey where shifelding of grid can is desired. A small slot in chimney admits gr

Type ST-12
For new dome 59 tcl tubes. 58 3E7107-With Chimney.
3E7106-Without Cllmines.
Type ST-14
For large dhaticter dome tyne ( 24,
27. 32, 33, 34, 35. etc.) fube

3E7108-Wilh Chimney.
75
YOUR PRICE. EACH 10 FOR
10
100 FOR $\$ 5.00$
100
One-PieceShields

## with Base

For 82 Tubes
Fentlathag holes in top, and base, Helgit $4+{ }^{\prime \prime}$
Dlam. $21 / 4 "$. Hase mount ing holes for $1 \psi^{\prime \prime}$ and 1nem hales 12
3C6955-Tuhe Sheld EACH
EACH
$01132 . . . . .114$ TEN FOR


Radio Metal Chassis Bases
Rustless-Stainless

## Extraordinary Low Price for this

|  |  |  |
| :---: | :---: | :---: |
| Stock Number | $\begin{aligned} & \text { Hze } \\ & \text { Inches } \end{aligned}$ | YOUR PRICE Each |
| $4 E 10912$ | $10 \times 12$ | \$0.89 |
| 4 E10913 | 10×17 | 1.14 |
| 4 E10914 | $10 \times 23$ | 1.45 |

ldeal for lullding power amplitiers. recervers, atio jobsia with ordinary plated sheet stee special are brimd new hard o work. These luminum Radio alloy, with clean rust- made to our spectal undrilled bases liss non-tatnishing lusirous finish. All sizes are 3 inches deep and open ron-magnetfc loasy to work, drill on bottom. Enclosed top and four Ho not confuse those high grade



## Two-Piece Tube Shields <br> fion For 24 and 27 Tubes 5 height when assembled. diameter 1 ti". ISot tom buncherl for spade holts hut loolts not furnished. Fits standard 1 解" mounting hole center socket. Top and bottom well ventilated. Long slot for Rrid lead. aluminum $3 C 6953$ <br> $01015-01016$ <br> 98 c <br> - Shield - Code <br> 12c <br> Ton for ....98c \|Per Hun. $\$ 8.25$ <br> Copper Foil <br> Thin copper foll for shielding pan els, cabinets. automohile bulkherds, etc. .005 inches thick. Any length suppled. <br> 3C6997-fi in. wide. <br> YOUR P Per Foot <br>  <br> $3 C 6998-81$ YOUR PRICE <br> Per Foot <br> 154 <br> 3C6999-1E in. sitie. YOURPRICE, Per FOOt ....................... <br> NOTE: This toll will he rut to any length. Mininum hilling price on any one order is 50 c , so order your money worth. <br> nosts drilled and tapoed for 683 screws which are included. Shipped knorked utes. Helght each can 6 inches. <br> Nook Nize list You <br> | Number | lnches | 1rice | Price |
| :--- | :---: | :---: | ---: |
| 366983 | $1 \times 5$ | $\$ 2.00$ | 1.18 |
| 366984 | $5 \times 5$ | 2.25 | 1.32 |
| 366982 | $5 \times 9$ | 3.00 | 1.47 |
| 366985 | $6 \times 4$ | 2.75 | 1.62 |
| 366986 | $8 \times 8$ | 3.00 | .76 |
| 366987 | $6 \times 12$ | 2.75 | 2.62 |
| 366988 | $8 \times 10$ | 3.50 | 2.06 |
| 366989 | $7 \times 14$ | 3.50 | 2.06 | <br> Aluminum Corner Posts <br>  <br> Buld your own shicid boxes. an on two sldes to fit in in. thlek alaminum pleres and tapped at each and to flt metal overall $1 /$ in <br> 3C6979-YOUR PRICE, Each Plece................... $\$ \$$ $3 C 6980-$ Same as ahove but $n$ tapped. We ship any lengtil specifle hy you. You tap ends to sult your own requirements <br> YOUR PRICE <br> 20c <br> NOTE: Minimum size order billing for surelal length aluminum corner posts ts 50 c 1. n.-Four 15 -inch pleces would he hilled at 50 c . same as a single 12 inch blece.

## Steel Chassis Bases

 casy to work with as the Radio Metal and substantial. Supplied unidrlle IIl sizes are 3 inches deep and open
on bottom.


Heavy cast corner posts. Nount in the corners jerfectly and make the entire joly very solld and without the slightest "xive". Tlitee tapped boles
on carli side. Dr chassis and mount with Giz screws supplied. base of pmst also tapped to take screw coming through base on set Includes: i Comer Posts: Complete screvs; and
Radio Alloy Shield Cans Alt six sides made of m" rusting zinc miun allov superior shielilng tractise bufe ed silyer
finish. Heary rast alumi




AIRPLANE TYPE 21/2" Dial With Escutcheon and

Lamp Socket 6-1 Ratio COMPLETE EACH 3E6772-Cloekwise 3E6773-Counterclock. With Green Face 3E6774-Cliork.ise. Nirplane tyoc byinter. Positive acting, friction drive
no
backlasht.
Illuminated nnslurent amber or ereen colored face with dilsnet indleating theures. Convex erystal lens. $31 / 2 m$ diameter embossed "scutcheon. bronze inished. in unper portion with lower portion for Kllocseles 550 1500. Counterc

Airplane Scale, Pointer, Escutcheon For Direct Drive
Escutcheon and one dial file with two airplane polnters tor mounting on $1 / 2$ or ${ }^{2} /{ }^{\prime \prime}$ condenger thafts Exactly the same 3E6776 Green 3E6777 Green. Scale $0-10$. 550 to 1 Sult K.C. 3E6778 Amber. Srale $10-0.1500$ to $550 \mathrm{K.t}$ $3 E 67$
YOUR YOUR
PRICE
$29 ¢$

## For Broadcast and Short-wave



## With Escutcheon Ratio 21-1

 3E6792CACH $\$ 1.45$ Short-wave and Broadcast scales on dial face canbe Illuminated Senarately and Independently of each other.
Mounts on condenser permitting fuli float Ing dial mounting. "Airband type pointer. Conamber scale. Two lamp sorkets are supplied. This nermits broadcast ang sy connecting pitot lights to a section orn the coll change switch. "nusually smooth drive. no bark bash. 4st Fits $3 y^{\prime \prime}$ shaft. Supportion or thort-wave scale is marked only with dutisions and can be accurately callbrated, by the builder.

## New Dual Ratio

For Short-Wave and Broadcast


Ratio 30:1
and 6:1 974
Complete with Escutcheon 3 E6780 Siale $100-0$ 3E6781-Scale 0-100. Hatio of dial can be alternatpushlug in or pulling out en intob shaft. Supplicd for use with a $7 / 8 / 8$ shaft condianeter. Mounting centers between dial center and knoly shaft are $23 /$

Full Vision Dial for Long and Short Wave Work


3E6782-
3E6783-
65C Complete
Dial and escutcheon with pllot light socket. Extra high ratio 12 to 1 . Fricton drive. Full rision flluminated scale with traveling nointer. Bronze finish escutcheon
olate $4^{3}$ wíde. $21 /{ }^{\prime \prime}$ high. Takes $\%$ shaft.


Midget Dial
42C
IVal Only
3E6784-
3E6785-
3E6786-Escutchcon plate.
Extra …......................... 5 c small sets. Scale wide. Wronze finish. Escutcheon $21 /$ " $^{\prime \prime}$ wide, $21 /{ }^{\prime \prime}$ high. 1 Llot light socket. Takes

Spot Light Full Vision
 4 . Bronze tinished. Escutereon $41 / \mathrm{s}$


Miniature bace sockets for pilot tamps. Carefully insulated. Lug contiertion mountings as used ith rious tyines sets. No bullis included
3E6796-Tifright clip mount.
3E6797-liset moluting.
3E6798-lieverse elip mount.
$10 ¢$
3E6799-With rithber हrommet
Ten for.... $78 \mathrm{c}-\mathrm{Per} 100$.
57.25

## Genuine G. E. Mazda Pilot Light Bulbs

Guaranteed quality. Consume minimum of currant. Miniature serew base. IHametcr abput $\mathrm{s}^{\mathbf{T}}$ inch. Abbreriations: Tub.Tuhular: Itd.-Round.

| Arilcle Nimber | Shape | Volts |  | Amos. | $\begin{aligned} & \text { TEN } \\ & \text { FOR } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3E6900 | Tub. Tub. 1 kd . 1ub. | $\begin{aligned} & 2.5 \\ & 3.2 \\ & 3.8 \\ & 6.3 \end{aligned}$ |  | 0.50 |  |
| 3E6906 |  |  |  | 0.35 | 54 |
| 3E6901 |  |  |  | 0.30 |  |
| 3E6902 |  |  |  | 0.15 |  |
| 3E6913 | Tıb. | 6.-8. |  | 0.20 | 65c |
| Low Drain Pilot Lamps |  |  |  |  |  |
| Article Number | Hhame | Volts | $\mathrm{Amps}^{\text {m }}$ | $\begin{array}{l\|l\|} \hline \text { Irles } \\ \text { Fach } \end{array}$ | $\begin{aligned} & \text { TEN } \\ & \text { FOR } \end{aligned}$ |
| $\begin{aligned} & \text { 3E6903 } \\ & \text { 3E } 6904 \end{aligned}$ | Tubs. Tub. | 2. 2. | 0.06 0.05 | 20 c 24 c | $\$ 1.47$ 1.65 |

## Imported Pilot Light Bulbs

 nor efficlency.$\qquad$ y. A tombar
shane.

| Article |
| :---: |
| Number |
| $3 E 6812$ |
| $3 E 6813$ |
| $3 E 6814$ |
|  |
|  |
|  |
|  |

:

## Victor R-32 Pilot Lamp

110 Volt. 10 Watt Insido Frosted
Fapectally for Yietor It-32 and Colontal Recelvers. May also be used in montriulty
clrcuit
$3 E 69$ $3 E 6909$
YOUR PRICE EACH

## Wainut Knobs

Finest Quality, Rich Iooling Turned out of solld end cut genuine Walnut. All one plece. Finely fintshed. Nolid brass, bushink ludine those with fiattened slide for push-on spring yoe knolus Dimensions piren are dinmeters. Helights all about $3 / 4$ inch.
$\qquad$
Futuristic

 Plain

Hexagonal



$\begin{array}{lllll}11 / 4 \prime \prime \\ 3 C 6847 & 3 C 6846 & 3 C 6843 & 3 C 6842\end{array}$ $\begin{array}{lll}\text { EACH } & \text { St } & \text { Ten for } 76 c \\ \text { Per Hundred } \$ 7.25\end{array}$ (May be assorted)

$3 E 6828$
(1) Ten for 5 5

3E6829-
6 P Per Hundred
$4 C$ Fintshed in beautiful $\$ 5.25$ Each $\ldots . .4$ walnut. Will harmonize well polished black with wooden pancis. $1 / 4 "$ shaft bakellte. Whlte
arrow pointer.

## Newest Bakelite Knobs



Newest patterns. Cleanty moulcied of best quality $306855 \frac{\text { sakelite. All for } 14 \text { " shafts. }}{\text { Style A } I^{\prime \prime} \text { aeross. 执" high. Walnut }}$
 For Midget Sets. Polished hlack finish.
306857 Style C $1^{\prime \prime}$ across. $/ 8{ }^{\prime \prime}$ high. Poltshed black finish.
306858 Style $D$ with Pointer. $11 /{ }^{\prime \prime}$ across including pointer. $7 /{ }^{\prime}$ " high. For smallest midgets Fine Walnut dinish.
EACH............................................$~$ Ten for ${ }^{\circ}$

48 c
Drive Cables, Bands, Belts
For Standard Receiver Dials-Condensers
Make of Set Model Stock

Crosley kent 40s, fins, sot 3E6862 $\begin{array}{lll}\text { Crosley } & 403, \text { fins, } 804 & \mathbf{3 E 6 8 7 6} \\ \text { Crosley } & 601 . & 602,607 \\ \text { 3E6877 }\end{array}$
 $\begin{array}{llll}\text { Majestie No. } 2 & 70,71, & 72 & 3 E 6887\end{array}$ Majestie No. All 3 E6890
 We can sumply dial cables for All Recefrers. Many not in our listing are in stock and avallable for tmmediate shimmen

## Bakelite Vernier Dial



Indispensable Hardware for Servicemen


Brass nickel plated. For mounting
panels, tubes, colls. grid leaks, ete. panels, tubes, co
Wldth \% inehes.

## Stock Number <br>  <br> Sub-Panel Brackets <br> 

Stronk light weight aluminum $3 \mathrm{C4}$ mel transformers. Two sizes. long.
YOUR PRICE. Pair ....... 24
3C4824-21/2 in. high $x$ 1 nng
Your price. Pair ..... 39¢


20 C
304 40 304830
YOUR
PRICE
27¢
100 plere

Metal Tapping Screws Gimlet PointRound Head Self-tapping monel screvs
hat rut their own thread in metal of any gauge and rive home as securely as machined threatl. Just drill a hole and drive in the
scren-mo nut or taphing Ideal for replacing rivets. set screw In stripped eastings, repairirg enpung
spot welds or any tope of construction


## Self-Tapping Screw Assortment

manufacturers. Can be used by eet placement on Atwater-Kent. Boseh. Crosley. Fada, Majestic, Philco, otc. Ideal for general work. 1boes not reuure a nut. Consists of 21 screw: of
$308195-1 / i s t$ Price, 50 c 294 YOUR PRICE

Rubber Grommets

on chansis. transformers and othe strong vuleanizerl black rubber. All $\begin{array}{lll}\text { for metal about }{ }^{3} " \text { thlck. } \\ \text { Stock } & \text { Fit Inside Per Por }\end{array}$


Rubber "Feet
-Bumpers"
For use on hottom of

$$
\begin{aligned}
& \text { cabinets. amplifers } \\
& \text { speakers, etc. llave re }
\end{aligned}
$$

 cessed rasily for head of screw. Cannot scratch. Will support heary weight without marring ordinary surface.
For use with $6 / 32$ or $8 / 32$ marnine screw and sizes 6 or 8 wood screws.
$\mathbf{3 0 4 7 9 2}$.

$\mathbf{3 0 4 7}$. $11 \mathrm{am} . . \mathrm{s}$. high. | 304792. |
| :--- |
| 304793. |

Per Dozen ................... $1 \boldsymbol{8}$

## Machine Screw Washer and Nut Assortment

Contains assortment of 100
Round head marhine 100 sets of nuts and washer ( ineluded
sortment for it contains hine wrew -furnished monly used
304837.
YOUR PRICE
27 c
Ornamental Head Screws
G楮 For fastening Speakers


## Stranded Phosphor

 Bronze Dial Cable

Hight size, fiexibilit.......\$2.65 for any make drum diai anitrength ual eables each consisting of seren tine strands of phosphor bronze gether and around a strong center fibre cord making a eable th" diameter

## Braided Bronze Dial Cable

Fourteen number bron whes of better quality than cable usually 3 C 6852 at low price

| 3 C6853-100 foot spool |
| :--- |

28 c
87 c
For Anchoring Shield

## Cans to Chassis, ete.

Steel Cadmilum plated. Flat or screw: threaded for rivet $6 / 32$. Illustration is actual $3 C 659$
TEN FOR
PER GROSS PER 1000

## © <br> Tubular Rivets

## I

Rivets for replacement and
repair are a neceseity for
every serviceman. necessity for have you hesitated to drill out a rivet for a necessary repilt because you manlike manner. You can now replace rivets and make a mean professional job of it hy using the special cllnching ponmlar sizelow These are $306565-3$ $306566-1 / 4$ long.
Fer Gross
Per 1000
Rivet Clinching Tool
For Tubular Rivets
handy tonl for driving homes tubular pivets. Tool is $43 / 4^{\prime \prime}$ long- $1 / 2$ " diameter, tapered at one end. Has special machined face which eenters on rivet and when driven with hanmer will
turn the rlvet looly hack against the material and clinches as securely as a power driven rivet.
For $1 / 6$ and
g." body diameter tubular rivet
$\mathbf{3 0 4 7} \mathbf{0}$.
3047 iO.
YOUR PRICE. Each . $59 \%$

Nickel Plated Cap Screws Highly, polished hexagonal head 孖" across and is"
thick. screw is in" long
with standard 3E6571-

Escutcheon Plate Screws Esperially suited for use in
to calinets. The size offered
is used most comimonly and win fit with practically no exception erery style of escutcheon

Per Grose
294

## Push Button Switch

3D6358. Open Circuit.

| YOUR PRICE |
| :--- |
| EACH |
| 1 .......... |

Ten for $\$ 2.50$
polished nickel Pearl center with Screw connectors eliminate soldering Sultable for circuits up to 250 volts. 2 amps. Phosphor bronze contact. 306360 . Same as above but for List Price 75 c .
YOUR SPECIAL PRICE.... Machine and Mood Screw Assortment Contains 85 $6 / 32$ nickel plated brass machine serews.
Arailable in round head, flat or oval head

304831 . Kound Head.
PRICE
24
Wood Screw Assortment Contains 85 as6orted sizes round head, lat and oral screws nickel plat
304834
YOUR PRICE .............

## Compound

in: paper in-
sulated or dry
electrolytic con
densers on repair or special work. The proper compound chemically same as used leading condenser manulacturers. Low melting point. Cools hard. Positively excludes moisture. cake size $11 / 28$ ronvenient size $1-1 \mathrm{~b}$. 304838-Per Package

16
Transformer Sealing Compound quality of dilplacing developed the in transformers. P'ut up in a heat
 304839.

## Shaft Couplings, Reducers, Extenders

 lo expland or reiluce shaft
diameter. Shafting is avallable in brass
Supplie

| Siyle | Iength |
| :--- | :--- |


| (turiber | Srye | Aencth | Descrintion | Price |
| :---: | :---: | :---: | :---: | :---: |
| 307290 | A | $3{ }^{3}$, Long | 1/9:Hole I.D. 3i:O.D. Dial Bushing | c |
| 307291 307292 | ${ }^{\mathbf{B}}$ | 3/1: |  | 12 c |
| 307292 307293 | C | 3\%. Lone |  | 12 c |
| 307294 | E | 1-1: Lenc | 1/ Hole i D. $1_{2}$. OD. Extencer | 12 c |
| 307295 | F | 1-1: Jong |  | 12c |
| 307296 | G | 1-1. Long |  | 12c |
| 307297 |  | fi. Lonk | 14. 1 Mameter Brass Shafting |  |
| 307298 307299 | H | $12^{\circ} 2^{\circ} \mathrm{Fong}$ | SV: Piameter Brass Shnfting | 12 c <br> 18 c |
| 307299 307300 | , | 12. Long | Siplameter Flbre Shatimg | 18 c |



Molded Bakelite Twin Tip Jacks


Fully insulated finest quality tip acks molded in genuine bakellte. hnophor bronze positlve contact pos
any standarit phone tips. Widely spared solder lugs tinned and plerced. ing renters , 1/t", Whith th". Mount nut $13 / 6^{\prime \prime}$. $x^{1 / 2 " .}$ Engraved "speaker" or 306356 . Fngraved "'Speaker YOUR PRICE
Each
TEN FOR $\mathbf{3}$ ธ̈c.....
Yaxley Push Button Samecon-
ftruction as
Jack
except that int in
except that in
mare of turn
knob an Insu
lated push
lated push but
ton is prorided.
Contarts made
nressure on kuob.
Switches

ressure on knob. No indita
included. Nin-fockIng tywe returns to original position when pressure re-
lensed.
I forking tyue, is automatically leased torking type. is autonatically
lonked in depressed position and must be fulled back to return to ortginal wosition.

Single Pole-Single Throw 3 Makes Contact in Single Circuit. 366440 Code 2001 . Non-lnck YOUR PRICE

534
Simalu Pole-Simgle Throw
Breaks contact in Single Circui 3 C6431-code 2002. Non-locking $3 \mathrm{CB4} 4 \mathrm{I}$-Code 2002L. Locking. 1, ist lrice $\$ 0.90$.
YOUR PRICE

538

## Single Pola-Donble Throw

One circuit comuleted in un nosition. In depresced bosition, flrst clrcult

broken and one of contacts switched to | gennd rircuit. |
| :--- |
| $3 \mathrm{C64}$ |

$3 C 6432$ Code 2003. Non-locking.
3 C6442-Code 2003L.
 YOUR PRICE 59¢
Double Pole-Ningle Throw;
Makes contact in two senarate elrMakes contart in two senarate elr-
cults when depressed. Both circuits 3 onn in "up" position. 3 C6443-corte 2001 . Non-locking List Irtre \$1.20
YOUR PRICE

Donble Polr-Sinale Closed
Breaks contart in twn separate dr-
 $3 \mathrm{C} 6434-\mathrm{Cone}$ 2000.
3C6444-Code 2005 L . Nockionkn

YOUR PRICE
704
Double Polu-Double Throio Twn se parate rircuits clospd in "up"
positlon. In depressed position, one contact from earh elrcult is connected to a secomd set nt senarate circuits.
$\mathbf{3 C 6 4 3 5}$ (inde 2006 . Non-lnek!ng. 3 C6445- inde 2006I. Locking. LIst Irrice \$1.50.
YOUR PRICE
88¢
Doubic. Pole-Dotible Throso f springs-makes and breaks hoth
leats of two separate circuits. Conleads of two separate circuits Con-
nects in second circuit before breaklink frst sirnnt anircuit liefore
$3 C 6437$-Code 2008 . Nom.locking.
INt I'rlere \$1.65.
VOUR PRICE
976
Rreaks one circuit into twn circuits
spirings. When bution is up. two
center springs contact: when depressed, 2 renter springs break and each makes
contact whth an outslde surlng comcontact with an outslide
pleting two new citruitg.
$3 C 6436$ - Code 20104 Non-locklag. Also known as Code 2880 .
3 C 6446 - Coite 2007 L $3 C 6446$-inde
inst Irice $\$ 1.30$.
list Price $\$ 1.3$
YOUR PRIGE
2007 L . Lo
.
76c

D. P. D. T.

Push Button Switch
 Throw-double nole opens two circulto
and closes two other in $3_{4}$ " hole. Terminal Mits. Mounts 3 B 6534 Non-locking $\langle$ Price 3C6355 t.ocking SEach 50C
S.P.S.T. Toggle Switch A quallty H H H HELtch ed leads. Stand-
ard z" bushing
is "解" long and Is fin" long and fited " inth
locking ring .
3 E6344. 3 iock 344 ring. YOUR $10 ¢$
PRICE

3C6366-No. 1-open
Clircuit. List. 25c. Net.
3C6367-No. 2A-Single, Closed Circuit.
Lisi. 30 y your price ..... 18 d

## Frost Gem Jacks



## Extension

Connector
Fyelet anchors se Fyelet anchors se-
urely fisten cords $3 \mathrm{C} 2300-$
YC2
YOUR PRICE, Each $6 c$

Fahnestock Connectors


Why he instanity released. down marners yrevent turning. Dozen
Per Hundred ................... onozen
Per

| Per Hun |
| :--- |
|  |

$\$ 1.59$


Standard Jack Plug


Moulded hody $11 / 8$ inch diameter with eyclet for anchoring cord

Two Way Jack Plug


3C6363
$\qquad$
YOUR
EACH
264
Ten for
$\$ 2.35$
cords rinnections for two sets of
llas loon either tip or loop ends.
Ilas loop for attarhing stay cord.
Inhreakatie fiber tharrel.

## Short Jacks

ler lugs widely spaced leary bakellte insulators eliminate leakage. Mount in $\% / 8$ inch hole

Solid brass, nickel
plated. Takes any
phone tip. Positive connection. Not insulated from panel. Re. up to $1 / 4^{\prime \prime}$. With on panels of thickness 3D6370 EACH
Ton for 35 c . Fer Hundred $\mathbf{\$ 2} 75$
Fibre washers to insulate jacks when mounting on metal panel or chassls. Inch hole. Ten for
Yaxley Jack Switches
 Small
co omp
Mount
Inch hot
panels
Sinch
insula
kneb wi
dicat in
Lock nut, washer, etched indicating phate included. $1 / 1$ Ineh diam, shaft.
Inclucting lugs, they project $11 / 4$ inches back of panel. $15 / 5$ inches wide. It/8 to $17 / 8$ inches high. Rugged steel frame. Nickiel phated. Jerfect insulawattase circuits.

Single Pole-Single Throw 3C6420-Code igo. 'y spring. "On" cuit. List l'rice 70c. YOUR PRICE

40 C
Single Pole-Double Throw $3 C 642$
nects input circuit to elther one of two outhut ritrinits.
List Price 856. YOUR PRICE
$50 ¢$
3C6422-Coste 732.3 spring. Same as cotc is0, except has center neutral position. List, 90 e.
YOUR PRICE
50 C

## Double Pole-Single Throw 3C6423-Code iin. 4 <br> List. 95c. <br> YOUR PRICE <br> 55¢

3C6424-Code Circuit Five spring, Lwo position contact. Two input cir-
cuits. Both connett to outhut in tirst
 one is hroken, clreuit two is also
broken but input suring is
 Your PRICE

65C

## Double Pole-Double Throw

 3C6425-Code 760. Six spring. connerts two input circuof two palrs of outputs.
List $\$ 1.20$.
YOUR PRICE
72¢
3C6426-Code 762. liouble pole, doulle hrow same as roile 7io. but Ist renter neutral postion.
List. ${ }^{\text {S1.20. }}$
YOUR PRICE
71c
Triple Pole-Double Throw 3C6427-iode if3. With renter neutral mosition. List. $\$ 1.55 . \quad$ Y

> Four Pole-Double Throw 3C6428-t'ole 764. Wlth cente list liosition.
Yoist, \$1.95.
\$1.15

## Rotating Type "Panel"



Single Pole, Single
Throw. Shaft Th he akded takes knob. mount Ing sleeve $1 / 4$ " long. sleeve. Iocknut included.
YOUR PRICE
YOUR PRICE
Ten for $\$ 1.3 \overline{5} . . .$.
15c

## Solder Cord Tips

| $\longrightarrow$ | Brass. |
| :---: | :---: |
|  | Nickel Plated |
| $\begin{aligned} & 3 C 6371- \\ & \text { FIFTY FOR } \end{aligned}$ | 14 |

Per hundred........25c
Solderless Tip Plug

$3 C 6368$
YOUR PRICE, Each ........... As
Ten for 35 c . Per hundred, $\$ 3.25$ soldering or use of tools. Wostily soldering or use of tools. Posltive connection. Fit abore jack or any
standard idp jark or jark assembly made of hrass nirkel finlsh.


## Twin Tip Jacks

Sure contart, nickel tip facks

 3C6200-1lain (not marked).

3C6202-Marked "Speake
Each, 6c. Ten for
Three Jack Assembly
$366203-r l a i n$
Each. 9 c . Ten for
82 c
Yaxley Junior Jacks

jack switch ex.
cept has hole
any standard
jick. Mount in
se" hole on
panels not over
3 C6405—Code 701. "Open Circu
One insulated spring.
YOUR PRIC.
3C6406-Cole 702. "Closed
24c
$\qquad$ YOUR PRICE

32 c
$3 C 6407$-corle $702 A$. Two Insulated
gurings. Same as 3 C 6406 Code 702 oprings. ame as 3C6406 Code 702,
except has solder lug on frame. For dse on insulated panels
YOUR PRICE
338
3C640 4 -4 ode 703 .
List Irire $65 t$.
YOUR PRICE
38¢
3C6409—fode 703A. 'Circult Re-
tist Price 65 c .
YOUR PRICE ................. $3 \boldsymbol{8}$

# Toggle，Rotary and Knife Switches 

## Toggle－Panel Switches

 Miniature SizeUnderwiters apmroved． 3 amp． 25 V． 1 amp． 250 V．For control ling radio sets．small motors，lamps meters，etc．Momiting sleeves Fery rugged．liest guality．II．\＆ 1 t． brand．Laminated bukelite or fibe Single Pole－Single Throw


2 Connections Makes and break single．circuit
Standard
．oN ＂OFF＂ Iliameter．

| $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | sleeve <br> length | Price Each | $\begin{aligned} & \text { Ten } \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 3C6300 | 14． | 17 c | 51.58 |
| 3 C 6301 | 年： | 214 |  |
| 3 C 6302 | 1. | 24 e | 2.10 |

Single Pole－Double Throw 3 Connections


| $\begin{aligned} & \text { Suck } \\ & \text { Number } \end{aligned}$ | Sleeve <br> Jength | Price Each | $\begin{aligned} & \text { Ton } \\ & \text { For } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| 3 C 6306 | $1 /{ }^{\text {\％}}$ | 24 e | \＄2．20 |
| 3 C 6307 | 12 | 27 c | 2.50 |
| 3C6308 | 1. | 30 c | 2.80 |

## Double Pole－Double Throu

 6 Connections reeds two circults nte either one of two pairs ofcults．A new de
reloument ses．Mounting sleeve 解＂Wiam－


Special Toggle Switches
$\qquad$ 125 V .6 ： $1 \mathrm{mb}: 250$ bods．solder lus ron－ nertions．Mounting lecers＂迢＂diameter．Two locknuts

| Single Pole－Single Throw <br> 2 Connections |  |  |  |
| :---: | :---: | :---: | :---: |
| Makes and breaks a single circuit． |  |  |  |
| Stuek Nuntber | Sleeve length | Price Each | $\begin{aligned} & \text { Ten } \\ & \text { For } \end{aligned}$ |
| $3 C 6335$ | 13. | $14{ }^{14}$ | \＄1．30 |
| $3 C 6336$ |  | 16 c | 1．50 |
| 3C6337 | \％＇ | 18 c | 1.75 |
| Double Pole－Double Throw 6 Connections |  |  |  |
| Stock Number | Slence Lengeth | Price Each | $\begin{aligned} & \text { Ten } \\ & \text { For } \end{aligned}$ |
| 3D6341 |  | 28 c | \＄2．70 |
| 3D6342 | 砍： | 32 c | 2.95 |
| 3 D 6343 | 涛。 | 35 c | 3.20 |



Key Lock Switch Double Pale－Single Throu


## $\$ 4.75$

Makes and breaks one or two etr－ when clrcult is hroken．Mounting sleeve outs included．Twa keys supplied Fiderwriters approved． 3 amp． 12 olts．lody size ${ }^{\prime \prime}$ lons with insulation and lugs．

Multi－Polar Rotary Switches


A high quality snap action switeit applicable to the wide pariety of new
circult reaulrements． eircuit requilrements．
sion pronf frame．Bakelite insulation． Silver mated．Low resistance rontacts 1.2 and ：a pole＊wliches sire enuipperi With a standird ${ }^{3 / \prime}$ bushing for single hole mountina． iuss．Luk mounting hole centers $11 / \mathbf{n}^{\prime \prime}$ luss．Lut mote motents

| Stock Number | Num．of Poles | Num．of rositions | Your Price |
| :---: | :---: | :---: | :---: |
| 3D6288 | 1 | 1 | \＄0．35 |
| 3D6289 | 1 | 2 | ． 45 |
| 3D6290 3D6291 | 2 | 1 | $\begin{aligned} & .59 \\ & .65 \end{aligned}$ |
| $\begin{aligned} & \text { 3D6292 } \\ & \text { 3D6293 } \end{aligned}$ | 3 3 3 | 12 | ． 77 |
| $\begin{aligned} & \text { 3D6294 } \\ & \text { 3D6295 } \end{aligned}$ | 4 | 1 | .93 1.07 |
| $\begin{aligned} & \text { 3D6296 } \\ & 306297 \end{aligned}$ | 5 | 1 | 1.17 1.30 |
| 3D6298 3D6299 | 6 | 1 | 1.40 1.57 |

 contarts and blades with screw tor linger holds．Hase lengths：s．l．

New design，ex ellent construction． For keneril radio and lahoratory test circuits．Mount in
To inch hole on panels not over 1／4 inch thick．Lorknilt curcely in place． mounted on punched bakelite form Phosphor bronze wiolug contact arn makes continuous contict on ring lus and mukes and breaks contact on each noint nositively and quickly．Galles are rifidiy clambed together on thre bosts thad are regularly shaced $1 / 2$ inch apart but ran be supblied with any de－
fired spacting not to exced two inches． betweer gangs．Btched banel plate supplied indicating contact positlots， Diameter overall 1,4 inches one gang projects $\frac{3}{6}$ inch．These are smooth working and solid switches gang with wide spacing．


## MAGNET WIRE

Finest quality. Uniform. Carefully inspected insulation. One continuous length only on each spool. Sizes are exact standard B \& S gatuge. Sperifications conform to those given by leading manufac turers for radio apparatus, motor and generator windings, etc

| WIITE SJVGIE COTTON COS ERED |  |  |  | HHITE DOUIILE COTTON COIERED |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stock } \\ & \text { Nunther } \end{aligned}$ | Proue 8 goz Net wt. Spoot | $\begin{aligned} & \mathrm{Ft} \text {, per } \\ & \text { Sjool } \end{aligned}$ | SIZF. | Stock Number | $\left[\begin{array}{c} \text { Price } \\ 8 \text { oz. } \\ \text { Not wht. } \\ \text { Sprol } \end{array}\right.$ | $\begin{aligned} & \text { Ft. wer } \\ & \text { Spool } \end{aligned}$ |
| 3E2100 | 225 | 13 | 16 | 3 E 21 | 244 | 61 |
| 3E 2101 | 24. | 100 | 18 | 3E2116 | 276 | 919 |
| 3E2103 | 319 | 155 | 20 22 | SE2117 | 314 <br> 33 c | 150 |
| 3E2104 | 35 c | 380 | 24 | 3E2119 | 37 c | 35.5 |
| 3E2105 | ${ }^{435}$ | 600 | 26 | 3 3E2120 | 48 c | 540 |
| 3E2106 | 46e | 925 | 28 | 3E2121 | 61. | 81.5 |
| $3 E 2107$ | 546 | 1430 | 30 | 3E2122 | 73 c | 210 |

NOTE: Magnet wire of any size or insulation and in any weioht spools supplied at proportionate prices. MIniis $\$ 1.00$. Minimum order may be for more than one $k$ ind of wire if desired.
We quote very low prices on 5 to 10 pound lots of a size.
Write for quotations.

| $\begin{gathered} \text { PLAIV } \\ \text { EN. } 1 H E L E D \end{gathered}$ |  |  |  | GREEV DOUBIE SHIK COIERED |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stork } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { Prico } \\ & 8 \text { oz. } \\ & \text { 8et wt } \\ & \text { sperol } \end{aligned}$ | $\begin{aligned} & \text { rt. per } \\ & \text { spool } \end{aligned}$ | SIZE | $\begin{aligned} & \text { Stock } \\ & \text { Niumber } \end{aligned}$ | $\begin{gathered} \text { Price } \\ \text { \&oz. } \\ \text { 欠ftwot. } \\ \text { Spool } \end{gathered}$ | $\begin{aligned} & \text { Fit uer } \\ & \text { Sipool } \end{aligned}$ |
| 3E2130 | 20 c | 62 | 16 | $3 E 2145$ |  | 62 |
| 3E2131 | 21. | 101 | 18 | 3E2146 | $45 ¢$ | 10 |
| 3 E 2132 | 22. | 1.48 | 20 | 3E2147 | 474 | 157 |
| 3E2133 | 258 | 232 | 22 | 3E2148 | 550 | 247 |
| 3E2134 | 274 | 402 | 24 | 3E2149 | 63 c | 389 |
| 3E2135 | 29. | 640 | 26 | 3E2155 | 724 | 610 |
| 3 E2136 | 325 | 1015 | $2 \times$ | 3E2156 | 814 | 5. |
| 3E2137 | 34 e | 1610 | 30 | 3E2157 | 974 | 1480 |

Price 8 oz.


## Beldenamel Antenna Wire



Seven strands. size 22 Enameled stock Helden Lenlicth List Your
$\frac{\text { Number }}{3 \mathrm{E} 2381} \frac{\text { No. }}{88.20}-\frac{\text { l't. }}{75} \frac{\text { Prict }}{\mathrm{sin} .65} \frac{\text { Price }}{50.39}$

| 3 E 2381 | 8820 | 75 | 5 | 50.39 |
| :---: | :---: | :---: | :---: | :---: |
| 3E2382 | 8821 | 100 |  | 51 |
| 3E2383 | 8822 | 150 | 1.25 | 4 |
| 3E2384 | 8823 | 1940 | 8.00 | 4.7 |

Belden Shielded Lead-In and Ground Wire
Stranded coniluctor with heavy eass.-
strin rubber insulation and overall bratd of fine thmed copuer wire. In service the shielding is grounded
to plek up disturbances and carry
 shielded. List.
\$1.35 3E2392-No. 8854.220
hilelded.
List, $\$ 11.25$. thlelded. List, \$11.25.
YOUR PRICE .........
3E2393-N0 8891 $3 E 2393$-No. 8891.
hlelded.
List. $\$ 1.50$. hllelded. List. $\$ 1.50$.
YOUR PRICE 3E2394-Nu. 8895.
shlelded.
List. $\$ 7.00$. shitelded List.
YOUR PRICE $\qquad$ \$4.12

## Belden All Rubber Lead-In

 Insulated with special rubber com bound which strips easily. seven sitrand. List, 90e.YOUR PRICE .............. 3E2396-No. 8851.250 ft . No. 14 seven strand.
YOUR PRICE
\$2.50 $3 E 2397$-No. 8852.50 ft No. 16 seven strand. List. 50 c.
YOUR PRICE ............... 29\&
 geven strand. List, \$2.35. \$1.32
YOUR PRICE

##  <br> Insulating Cement 3E2065 <br>  <br> 29¢ <br> Saturated <br> Braided Tubing <br> or all beneral tmulioses. Fits orer uset on size 12 wire witl can litele stretrhing. Thoroughly saturated with <br> 3E2052-Red <br> 3E2053-Black <br> absorption efterts



Size
18 stranded inner conductor. hield of thated with outer braided lued as lead-in, by srounding the outer
shield. the tendency to plick up man. made static between arrial and
ceiver is practically ollminated



Conper wire, rubber insulated. Used makes good aerial wire. Solid Conductor
outer weatherproor

| With | uter weatherproof braid. |  |  |
| :---: | :---: | :---: | :---: |
| Strek Number | Conl | Per |  |
| $3 E 2165$ | 25 | 50.16 | 51.40 |
| $3 E 2166$ | 50 | . 27 | 2.45 |
| $3 E 2167$ | 100 | . 55 | 4.95 |
| 3E2168 | 1000 | 4.75 |  |
| Stratided Conductor bir Covered-No outer br |  |  |  |
| Stock | Coll | Per |  |
| Number | Feet | Coll | Colls for |
| 3E2169 | 25 | 50.12 |  |
| 3E2170 | 51 | . 23 | 2.05 |
| $3 E 2171$ | 100 | . 45 | 4.20 |
| 3E2172 | 1000 | 3.95 |  |


 and Solenold Colls of different widths
and diameters. and diamelers. Whil use wire of difmade. Equipped with necessary accessorles for winding various tyyes of nointer for counting number of turns.
 3É2385-125 ft.
List, $\$ 1.75$. YOUR PRICE $\$ 1.13$ 20 strands No. 38 enam. wiro with
double roverink of silk. double rovering of silk.
$3 \mathrm{ES} 286-100 \mathrm{ft}$.
List. 51.00 . YOUR PRICE... 194

## Bare Copper Wire



Page 96

(One EAch Color)
for $\mathbf{8 5}$ c
One EROHS Cntor

Num. 20 ( 10 strands of 30 Wire)

S



| stock N | Color | ack Num. |
| :---: | :---: | :---: |
| 3E2000 | leyl | 3E2009 |
| 3E2001 |  | 3E2010 |
| $3 E 2002$ | 1310 | 3 E2011 |
| $3 E 2003$ | Green | 3 E 2012 |
| 3E2004 | mlack | 3E2013 |
| 3E2005 | Brown | $3 E 2014$ |
| 3E2006 | Whate | 3E2015 |
| 3E2007 | GrayMiroon | 3E2016 |
| 3E2008 |  | 3E2017 |
| $\begin{array}{ll} \text { YOUR } & \text { PRICE } \\ \text { PER } & 3 \\ \text { ROLL } \end{array}$ |  | YOUR PRICE |
|  |  | PRIC |
|  |  | L . A 6 |
| $\begin{aligned} & \text { a Jnils } \\ & \text { (One Fach Color) } \\ & \text { for } \$ 1.08 \end{aligned}$ |  | ${ }^{1}$ Holls |
|  |  | Itarh Color |
|  |  | or 53.85 |

Stranded Copper Core
Num. 18 (16 strands of - 30 Wlre)
|(N) F't. Rolls
25 Ft Rolls

Stoek Num. $|$ Color $|$| i(M) Ft. Rolls |
| :---: |
| Stork Num |


$30-$ Inch lengths. The best quality spaphetti made. Made of high krade cambric tubing impregnated with high ferent colors can be used to Dirdifferent circuit. Don't be fooled by low price spaghettl with gelatin or low price spaghett with gelatin or no other bratid "n the market to
approach our stork suaghetel in gualapproach our stork siaggett in guat-
ity and our price is positirely the lowest for thls erade of quality.
3E2055-I Illack 302060 -I3lue $\begin{array}{ll}3 E 2056 & \text { Yellow } 302060-\text {-lue } \\ & \end{array}$ 3 E2056-Lellow 302061 -White
$3 E 2057$ - lsrown 3E2058 Green 302062-Gray 3E2059-IRed YOUR PRICE

# Radio Cables 

For Microphone and Public Address Installations

Rubber Jacket Overall Outer rubber jacket insures Positive Weatherproofing. Can be used for Auto cablents calile must withstand clinatic conditions. Constructed like
above cable excent enclosed in a heary rubber jarkel

78" 0
$\qquad$
Shielded Low Capacity Weatherprool Tubing

S" Inslde Dlameter and approximate g" Inslde Dlameter and approximate side diameter bermits casy assembly in corner lost of auto as shene shleld ink output of signal generators, or ans cables with a diametur of less than nated loom tubling covervid $w$
waren tinned conper shield. 4EIIO68-10 ft. cuil. YOUR PRICE

100 feot for $\$ 3.95$
Shielded Ignition Cable

$7 \mathrm{M} / \mathrm{M}$ shielded secondary high tension wire. For leads from hugs to coil. distributor to coll. etc. Conduc-
tor consists of 16 strands size 27. tor consists of 16 strands size which is coverling of high tension rubber compound and a spectally lmpregnited cotton br
ing of
flexible

655

## Shielded Wires for

 Auto Radio InstallationsFor "A" Battery Leads
Conductor is $\mathrm{B} \& \mathrm{~S}$ size 12 equivelent, consisting of 65 size 30 stranded copper wires.
two wrappings of varnish impresnated cambric tapes ofer which is a woven cambric appes orer which is a colden
cotton traid. overall is woven shielding
of

524
4EI $\begin{aligned} & 1069-10 \text { feet for } \\ & 100 \text { feet for. } \$ 3.90\end{aligned}$
For "B" Battery and
Speaker Leads
4EIIO70-Condurtor is B \& S. size 18 equifilent consisting of 15 griands


Tinned "Bus" Wire No. 14. Cut into two-loot
3C2067-Round. 10
Lengths. ( 20 feet)
13C
$\$ 1.08$ Note: Wire on orders for multiples
be shipped in continuous lensths.


Fine Stranded Copper Wire Conductors Each conductor rubber insulated and covered with cotton brald. Two such
conductors lald parallel with brald conductors lald parallel with brald coveri
Stock
Num


## - ex

## Glazed Braid Overall

Each conductor size 18 of stranded copper wires, $d^{2 \prime \prime}$ rubber insulated and braid covered kach covering is distinctively colored for easy tracing.
Individual conductors are cabled together and covered with brown glazed bradd overall. Vers ilexible. Stock

| umber | Cund | for | for |
| :---: | :---: | :---: | :---: |
| 4 D 11000 | 1 | 8 c | 50.68 |
| 4011001 | 2 | 18 c | 1.54 |
| 4011002 | 3 | 22 c | 2.15 |
| 4011003 |  | 28 c | 2.65 |
| 4011004 | 5 | 34 c | 3.10 |
| 4 DII 005 | ${ }^{6}$ | 38 c | 3.70 |
| 4 Dil 006 | 7 | 48c | 4.45 |
| 4D1 1007 | 8 | 58c | 5.10 |



## 

## Shielded Covering Overall

Each rondurtor size 18 of stranded copher wires, de" rubber insulated and brald rovered. Each covering is distinctively colored for easy tracing.
Individual cundurtors are cabled toIndinidual cundurtors are cabled to
gether and covered overall with gether and covered overall with
woven shield of fine size tinned copwoven shield of fine size timned werlect
per wires. Very flexible. perfect $\begin{array}{ll}\text { per wires. } & \begin{array}{c}\text { Very } \\ \text { electrostatic } \\ \text { shteld. } \\ \text { Stork }\end{array} \\ \text { Num. } & 10 \text { feet } \\ \text { Sto } & 100 \text { feet }\end{array}$ Stork

Number | $\mathrm{K} u n$ |
| :--- |
| 40 |
| 40 |
| 40 |
| 40 |
| 40 |
| 40 |
| 40 |
|  |
| 0 |

## Woven Shield Covered

 With Glazed Braid OverallEach conductor size 18 of stranded copper wires. ${ }^{\prime}$,"" rubber Snsulated
and braid zovered. Each ewerlng is colored for easy tracing Conductors cabled together and rovered with elose woven shield of fine size tinned copper wiro. Over the shield is an outer qlazed cotton braid. Hecommendeld for all purbose where shleided cable is required and not subjected to tou Radios. Home Kadios. I,A. Systems. Rtc.. where cable might tourh grounded etc. where catialic objects. Murh nolse is eliminated from reproduced grogram with fis use.
Stork

| Num. |
| :---: |
| Cond. |
| $\begin{array}{c}10 \text { fect } \\ \text { for }\end{array}$ |
| $\begin{array}{c}100 \text { feet } \\ \text { for }\end{array}$ |


Emergency or Temporary Microphone Cable
is 3-conductor cable constructed of No. is solid copper condurtors, Conductor gether and covered orerall with a paraflined cotton brald. Comductor are colored red. White ind blue. Es cuits. ail burners and leat contro devices but will make an excellent temporary cable for mifcrophone current where the cable is not subjer to any handling or alouse: shonld not It will safely carry any current for minic rophone ojeration but insulation is too lien for sicaker circuits.


## Rubber Jacket Overall

Each conductor size 18 of stranded opper wires a" rubljer insulated listinctibely colored for easy tracing. Individual conductors are cabled to gether and enclosed in outer water
proof super service rubber jacket over broot sujer service rubber Jacket over-

all. A very llexible and rugiged cable that will withstand and rugsed cable Stock Num. 10 ieet 100 feet | Number | Cond | for | for |
| :--- | ---: | ---: | ---: |
| 401010 | 2 | 24 c | $\$ 2.19$ |
| 4011011 | 3 | 37 c | 3.40 |

\section*{| .19 |
| :--- |
| .40 |
| 10 | <br> }

Woven Shield Covered With Rubber Jacket Overall

Each conductor size 18 of stranded copper wires, ${ }^{\frac{1}{6} / \prime}$ rubber insulated and braid covered. Each covering is disInctively colored for easy tracing. rether and covered over all with copper wire Over shield is an outer super-rubber Jacket proriding a waterproot practically weararoot covering. This rable is recommented for theater, and outdoor service on P. A. sys* etc. The finest cable made. Yery tiexible. Will stand hardest | Number | $\begin{array}{c}10 \text { teet } \\ 100 \text { feet } \\ \text { Nund. }\end{array}$ | for | for |
| :--- | :---: | :---: | :---: |

A


Note: Wire on orders for multiples of 10 feet or for more than 100 feet will

This shielding is used un amplifie socakers. bublic address conduits. automobile radios and whereser it is desirable to eliminate electrical interand interference shield. The conductors are rum through the sletwing thexible. can the is hrounded. Very doubte its orisinal dimeter but the frupth is redured proportionately rines quoted are for lengths of fiat ire. Shertening of shtulding when mened up to shze we sperity is about $55 \%$ up to sizes we shere fiat lenath han opened un length actually needed

$\begin{array}{ll}1 & 107 \\ i & 107 \\ i & 07 \\ 1 & 07\end{array}$
Natural
ork ind


Size 18 single conductor made up of tinned copper wirt strands with In inch lead sheath
The only absolutely perfectly shtelded wire. Necessary for best re sults on low Voltage fransmission ing transformers like the Elim-O-Stat Tulie, etc. when used in location near ignition systems for oll-burning furnaces. X-Ray and Electrotherap high irequency apparatus and othr simblar devices generating intensive interference. May bo used also im ground or in water. Auto Radio Set when used in primary circuits o sbark-coll. Orerall diameter about
3n inch.
$302197-50$
YOUR foot coll.
$302198-100$ toot coll.
YOUR PRICE ............

## Duplex Wire Lead Sheathed



## Pigtail Wire

3C2387-10 tuot
list Price. 35c.
YOUR PRICE
$20 ¢$
A bralded wire calle made up of
rery fine threads of copber wire, which gives it extrenie flexibility. Use it tor making connections on your variable condensers. variometers, and switches and avold high frequency resistance losses.
llas two heater leads of stze 16 stranded tinned copper wire. Balance of conctors are are size 20. All con turtors are cotion served. cosered with
a $\quad 1$ rubber insulation. and a lacquer a abined rolor-coded rotton braid. J3lack Alpued color-coded cotton braid. Black $f t$. lengths. Longer lengths are arallable. Add for for each additional foot of 8 wire rable and yc for each addi. tional font of 9 wire cable.
3E8072-8 wire cable.
3 E8073-9 whre cable.
29C
364

## Parallel Lamp Cord <br> All Rubber Covering



2 Conductors of No. 18 (4) strands of No. 31) wire with as" wall of rib laid cotcon hraid over each overall with lasi narallel and coverrd overall with brown finsh. Flat oval shape $1 / 4$ " whe, $/ \mathbf{m}^{\prime \prime}$ thick.
size. Fotremely flexible. 4E| 1049-10 foot leng YOUR PRICE .................

## Insulators <br> Wall Insulator



For supporting wir ing or instruments. silie for supporting lead-in or ground porcelain. Nuts and shown wimenslons 2 2xila $x^{22}$ inches. shyg. wt. 8 oz YOUR PRICE

8
en for................. 70
Aerial Insulators


Glazed porcelain. deeply corrukated
age. Holes at each end for attaching 3E2232-21/2 inches long. $\underset{\text { Each }}{ } 223 \frac{100 \text { Lots. } \$ 1.75}{3-4}$ inchus long. 3E2234-5 inches long. Two for

Insulator
 $\frac{100 \text { Lots. } \$ 1.95}{3 E 2238-\text { With } 7 \text { inch }}$ Each

Ten for 35c
or attaching lead-In or ground wire to posts or of porcelain. mounted in Ralvanlzed screw eye Shpe.


## Nail Knobs

Glazed, white porrelaln square insulators. Separable cap with lase. Asharing leather washer under head. Ready for use. Gronves tor two wires. For lead-In or ground wires. Diameter $11 / 8 \mathrm{in}$. Helght, $1 \%$ in.
3E2223-
Per Hundred

## 

Made of porcelain. if inch lengths nly. For finest antenna installations. 3E2229-4 inch.
Your P
Ten for


158 $.85 c$

## Ground Clamps

 Vise grib hardened ateel frame. Bite through rust. eign matter of all kinds. will not rust. $11 / 2-$ in. opening. 3E2255$4 C$
(0) Glass Insulators hiectal tembered glass unatfected $1, y$ heat or rold or other atmositheric con-BE223I-Ten for
Per Hundred
29C $\$ 2.65$

 tlon with all-wave sets intended to receive European and American Broadeasts
Kit includes 100 ft . Beldenamel No. 12 Solld Copper Wire, 2 -hlass tension insulators, 2 -stand-
 Antenna TLshtner and 1-1'orcelain Lead-in In. sulator. The 100 Ft . of solid wire shouls be
divided 65 ft , divided, 65 ft. for the lead-In and aerial. 35 spring ierial thatener reduces fading from aerial swasing. 3E2078-List Price $\$ 3.50$.
YOUR PRICE COMPLETE


DX Lifetime Aerials


Giant Aerials for Roof or Attic


## Aerial Kits -Priced Right

## STANDARD

 KIT CONTAINS:50 fi . No. $7 / 26$ stranded aerial wire; 95 ft
ubber covered lead-in wire; 1 approred licht ning arrester: 2 norcelain insulators: 1 light clamy: 1 windos lead-in; 2 porcelain nali knobs.
3E2075-YOUR PRICE
42C


## Special High Frequency All-Wave Aerial Kit U.S. Signal Corps Pattern

A scientlfic aerlal designed for permanent Installa.
for the sround cireuit. This makes an ideal length for Trans-Atlantic reception. The solid wire uffers less impedance to High-Frequency signals than twisted multi-strand wire. The non-indurtise stand of in ineulitors

\$1.29

Filtered Aerial Wire
 List. \$1.50. $3 C 2464$ $86 c$ 60 Foot Coil

Designed on revolutionary brin-
findes. Filters and amplities incomclples. Filters and ammities incoming signal. Excellent for distant re
cention. Reduces static. Comosed of solid copper core, insulated orer whitel is hellically wound an enamel Insulated fine colper wire. Inner core Uuter wire connected to aerial on set.

Braided Ribbon Antenna
25 strands of conner wire braided into
elat ribbon. 100 ft contains nearly $1 / 2$ mile of wire. Gles
maximum conductive surface io radio waves.
3E2298-Per 100
 YOUR
PRICE

79¢
Baby Insulator
For susnending wire inside of $11 / 2$ in. oser ail 3E2240Per box of 10
$\qquad$ keinforced 1 rat Teeth rut through rust $\begin{array}{cc}\text { and paint. Separbte } \\ \text { screw for } & \text { attaching }\end{array}$ screw for
wire. Fita plpe ut the to 3E2439EACH 5c

## "Super-Thru" <br> Combined Radio Outlet,

 Aerial-Ground and Lightning Arrester The only Acrial-Ground entrance Htting that is aproroted by the Indersititers Laboratories. Should beusied in every first-rlass restemtat Used in every hrst-rlass restdential
installation. loroves greatest conventence with maximum protection. All barts of molded Brkelite. Hounts through single $7 h^{\prime \prime}$ hole. No nutlet
hox required. Fits any wall up to box required. Fits any wall un to
15 inches in thickness. inside-plate held by ienston, no screvs. Spectal held by tenston, no serews. Sbectal polarized attaehment nlug will not fit electric outhet and ran hot be reversed in its own blate. Installation eonsists of a special l'lug, in ide wall-plate, and exterior Lightning Arrester. Con-
nection from inside blate to Arrester nection froin inside blate to Arrester
nlate made by 12 gauge insulate wires nlate made iny 12 gange insulate wires

## Arresters

## Superior Arrester


dependable air gap type arrester. Porcelain case. shug. wt., 10 oz.
3E2207-Each
Lots of 10
Lots of 100

## Belden Bakelite

 Lightning Arrester

Moulded bakelite body. Sultable for use inside or out of doors. Sturds.
Reliable.
Linderwriters Furnished with $\$ 100.00$ lightning damage kuarantee. 3E2379-Lis

14C Ten for
$\$ 1.29$


Made of genulne bakelite. Son-alr git) princlple. For indoor installation. $\$ 1110.00$ insurance nolicy a $k$ a $\ln \mathrm{s}$ lightining. for your radio set, goes pound.
$3 E 22$ I I-List. 50 c .
Your Price
28¢

## Glass Arresters



Base of clear crystal glass. Carhon element held between brass cunductors. C'learly sixible. $\$ 100.00$ insurance 3E2224-List, \$1.00. Each

36c


LIas choke coil and condenser eonnected between aerial and set terminals which art as a static anil noise reduper amil
tilter. sold with a $\$ 100.00$ free infilter. Suld with a $\$ 100.00$ fre
surance bond against lightulng. 3C2463-IIst Price, $\$ 1.00 .58 \$$ YOUR PRICE


Two Types-for Regular or Shielded Lead-In 3E2205-Standard Type "'Suner Thru' comnlete.
YOUR PR.


3E2206-Snecial Tyne "'SuperThru for use with Shielded Lead ln. list Price, $\$ 2.15$.
YoUR PRICE ........ $\$ 1.25$

## Radolek Noise Filter System

 transformer ist. Connection from this is grounded. signal aerial, shielding serred eren aniplified. and long leadIns of several hundred feet are entirely practical when necessary to put
aerlal in the clear. Many installatlons of this system are giving ex cattons where prevlously no Radio erated because of interference.

Step-up A uto Transformer-couples Transformer-couples antenna to Iow voltage lead-in Transmission line. In above kit.

## YUR PRICE

\$1.95

| 508-step-Up ${ }^{\text {a }}$ |
| :---: | $3 E 8509$-Step-1)own Auto Transformer only. YOUR PRICE SI.O6 Antenna Lead-in Window Strips

col Duco impreanated web covered coppe 3E2470.
EACH
Por Doz...36c: 100 for.. $\$ 3.251$ Por Dez...54c: 100 for.. 54.95

## Lynch Antenna Systems

There is a I,ynch Antenna Kit for every cype of home-operated Receiver: Ther eliminate " man-mante" static and areatly increase slanal plek-up and clarley. Every Set owner should have one . You ran make many extra


## De Luxe All-Wave Kit

For Cage Doublet and Transposed Transmission line. Guaranteed to kise better results than All-Wave, Shord-Wave, or Broadcast Set Klt Includes: 300 feet "HF-M110" enameled short wave wire (light weight). 20 Transposition Blocks. (enough to make 25 Fit. of transmission line). 10 Cage-Aerial Spreaders. 8
Navs standard Insulators, 1 -Iniversal (oupler, Nasy standard Insulators, 1 -Tniversal Coupler,
and 1 double IAghtning Arrester. Complete nstructions with each Kit. $3 E 852$ I-Ji
YOUR PRICE
\$7.35

## Short-Wave Kit

 Combines hilh nolse-reduction and piek-up cffyciency on waves shorter than 200 meters. The I.yneh ShortWave Douthet Antenna 1 llt comprises the following parts: 15 ,yynch Trans-position Blocks: 8 Eynch Commerclai
 Coupler: 200 feet Special Lightwelght "Hi-Mho" wire. 36.00 . YOUR PRICE
\$3.53
Gient Killer All-Wave Kit
For any All-Wave. Short-Wave or
Broadcast Receiver. Closely approaches the derformance of the more expensive kits and is far suberior to any orill-
nary aerial. Consists of: 50 "Hinary aerial. Consists of: 50 Hi Mho" High Frequency Antenna
$35{ }^{\circ}$ twisted pair low impedance trans mission line rable. 3 Antenna insulators. 1-5" Porcelain Tube. 1 Porcelain Screw Eyes, 2 Nail Knobs. 3E8623-Li
\$2.06

## "No-Stat" Broadcast Kit

 For nolseless operation and maximum signal strencth on broadcast recelsers. celver Matching Transformer. 50 Shielded Jead-1n Cable.YOUR PRICE
\$3.53
3E8519-same as abore except
Cable, List IPrice. $\$ 7.00$. Transmassion
YOUR PRICE yOUR PRICE

## All-Wave Kit

## For use on all wave bands.

factory tests have been made with seott. General Electric, RCA, Stewart Warner and other high-arade all-wave Transposition blocks: consists of: Type Insulators: 1 I'nirersal Coupter; 100 ft . "III-Mho" (Specla) hlah conductivtty) Antenna Wire: 50 ft
inemho Finameled
3E85 6 -IAst. $\$ 6.50$.
\$3.81

New Tobe Model 33 Filterizer Kit


Tobe Model 32 Filterizer Kit
receirers operated on electrle supbly lines over whiel
interference is brought in. Includes a complete Model 33 outfit as d scribed above and in addition Tobe line Filterette tybe lis. This item is a carefully designed pacity providing elfective radio freguency isolation of the recelver from the power the line Filterette confused with cheaper Ine fiters which do not include the choke colls that are sery effective in effectire line filtering. This system properly instafled bought fit over ansuppressing all interference-that in over power line.
tenna and that ordinarily brought
Combines Antenna Lead-In And Supply Line Noise Suppression Combines Antenna Lead-in And Supply Line Noise Suppression
$308501-1 . I s t$ l'rlme $\$ 9.95$.
YOUR PRICE ..................................................... 5.858

## Tobe Model 36 Auto

 Filterizer KitKeeps notise out of the auto radio by protecting
 with 10 ft. of Filtered Lead-in which eliminates motor noise trout leadidin ind pe pemtst use
 (3) Anmeter Filterette to sto nolsts trani low tension wires and electric ear heaters. (4) Instruction Bookiet:


YOUR PRICE
\$1.74
Noise Reducing Antenna Products


Double Lightning


YOUR PRICE. EACH ..... 10d
Antenna Spreaders
. 0 . $\quad$ Reduces clee. antenna and
3E8555-3E8555-
YOUR PRICE. EACH ...... 68 "Hi-Mho" Antenna Wire 3E8576-31/2" long unglazed
3E8577-6" long unglazed 104 Your Price Each for 90 c Excellent for All-
Wase Sets. Aligh conductivity resista
radlo Lalf the wetght of solid copper but with the same A.C
resistanee. The shorter the wave lengeth the nore effective "Ill-milo" he $3 E 8579-6^{\prime \prime}$ long glazed 15
Your Price Each Your Price ${ }_{10}^{\text {Each }}$ for $\mathbf{\$ 1 . 4 5}$

## Airplane Insulator

|  | list. $\$ 1.00$. <br> NET $\qquad$ <br> 3EB557-Heavy Weight List. 75 c . <br> NET $\qquad$ |
| :---: | :---: |
| Antenna Spring Tightener | 3E8558-lleary Weight 100 Fit. IAst. $\$ 1.50$. NET |
| , | See Page 142 for RCA |
| Takes uni slack in Aerlal, 3E2376-Spring only, | World Wide Antenna |
| EACH................... .18 | System. |

Serviceman＇s Spintite Kit


Socket Wrenches Reamer and Screw Ilrivers $3 C 4681$
YOUR
PRUCE $\$ 50$ PRICE
An extra fine quality conipact outfl that pro－
vides a complete set of socket wrenches and screw drivers，also is userull
reaner．This outflit meets he ner．This outht meets nair jol，and can he rolled up to conventently carry in the tool chest or analyzer．Outfle includes universal handle with chuck， 3 serewdriver bits．
rcam awl，$i$ sphntite heagon wrenche ${ }^{2}$ ，sizes 1 rcam awl， 7 sidntite hexagon urenches，sizes 3
and $1 / 2$ inch．All mounted in durable tool roll．

## Hollow Stem Hex－Nut Wrenches

 Hish duallis tonds．Have deell hollow in sorketto take any ordinary projectlon of screw above to take any ordinary projection of screw above
nut．Fine tool steel shanks．Sockets of spe－ hut．Fine tool steel shanks．Sockets of spe－
cladly hardened toni steel．Shank and sorket cadl－ mlun plated．Fincly finished grooved wood handles，irovide sure grip．Shanks securely set
hin handies to preven：turning．Every Radio $\begin{array}{ll}\text { In handies to preven：turning．} & \text { Every } \\ \text { Sersiceman } & \text { Radito } \\ \text { needs a complete set oi all } \\ \text { thre }\end{array}$ Sersiceman needs a complete set oi all three
styles．Ou：quotations represent big ralues．


With Straight Shanks， $6^{\prime \prime}$ Overall


Special Socket Wrench Set


3C4652－Handle and lie bockets． YOUR PRICE

59C together with a suectul tisht－erip handle in which is set a sturedy steel shaft firmly held with long steel Perrule．Fine duality steel sockets with sery
 screws proserting not ovet ${ }^{3}$ incl．
This is a special quality Set，worth more This is a special quality Set，worth more
than the small difference in price between it and inferior quality，similiar Sets of－ fered by others to create a low price

## Super Grip Screw Drivers

Insulated Handles－Insulated Blades


The finest made and at bar－ gainpricest Tight grip．inoulded， nolished black hard rubber han－ dies．Offer neriect Insuation．
itadio sizes have slender hard－ latio sizes have slender hard－ ened stecl blades，dilameser fors
lifeh．Reach the dificutt spots． Blades can neser get loose or turn in handle．Very strorg and
rugsed． rugged．Exery sersiceman and machinist should have a complete
Stock
Blade
Prico
 $\left.\begin{array}{lll}\begin{array}{ll}3 \mathrm{C} 4725 & 31 / 2 \prime \prime\end{array} & 15 \mathrm{c} \\ 3 \mathrm{C} 4726 & 41 / 2 \prime \prime & 17 \mathrm{c} \\ 3 \mathrm{C} 4727 & 52^{\prime \prime} & 20 \mathrm{c}\end{array}\right\} \quad \begin{gathered}\text { One of each size }\end{gathered}$ ${ }_{3}{ }^{3} \mathbf{C} 4727$ 3C4728
3C479
3 5123 Cuman
0
 tool steel．Suitable for continuous factory uroduc lon work．Size given is width of hexagon nut in Stock

| Stock |  | Price | $3 \mathrm{C4} 691$ |
| :---: | :---: | :---: | :---: |
| Number | Size | Each | Complete |
| $3 \mathrm{C4682}$ | 品 | 30 c | set surell |
| $3 C 4683$ | $1 / 4$ | 30 c | Wrenches |
| $3 C 4684$ | f | 30 c | Your Price |
| $3 \mathrm{C4685}$ | 陈 | 30 c |  |
| $3 C 4686$ | 3 |  | 5330 |
| 3C4687 | ？ | 45 c |  |
| 3C4688 | 1／2 | 45 c |  |



With $90^{\circ}$ Offset Shanks， $7^{\prime \prime}$ Overall Easlly and quickly hamile nuts in mositions not accessibit with straight shank wrenclies．Fxceut
for $90^{\circ}$ bend in shank construetion is exactly fir $90^{\circ}$ bend
same as above．


 $3 C 4700-$

45 4
The handitst tool in the serviceman＇s kit．Hollow handle holds screwdriver socket and 5 ，wrench
 ceneral repair use．Handle and shank are ${ }^{1 / 3}$ inehes long．Handle is hearily knurled．providing good gripping surtace．Finished in white niekel．

## Burgess Flashlight Screw Driver



Puts the Light Directly on the Screw A combination flashlight and screw driver． finables use of both hands．harge secure srid safety insulated handle．Fine tool steel blade handes as rallo serrws．Very Special Valu and on．1sulb Included．Very Special Value！ $304747-$ Scr
YOUR PRICE

59¢
3039－No 1．Int－Cel！Ratteries（2 Required）

SERVICEMAN＇S Vest Pocket Screw Driver


## Radio Set

## Screw

## Drivers



3C4739－

## 29C

Real quality tools 10 handte thy screvs in ecesses．Tight grlp，moulded inolished black hard diber handles ofter perfect Insulation． 4 －Inch tronger hardened steel blades，small enough and 1 ， $r^{2}$ ，and $3{ }^{1 / 2}$ inches．Hlades will never loosen


Supet quality，classy appearance．$\quad 15,000$ volt test，unbreakable lusterous transparent non－In－ loosen．Hlades of fine hardened tool will never handle thehtest scres＂s without bending or chipping． Blades are rust－proofed and highly bolished．Vest pocket clip prevents losing．An extra－quality American made tuol for the protesslonal Radio
 machine screws，dial serews．small wood screw 3E4744－ler set of Three． YOUR PRICE

65

## Maple Handle Screw Drivers

## 3E4749－ <br> Set of ${ }^{\text {Y }}$ 59 5

Substantlally made to stand the gate yet low in
 hardented amd polsined torl steel．Wriph not iurn in handles．Fxtha beavy steel ferrules．Four Irtrers with 6， 5,4 and 3 inch blades．A set
of these drluers whit hat of these drlvers will hamble practicaliy every thachine and wood serew，except very snallest
ones，used in Radio Service Work．


## Hold－E－Zee <br> Screw Drivers

Holds Any Size Screw
Quickly places any type screw in spots not ac－ Qeesshie with ordinary serew altiver．Nerew grlpper instanty along blade to upper when wesired．Gribper sinds insulated unbriakable handle．Hexagonal tool steel blade 迫＂diameter．
$25 C$
3E4741－ $3^{\prime \prime}$ Blade．Each
$3 E 4742-4^{\prime \prime}$
Blade．Kach
$33 c$
39
3E4743－10＂11ade，bueh ………．．．．．．．39 c

## Screw Holding <br> Screw Drivers



Four finger－like proser grid．Works in places washers，ete，In rise＋like angers or ordinary tools．Niekel plated reach with stcel blade．Moulded ．Nekel plated tempered ane of the most satisfactory tools of this Is that we have seen，
$3 C 4636$
3C4635－8 inch．Each．
756
3C4636－10 Inch．Each
950

Utility Set


3C4701-Complete Outit. YOUR PRICE PER SET.
$\$ 1.95$ Includes a motor arlor to fit $1 / 2$ Inch shaft. held inch: 4 Inch wire serateh brush; $1 / 2 x 4$ noch emmery wheel; 4 Inch steel saw and two 4 Inch cotton buff wheels. A handy set for the show and well worth

## Polishing Head


$3 C 4702$
youn
Holds emery wheel un to 1 " thick and butr wheel. Was chuck
for drills up to $1 / 4^{\prime \prime}$. Pulles $13<{ }^{\prime \prime}$ diam. For $4 /{ }^{\prime \prime}$ round belt. Overall height in. Shat length $8^{\prime \prime}$. sturily cast iron base. well flnished in red enamel. 'l'wo screw holes for fastenling.


## Saw Table and Guide

Accurately made and champs 3C4702 our nuin head. Size $8 x x^{2}$ inches. Makes a romplete cutot saw. Fine for saw-
ing bakelle or wood manels. Neatly finlshed. ang head of murh more falue to you. Adjustable gulde with included.

## Ball Pein Hammers

These tine hammers are turned out of a handles of correct probortions to give he hammer periect balance. The rlght sizes for light rebalr jobs on radio sets, electrleal ap-3C4703-4 oz. Hammer. YOUR PRICE 15¢
$3 C 4704-10$
oz. Hammer. Your Priee....25c
$3 \mathrm{C} 4705-16 \mathrm{oz}$. Hammer. Your Price....32c

## Tin Snips

$3 C 4589$
YOUR

## 48C

Thie best size for the radlo
servicemati.
servicemati. 7 Inches overall lensth.
Hounded and bolished rutting thade 2 Inches long
Very strong Drop forged steel. Nicoly fintshed Very strong. Drop torked steel. Nicely finished.

## Wren Wadio



## Spring Steel 72 Inch Rule $\begin{aligned} & \text { Sins. } \\ & \text { American Made } \\ & \text { In Bakelite Case }\end{aligned}$

 A new semi-flexhle steel rule. Which may he and will alwass spring back to its natural form. the width of the rule that it holds its nearly righd shape for all ordinary measurlng purnoses and may be bent or cursed at whl whhont damage to the eter. $1^{\prime \prime}$ thick.304535 -YOUR PRICE

## Diagonal Jaw

Nippers
Your 49C


For flne etectrical and radio work. Made of hardened tool steel. Cuts wire clean in tight whares. A high grade tool, fine bollshed finish. Well worth the price but not the equal of Klein's for professional work. Slze $51 / 2$ inches.

## Long Nose Pliers

3C4566
Your
Price..... 498
The handlest pllers for radio work. A tine Ituality tool made of fline hardened tool steel.
Inely finished. Wonde rful value. but not nearly equal to kielis's for urofessional work.

## End Cutting Nippers

3C4659
\% in. 56
Cuts wire and small sorews in tight wates Drobl forged steel Hardened faws. Guaranteed. llill stand lots of rough handilig.

## Genuine <br> Mathias Klein Pliers

The H'orld's Standard of Quality Kiein miliers are nate of the best flne tool steel guaranteet the hahent qualits on the market. Do
 products, the values offered here are excedtionally gond. Customers juage a serviceman by the quality of his instruments as well ats by his work

## Klein's Narrow Nose <br> Oblique Plier <br> Kleins Cat. <br> Cuts close.

mitting use in confined waces. Knires pertectly ntted so that they mect accurately at all boints $3 \mathrm{C} 4750 \quad 5 \mathrm{hmeh} \quad$ Each $\quad \$ 1.76$

## Klein's End-Cutting Plier

 Klein Cat. Ias stout jaws and broad. cutting knlres. Cseful on enclosed be reached with othe

Klein's Long Nose
Side Cutting

## Plier

## Klein Cat.



Fine cutting assured. Kintes carefully fitted Body of the plier is hardened and tempered. D'oint 3/8 inch roun
364754
364555
5 inct:, Each..
6 inch.
Each. \$1.87
3C4755
6 inch.
Each
.$\$ 2.06$

## Klein's Side-Cutting Plier

## Klein Cat

No. 201
For ute on bare
or insulated wire. Powerful leverage and keen re
Handles nit hand. Dole inforced rutting knives. Adamable for heary cut3E4758 Chate for sire insulation back of knlves. 3E4758
YOUR PRICE
\$2.20

##  <br> $3 C 4601$ <br> YOUR PRICE <br> $17 ¢$ <br> For enlarging dritled holes to proper size. Per-

## Counter Sinks

EACH .......19¢
$\$ 2.08$
Round shanks to fit hand or power drllls. Made of tool steel carefully hardened.

## Insulated Side Cutting Pliers

 304665 PRICE 594
Made of
ne qually

## ine quality

tool steel with hardened faws. Finurled opening vermhts thrm grasy on screws. condenser and solume control shafts, etc. A very handy and useful tool
for radlo servicing anil leht electrical work 55000 ol ': Jaws insuation on handles, Length 6\% inches

## Utica Flat Nose Stub Pliers

## $3 .{ }_{3} 466$

69C

Mhers whith short stub sure grlpping jaws. Particuof the tool steet hardened and tenmeres. Fath Hnienched an

## Special Thin Nose Pliers <br> 3 D4667 <br> YOUR PRICE <br> 34C <br> Handy radio pliers with long thin jaws for rearhing into narrow places. Stub nose will hold nuts firmly. Knurled jaws $17 / 8 \%$ long. tapered fron $1 /{ }^{\prime \prime}$ to $1 / s^{\prime \prime}$. Overall length $61 / 2^{\prime \prime}$. Drop furged steel. Brightly cliromium blated.

## Close Cut Hack Saw

Cuts steel. bakelite wood. ete.
quickly and cleanly, Strong thet

thearhes many phaces ordinary' hacksaw cannot touch. Blade very durable: almost unbreakable. Blade eisily replaced. Very the teeth, 19 ver in. 596 3 C 4655 -Fixtra blades. Six
Pistol Grip Hack Saw

$3 C 4740$ 1/ist, $\$ 100$

## YOUR PRICE

49 C
Amertcan made. Finest quality. A real hargaln at our wirice. Not to be rompared wh the poor
quality. imported saws selling at slighty lower quality inimorted saws selling at slightly lower price. Strong. adjustable to ake 8. in or
blades. Moulded ruliber handle. One $10^{\prime \prime}$ blade
Hack Saw Blades

## - M HACK SAW BLADEXS winmo

$3 \mathrm{C} 4556-8$-in. Dozen. Your Price
$3 \mathrm{C} 4557-10-\mathrm{in}$.
Dozen. Your Price
$3 C 4557-10-i n . ~ D o z e n . ~ Y o u r ~ P r i c e ~$
$3 \mathrm{C} 4558-12-\mathrm{in}$.
Dozen. Your Price

## Radio-Lectric Counter Sink

## $3 C 4657$

## $17 ¢$

For shaping holes in hard rutber, bakelite, alure. Yood. etc. to debress heads of that head screws.
Every service man needs this tiol Firm grouved woud handle. Hardened steol blade. firmly


$3 \mathrm{E} 4640-$
YOUR PRICE
Your price
 Electric Drill Chuck
Steel Drill
$U_{p}$

3E4647-

## \$14.95

A quality tool in evory
respert.
whin maet every need of Radio sricisin. Powerful motor. Cast
and aluninum body
handle.
3 -jaw
chuck. camacity un to

tight chamber. Trouble-frece switelos in grease-


Steel Twist Drills with $\frac{1}{4}{ }^{\prime \prime}$ Shank -55 5/16 to $1 / 2$ Inch Fine duality rarinon steel twist drllls with
turned down sliank to fit 1 t" chuck. These sizes are a neresifty for thos anto radio installations. Vers
3D4620- Inci 304633 304621
304622
304
Inch 304623 -Ts Inch

85
3D4625-Complete Set of 5 Drills .... $\mathbf{\$ 3 . 9 5}$
HIGHEST QUALITY
Alloy Steel Twist Drills


American Made
Made of alloy steel consisting in part far superior to ordinary carbon drills. for electric drills. Perfectly polnted.
prevents splitting of Irill. Oorrectly tembered to invure lonk
life. Quality considered, our prices represent extra-ordinary values.
 YOUR PRICE Sizes 4562 , Steven drills in

814 3E4563-Figlit drills in Hirdwood Ror. Sizes YOUR PRICE $\qquad$ \$2.73 3E4564-Elicen trills in Fitire Roll. sites YOUR PRICE
\$1.27


Tap Wrench with
3E4560-.... S1.15
Per
Three taps and three drills, the most pructicat set for Radio Servicemen. What bles you to drill and tap screw boles in any
materlal. Drills can be used in ordinary hand drill if desired


Radio Servicemen's Tool Boxes All are of heavy gauge cold rolled steel, baked.
on enamel green finish.
Brass phated catclies and on enamel green finish, Resrass plated cat lies and
lock when one key. l'aneled sides, ends, ton and botom for rigidity and strenktis


Cantilever Tray Tool Box Tray Raises as Lid 1s Opened 4E10902-


Radio Serviceman's Parts Box


Closed


## Servicemen's Vises

## Portable Model

## 3E4580-

## YOUR PRICE

Sturdily bult, accurately
fitted. Machine cut steel screw, Folished jaws 1 gis renient to carry in tool boz Shıg.


Journeyman's Swivel Bench Model


3E4575-
PRICE
\$2.48
Replacoable
hardened
jaw fteel
aces.
nnurled sur rolled steel bar, screw and handle. Pine jaws hold wine se to angle. Hugged anvil. The finest vise on the market for Madlo and electrical work


## Radio Blotorches

## Combination Alcohol Blotorch

 C48002.94 duces a powerful 2200 degree llast with attached burner. One urn of thumb screw releases needle boint flame. Clenning inin attached to always cool handle ready for instant use. Made of extra heavy gauge brass nickel plates. Will last a lifetime. No rouf For induors or outdoors Burns 3 is hours on one filling.

## 3 C 48 O

Alcohol Blotorch
Your Price\& \& $\$ 1$
orking torch. 0 seconds Burns $2 \frac{1}{2}$ hours on flling. Intended for indoor use. Suitable for all types rallo asal clertrical work. Mechanleally fool lado lioilt to last a lifetime

## Duplex Alcohol Blotorch

 A hears duty torh with a Bunsen
nurner esper cially addapted for out ontloor we and heary soldering foos. Bunsen is desired. Flame adjustable from 1200
 senerating, Jrimary tube is used as a handle.
filling.

## Gasoline Blotorch

 3 C 4803 YOUR PRICE oper 2000 lecrese No bumping, no blowing. Burns two hours on one fllling. Generates its own pressure. For jolos redulting a melting. iusing,brazing heat. Very durable. a wonderful value. size $21 \times 74$ Nickel wlated brass tank.
Kester Rosin Core Solder
Requires no plux as rosin has been thoulded into the core of
solder wire. Best for flne radio cnnections and electrical work. takes stronk, low resistance

3E4765-rer can 158



Wire Solder 3E4768-1 59C cmmposition of tin and lentect anch. Very convenient for solitering in close gusiers.

Kester Aluminum Solder
Flux Filled
Tirgin metals properly alloyed. Hollow wire form with plux sealed trithin solder. Prorides the fastest and nost sathsactory in any form. In can is inluded cleaning materials and nstructious.
3E4763-Per can. List Price, 25c. 19 d
YOUR PRICE, Each.........................


## Solder Paste

3C4770-2 oz. Can. 10 d
Ten for 85c
A non-corrosice soldering flux. Makes a secure merinanical and perfect olectrical connection.


## able Tip Ends



3D4405－ILIst Price．

Test Prod Kit
With Interchangable Plug－in Tips

$3 E 44$ I 5－List Price．$\$ 2.00$.
YOUR PRICE
784

## Test Leads With Alligator Clips

Flexthle wre test leads．Color coded red and black for positice and neratire identification．Al－
ligator Test Clips at each end proride quick ligatior Test Clips at each end proride quick
positive method of making connections．Allitator plips have extra narrow jaws and very flrm grip． Ideal for
sitions．
$304410-12$ Inch．Pair
3D44：1－24 inch．Palr
$38 c$
$44 c$

## Alligator Test Clips

## New type．Long thin jaws．Strong spring wil grasp the zomer <br> smallest terminal lug

nure．positive contact．Barrel end will fit Banana Type Spring Contact PIug－in prongs or can be se－ curely soldered to test cabl
$1 / 4 \%$ Polished niekel finish．
3E4407－YOUR PRI ，Each． 4 C

## Rubber Insulators



EACH

Durable rubber collars to insulate allia．．．．．．．．． 7 C clips．Only polnts of jaws are exposed．Permit of quirk seeure connections but eiminate danger
of shock on＂hot＂clrcuits．

## Long Test－Prod Handle

With Sharp Point Phone Tip End

Hollow high di－electrie insulated handle． long orerall．$\frac{7}{6}$ ，＂diameter．Sharp point phone tip terminal．Will pierce insulation，rust．pitch
and paint．Fits standard phone tip jack．Com－ and paint．Fits standard phone tip jack．Com－
pletely solderiess，merely unserew phone tip and
 insert wire．Brilliant lusterous color coded handles． $\left.\begin{array}{lll}3 E 8875-R e d & 3 E 8878-G r e e n \\ 3 E 8876-B l a c k & 3 E 8879 \text {－rellow } \\ 3 E 8877-B l u e & 3 E 8880-P u r p l e\end{array}\right\} \quad$ EACH 3E8877－Blue

## Short Test－Prod Handle

## With Phone Tip End $=6$

Hollow hifh di－eloetric insulated handle long overall， 38 dlameter．Plione tip end，fits any standard phone tip jack．Completely solder iess．itant lusterous color coded handles．
$3 E 8881-$ Red $3 E 8884$－Green
3E8882－Black $3 E 8885$－Yellow $\}$
6

in

## Insulated Top Jacks

## For Standard Phone Tips

Insulated top $\mathrm{gm}^{\prime \prime}$ diameter．Brilliant lusterous code colors．Hold phone tips straight and tight．Fits panels up to $1 / \mathbf{}^{\prime \prime}$ WIde．Flber shoulder


## Solderless Tip Plug

 P Your Price，Each．．．Ten for $\mathbf{3 5 c}$ ．Per hundred， $\mathbf{S 3 . 2 5}$
Attached to cord or wire without soldering or use of tools．Positive connection．Fit abore jack or any standarid to jack or jack assembls．Made of hrass nickel finish．

A complete set of 14 pieces insulaterl test prots of long．short and medium lensths with interchange－ Prorldes the serviceman with the most effictent tnols avallathe for makin neetions from his test elpulument to the＂job＂
under inspection．These hands prods will reach into the most confined．tlght spots to save you time．The＂missing link＂between the set and your test instruniente
Furnlshed with interchangeable tips consisting of a phat grop ins jaws；a pair of insulated needle－ point tips for plercing insulition，cherking con－ tinuity and making positive contact on corroded terminals：a pair of insulated blugs with universal tapered lugs which fit sizes $4,6,8$ and 10 screws．
Hair of insulated jacks are supplied．
Handles of prods are made of high insulation material．Solderless screw connections safely in－ sulated by sleeve caps which fit securely over set
screws．Three pair of prod handles whith prong ends which may be instantls，plugect into any
 4 Inch， $2 \frac{3 / 2}{}$ inches and $15 /$ inches overall．All 3 32080，etc．，Ilsted below，for cennections．


## Standard <br> Insulated Binding Posts With Color Coded Tops Atractive colored，high di－electric． $10 / 32$ top－diameter $1 / 2$＂．Mounted on 1／2＂dlam．， $1 / \mathbf{B}^{5 / 8 "}$ thick <br> 3E8863－Red $3 E 8866$ Green ${ }^{T}$却的 $3 E 8864$－Black $3 E 8867$－Yellow $3 E 8865$－Blue $3 E 8868$ Purple <br> 48 C <br> Small Insulated Binding Posts

戠路
With Color Coded Tops
Same as aboze but smaller．Ton $\boldsymbol{F}^{\prime \prime}$ diam． 6122
dum．
3E8869－Red 3E8872－Green ${ }^{\text {TEN FOR }}$ $\left.\begin{array}{l}3 E 8870-13 l a c k ~ \\ 3 E 8873 \text {－Yellow } \\ 3 E 8871 \text {－Hlue } 3 E 8874 \text { Yurule }\end{array}\right\}$（2d

## Flexible Cable For Test Leads

Flexible rubber corered stranded copper wire，
equivalent to size 16 ．Conductor is corered with cotton sersing orer which is a live rubljer cover－ ing sh ihick．Over this is a lacquer saturated
tight cotton braid．Will withstand highest rolt－ $\underset{\text { ages encountered in radio test work．Avallable In }}{ }$ ages encountered in radlo test work．Avalable In $\left.\begin{array}{l}3 E 2080-\mathrm{Red} 3 E 2082 \text { Green } \\ 3 \mathrm{E} 2081-\mathrm{Hlack} 3 \mathrm{E} 2083 \text {－Yellow }\end{array}\right\}$ 3E2081－H1ack 3E2083－Yellow 374

## Insulated Connectors

For Banana Type Plug－in Tips and Prods


Securels and speedily connect any Tips or Prods hating Banana Type Plug－in Prongs．
colored hash di－electric insulated body，ly long． colored high d
$3 /{ }^{\prime \prime}$ diameter．
3／＂diameter．
$3 E 8851$－Red $3 E 8854$－Green）
$\left.\begin{array}{l}3 E 8852-\text { Black } 3 E 8855 \text {－Yellow } \\ 3 E 8853 \text {－Blue } 3 E 866 \text {－Purnte }\end{array}\right\}$
$\stackrel{\text { EACH }}{10 \mathrm{C}}$

## Long Test－Prod Handle

With Banana Type Spring Contact Fits Plug－in Jacks

Hollow high di－clectric insulated handle． $3 / 3$ inch terminal for wire lead completel．insulated bs screw Prong end provides guick postive mieans for plup ging in any of the interchanceable terminals listed or into panel jacks．Brilliant lusterous color
3E4417－Red 3E4435－Green）EACH


## Medium Test－Prod Handle

With Banana Type
Spring Contact
same construction as long test－brod described
3 E 49 Lencth overall 2 wa inches．
$3 E 4419$－IRed
$\left.\begin{array}{l}3 E 4439 \text {－Hreen } \\ 3 E 440 \text {－Yellow }\end{array}\right\}$
3E4438 blue $3 E 444$ I－Purnle
12C

## Prong End Adapters

For Test Prods with Banana Style Prongs

Adapters with high di－electrie Insulated handles． that extra degree of alaptability that onatus many additional tests to be speedily made with ininimum amount of connection changes．Fifery shop and laboratory＇needs severat sets．One Alligator Clip included in set
$3 E 8845$ Hed $3 E 8848$－Green $\left.\begin{array}{l}3 E 8846 \text {－1hack } 3 E 8849 \text {－Yeliow } \\ 3 E 8847-\text { Blue } 3 E 850 \text {－Iurple }\end{array}\right\}$

## Insulated Plug－in Tips

With Banana Type
Spring Contact Prongs
Itgh di－elecricic insulated hol
low hande sers connection．I＇rorides for connecting test wires Into plug－in tip jacks．
3E4427－iked $3 E 8826$－Green（EACH $\left.\begin{array}{l}3 E 4428-1 \text { lack } 3 E 8827 \text {－Yedlow } \\ 3 E 8825-1 \text { lue } \\ 3 E 8828-\text { rurple }\end{array}\right\}$

Standard Plug－in Insulated Jacks
For Banana Type Spring
Contact Prods and Tips
Takes above three types，prods and aps．crovides a secure low resist． lireak．Fits panels uil to $3_{8}{ }^{\prime \prime}$ thick． shoulder washer included for metal panels．

$\frac{\text { Ten for }}{\text { Special Quality Plug－in Insulated Jacks }}$

ctter design ard I＇lug－in dacks．Brilliant lusterous moulded hi di－electric Insulated tops，Intended for better arade of


## ＂Banana＂Style Plug－in Spring Contact Prongs



Fit abose two styles of jacks．I＇rovide secure solld
cuntacts．Easily attached to rods or sheet．Ef－ ticlently provides for vlugging－in many styles of special apparatus．
3E45 2 －With unthreaded Shank，1 沓＂
3E45 I 3－With threaded
nuts 1 fín overall．Ten for
nuts I我＂prerat Metal Jack
For Banana Type Plug－in Prongs
Made of brass nickel plated．Hold firongs securely．Shank pure contact． nut and solder lug incIuded．
$35 C$

## Universal Microphones



New Model XX
Two Button
Stretched Diaphragm Model "XX"' conflrm. the reputation for qual
ity and performance that ty and performance thot sal products. Every es sential feature necessary to Insure superior juet ormance and loma been incorborated in the design of this model Only the non-essentlal "trimminas" have been elim inated 10 enatble this ponutar price. Faithful truly natural tone. Pure Gold contacts. Duralumin tretched diaphrakns. 200 ohans ver button. Very low hass level. Scientlikally Danped. Freduenes ange from 100 to 4500 ryiles. fousgedly bull and finlshed in hon-cortnsive. polished chrome pate Diameter, $22^{2} \mathrm{in}$. Drerall thickness, 1 th. Made In three deseres of sensitivity: K. rery sensitlve: M. medium sensitlre (standard) :und D. SE280 I-List lriec. $\$ 10.00$. YOUR PRICE
\$5.88

## Improved Model "KK"

## Frame Turned from Solid Steel Bar Stratched Diaphragm A substantial, solid. two utton broadeist mitrophone with "very mindmum of of the flnest materials with center alloy diaphragm which is held minder tension. Inta <br>  only. 1112 in . Frepuency range of from 50 to well oref 6,000 cycles. Buttons are 200 alims resistance each. lintire microphone finlshed in 2t-Kt. pollshed  gensltive (standard) and b, highly damped. biath 3E2803-List rrice, $\$ 4000$. YOUR PRICE <br> \$23.52

## Lapel Microphone



Professional Model
Thin, compact, light in wetght, with mintmum higs. a laboratory de11 nit for Broadras guality or reproduction natural toned prectsion terminals
securely
ing. Jeslstance 900 ohms wolished Bakellte housfrom sit polim cycles. Diameter $21{ }^{10}$


odel "QRQ"
Single Button
All exceptionatly efficient, small high. Finished in highly ${ }^{2}$ in. high. Finished in highly notolld 21 karat gold buston is it "xtrumely long life. Furnlshed
"1th 3 -fict phone tip cord. $\$ 3.00$

$\$ 1.76$
Three Channel Microphone Mixer gineered mixer. Will handie one fwn or three 2 button rarbon ml crophones, condenser mirrophones low Impedance nhono pickups or standard telephone lines or any combination of them. Slixing and
fading ran be done smoothly and fading ran be done smoothly and
silently without afferting quality or withont unhalancing channels. Constant Impedance is matntained at all times throughout circuit by
the use of constant tmpedance $T$ Vids, Out jut is to 400 ohm IIne. Housed in black erackle finish stcel housting, engrayed bakelitu
nanel. Size $4^{\prime \prime} \pm 51 / 2^{\prime \prime} \times 12^{\prime \prime}$. Net 3E2840-List Price, $\$ 36.00$. YOUR PRICE

## Model "BB"

New Super Design
A superlatire ralue for
such a low price.
Isuite to such a low prrice. Built to of the rugzedness can be obMonlel
Intiel
Designed esperialls for oice plek-up, pulble address work and far amateur halls, ball rooms, speaks,


Extra heary 2 titi. J'ure Gold spot Center, Duralumin Diabliragm and has a frequency range of from til Owill the tho estes. 200 ohms ber butal. Owing to the barge size and weight of nonted stand ine used for momenting instcad of Noodel especially when covers are used. Made in three de-



## Universal Model " $\mathbf{Y}$ "

## Super-Sensitive

 vactness are necessary. should be placed in proterted locations, hehlnd screen or grill work. Sultable for use with earphones. Derause of the
exjosed diaghragm, great care must be exerelged exbosed diay
in handing.
3C2818-List Prlce. $\mathbf{5 2 . 0 0}$.
YOUR PRICE
$\$ 1.18$

##  <br> Universal Model "W" <br> EDGE VIEW <br> Perfected Watch Model Microphone The amallest completels protected and workable slagle-button milcrophone deyended upon to glvo A favorite type for use in hidden positions such as a deteriophone, or <br> Highly sensitivity. Mrit <br> combact. 200 obms. Equibued with Pure Gold Suot ('enter Diaphragm, completely enclosed, proterting it against injury during handing and use. 17/3 in in dlameter. in. thlek. 3C2819-IAst Irice. $\$ 3.00$. YOUR PRICE <br> $\$ 1.76$ <br> Universal "Handi-Mike" <br>  <br> Intended for rolice onls. Has maximum solume whith clear and clean rut speerh renroduction. Beautiful pollshed plate finish. Equinned with an "off" and "On' thumb switch and $15-\mathrm{ft}$. cord. Scientiflcally ronstrueted with gold fared pution. Mountell in sound damplag hution. Mounten in sound damping, re- sillent felt. Overall length. 6 inches. Size of head, diameter. $211^{6}$ Inches. Cons of booklet "Use and Care of Mirronhones," giring instructlons and wir- $\operatorname{lng}$ hookup. accomnanies each Handi-  List Price, $\$ 10.00$. <br> YOUR PRICE <br> \$5.75

## Double-Button

An excentionally clear, highly damned hand miernmhone, designed particularly tor uses where clarity of renroduction mlus general adaptability and por-
tablity are important requisites. Especially recommiended where microphone must be used in close proximity to loud speakers. Swlith breaks the circuit in the center ronductor. Hugred eonFiturtion. No delicate narts, 200 ohms per button. equipued with beant solished equipled with a $6-\mathrm{ft}$. silk bra
$\mathbf{3 C 2 8}$ (3-List Price, $\$ 15.00$. $3 C 28$ I3-LIS
YOUR PRICE
\$8.82

## Suspension Rings



## $61 / 2 \mathrm{Imch}$

Size $61 / 2 \ln$, Mlaminter by $1 / 2$ in. wide by $1 / 8 \mathrm{in}$. thick. A larger ring for larger mikes, especially the exta heasy "lib" "A" "ILL" or Torpedo
Trpes suspensinn swings inimbaded.
$\mathbf{3 C 2 8 2 7}$ List l'rice. $\$ 4.00$. YOUR PRICE $\$ 2.35$


## Desk Type Mountings

5 inches in diameter and in used or mounting Models " $X$ "", " $A$ " or KK microphones on 4 pulnts of susbension, hising \& springs. Base is ing a cushiniled rubler ring formpreventing damase to palished sur tincos. Finished ln highly nolished chrome plate. Lintire assembiy $8 \%$ flurged. Remorable 8 gusion sorings in-3C2828-Without Covers. List 1'rice, $\$ 4.00$ 00.
$\qquad$ \$2.35 3C2829-With List l'rice, $\$ 6.00$.
YOUR PRICE \$3.53
Model "L" Desk Stand
For larger microphones sur King Dia. fise". Has two
lengths of interdiancable wh Ing whleh allow for helghth of either $10 \frac{1}{2}$ " or if $1 / 2^{\prime \prime}$ as
$\qquad$ suspension rings furnished

roun price . $\mathbf{\$ 3 . 5 3}$
3E283 I-WIth Covers. List $\$ 10.00$. $\$ 5.88$
YOUR PRICE ..........................
Floor Stand


Ton ring in $r$, 2 in. in diameter Heavily welghted 18 mond liase $1:$
inches diameter. Total extented height $51 / 2 \mathrm{ft}$. Ihbis stand is smonth height $51 / 2 \mathrm{ft}$. Whas stand is smoith
lin neralion and is not easily
timped. The clamp lock is positre. yet is operated by the slightes pressure. Finished in highly yollshed hlank call letter equipued with shown 8 suspension sivinges inchudech set weight $10 \frac{1}{i}$ lbs. $3 C 2833$-IIst Price, $\$ 16.00$. PRICE
$\$ 9.41$

## Banquet Stand

Same reneral construction as floor
stand but 11 ghter in welght Adjustahle from bigh lase 7 in . in diameter. Top ring $6^{1 / 2}$ in. in illameter. Findshed
in hlably polished ehrome plate 8 suspension rings ehrome plate.

## 3E2832-List Prire, $\$ 12.50$.

YOUR PRICE
\$7.35


SHURE Microphones


Model 5B 2 Button A full sized 2 bution mi-
crophone. Large ir a 110 makes possible the use of regibar size precision
justable buttons maki justable quality sumerior that of units with smaller
frames which can ancombe diate only the snaller buttons. Dlaphragin dammed to ellimbinate nolsy vibration.
Speaking voice clear and easy to understand. Isy the use of two huttans "push-ruil" inicrophonic action is secured that charinates gold surfaced buttons. screen in face of midrophone eliminates need for covers on stand. Aphearame enhanced by modern-
istic bevel edge. Highly polished and chromium plated Operates best at 6 to 8 MI. A. per button. Lamit of guarantee 2l A. A. Her button. button Frequency resmonse dor orerall: 3ai inches Diameter of frames 3 inches. Thickness owerall $1 \frac{1}{4}$ incles. shifping weight, $11 / 4$ pounds. Packed with wiring diagram and complete instructions. (Ňot recommenided for Mulin
YOUR PRICE
$\$ 5.88$

## Shure Model 22B



2 Butcon Microphone Patents Pending
A tarse stze , hight tumally ${ }^{2}$ amateur broadeasting. glazed carbon button dises, adjustable buttons, eathodestretched dural diaphragm and clamped by a sperial patents pending). Screen in the face of the mit crophone eliminates the need for cot stand. Modernistif. bevel adife clesign. guarantee : $30 \mathrm{MA.A}$. ner hutton, Total Internal resistance: 400 olums, or 200 olms per biameter over afl: 3 " " Diameter of frames, 3 ". Thickness overall: 1 解". Shinphng weight. $11 / 2$ lbs. Parked with polished chromium finish. $\$ 25.00$.
$3 E 294$ I-list
YOUR PRICE
\$14.70
SHURE Model 40C
Condenser Microphone
 ments. Provides a perfectly of the head amplifler. No audind plate cireutis chromitum plited. Rase double balied black japan. Insut: $105-12.5$ v., 60 cyeles A. ${ }^{2}$. Output: Fhament:
 M.A.1.C. At and 1s- Rrounded to case. microphone cable. 6 Ft . A.C. cord, and 80 tube. List Price, $\$ 40.00$. YOUR PRICE
\$23.52

Shure Adjustable Desk Sland Meichu can he adjusted from 13 to
18 inches. Weikhted buse has hole 18 inches. Weigited buse has hole chromiun finsthed rink. 6 inches diameter, ${ }^{8}$ inch who
 3E2876-List YOUR
PRICE
$\$ 10.00$
$\$ 5.88$

KELLOGG

## Hand Microphone


ting, reeord recording, and on pub-
lic address systems. Nlade by one
of the oldest and foremost hanufacturers of the frequenries between
spond well to 40 and 3000 cycles. 11 atrhes 200
 less than $21 / 2$ milliamperes arerage current. Plosphor bronze with
kold phated contact point diaphragm protected by tine mesh soreen. Caist metal handle, grounded through
 dinctor, 18 strand. $5 y^{\prime \prime}$ tine two cond. Standaril size phone tips, E'se with regular 200 ohm micrantione fuput lansformer for
sion of high quality.
302975 -Lisi Price, $\$ 8.50$. \$125

Telephone Type Desk Stands


Floor Stand
Rroad tripot base per nite speaking Huilt to furd service. Fill not tip over easily: Rigid seamless siteel standard adjustable froll $41 \%$ to 66 inches lieight. fish inch ring in dirome finlsh. Islack crystalline tin-
ish on siandard and base.
302996
$\$ 15.00$
*850

PIEZO ASTATIC
Crystal Microphone

## No No S2 You EA A S21 You EA A

No B
 weth in any mosbllon. Practically indestructible shone does not affect this unit. Frequency response is very uniform over the audible range.
lessonan

## re ol

 tield current or polarizing sittake ess to vikround noise present. G:ves a natural. performance of any other type noticeably surpasses Requires No Special Transformer High impedance output enables direct connectlon tier. Doers not reguire special type of life mathIng iransformer "hen used at a distance fromampulitior. Ordinary single button carbon mike transformer can be used. using secondary as bri-
mary conncetimi to mike and primary tor 200 ohm line output. Ounput ICvel is minus 60 Ib.IS. stage amplitier gives sufficient gain to obtain full
output. For maximum sensitivity four stages of Housed in should be used.
strong chromium
Housed in strong chromium plated case diameter, ${ }^{\prime \prime}$ thick. Microphone can be mounted
on size $1 /{ }^{\prime \prime}$ threaded phe or can be mounted in regular mimpophone ring liy means of four book
eyes furnisheq shlelded calle and instructions for use.

Stand Mounting Adapter

Ribbon Velocity Microphone Kit


An easy to assemble.
high quality directional micromione kit. Latest
design. Emploss a nueCial a luminum, alloy subpended from" thick. suspended from bakeltto
yokes, in an intenso magnetio fleld. The miligntest vibration of hetic ficld, is a us mas current to be induced in quency response, 30 to tional effect is a kreat nid in reducing feedback from speakers to. "miko". Isecruso the extremeis low fanjedine of the ribbon inspedance low to high a smedance coupling transformer must be emplosed betwern the microphone and amplifier. The Ribton-Velochty as the condenser tine mimophone necessituting u preamplitier of at least two stanes of resistance coupled triofe tubes. before coupiling to a standiard
 302970 - Improved mibbon Velocity aricromone YOUR PRICE $\qquad$ . $\mathbf{5} .88$ $302971-\mathrm{F}$
YOUR PRICE $\$ 11.76$
Special Ribbon Velocity Microphone
Transformers
$303940-\mathrm{Rmbh}$,
YOUR PRICE
303941 -
\$3.24
List I'riee $\$ 5.50$.
YOUR PRICE


## Bruno Velocity Microphone Housing

Houses above microphones together with ribbon to line or ribbon to grid trans. former. Made of loght. strong metal,
allifatorold black finish. Has threaded ME2972-List Price, $\$ 6.00$ YOUR
PRICE
$\$ 3.53$

## Stand Mounting Adapter

 Mapter for mounting Rruno Ribhon Wicrophone With ease onYE $2872-$
YOUR PRICE

## Amperite Ribbon Velocity MICROPHONE KIT



P
A
fav
m
A high grade ribbon microphone that compares models. Consfdered sumerior to carbon studio phones. No button cu
or other backaround noises. High fidelfty of tone
Is obtained as freudency resuonse is flit within
one 1).B. beiween 40 and 10,000 C.I $\mathrm{I}^{2}$. S . without problurtion of resonant beaks. Directional chareliminate feedhack. Undesirable outsicle nolses, are materially reduced. Onthut is -90 D.B. 'I'wo
stage preamnatier should the used to bring level ujp to a point where microphone can be used with arequge tublic address amplitier, Ribbon is of
specially treated aluminum alloy that is not if fected bs temperature or humidity. Housed in aeoustically correct, sturdy lowner and steel case
whidh provides complett, shlelding. shatehing transfurmers Ilsted belaw the in liase of mike rase,
 for mounting on stiand. Complete instructions with
diagram for two stage preamplifier are included

## New Model RAE RIbbon MIke

Similar in appearance and general characterlsties ramge and is therefore more sultalie for studio work. Completely assembled with 200 3E2860-List Price, $\mathbf{\$ 3 5 . 0 0}$. YOUR PRICE
$\mathbf{\$ 2 0 . 5 8}$
Ribbon Wicrophone Transformers Especially designed-high permeability transform ers to match the Amperite Superior Microphones Duc to small encrgy pickup, properly matrhed
int desifned transformers are fery necessary Thent transformers exactly dit are the base of mecessary, 3E2854-1kthon to Líne List Price, \$5.00.
 $\left.\begin{array}{l}3 E 2856-1, \text { ne to Grid } \\ 3 E 2857-\text { late to Line }\end{array}\right\} \quad$ S2?

Stand Mounting Adapter
Adapter for mountlig Amperite kithom micro-
3E2871 -
609
Amperite Superior Condenser Microphone Kit
that resonant point is fa
phragm comes mounte
against dust and climatic Fully enclosed. protected of parts whth instructions for assembly of mincrowelght. 4 Ibs.
3E2865-Kit Only. List, $\$ 8.00$. YOUR PRICE $\qquad$ $\$ 4.70$
 YOUR PRICE. $\$ 5.88$ 3 E2867-spee

YOUR PRICE.

## Universal Condenser Microphone

 With A.C. Operated Pre-Amplifier

3E2810
List $\$ 84.00$.
YOUR
$\$ 49.39$
Asssembled ready for use
fier usling a type 230 tubes. Flugs into 110 V A. C. $50-60$ evele socket. No hum or ripple.
quency response from 70 to 7.000 eveles. audio but lesel- 10 1). B. greater than from 2 carbon
mierophone and can be fed into sanie transformer mictophone and can be fed into samie transformer
or frout. Brown Criskie tinish, 25 ft . rubber

## Thordarson Line Matching

## Transformer

## Couples 500 Ohm

 Amplifier Output Line to Voice Coil of Dynamic Speaker Employs the Univer sal System of Ratio Matching of Impe304380 Permits use of from one to six speakers (use
ing a transformer at each speaker) at full colume.
or from two to 12 sjeakers (using a transformer each 2 sueakers) al halr bower. tisfactory these transformers provides tho only
 tributed polnts. In aiddition the diatribution of
power may he adjusted (fice diagram lelow) so as reduce feeltark diticulties.
Sinecillations: High inductanco primary: 7 tap Specillations: High inductance primary: 7 tad having impedance values between 2 and 16 ohms van tw balanced to the 500 ohm line with any combination of sueakerg- -1 to 6 at full volume-
2 to 12 at hatf volume. Transformer is $3^{\prime \prime}$ high: whe, $24 /{ }^{\prime \prime}$ deep. 15 watt working capaclty veak. Complete instructions included.

## Thordarson T612S Transformer

Universal Single Tube to 500 ohm Line Matches shove transformer in appearance. Has provjde for pousline any of the tollowing tubes to a, ohm line: $2,3,41,42,47,89,59,46,45$, 25 Watt pcak. Dlagrams Included 4361. List Price 53.00 R PRICE

## Thordarson T6126 Transformet

Universal Push Pull Tubes to 500 ohm Line center-tappel primary and five gecondars ratio taps to provide for coupling any of the following tuhes in sush-null to a 500 ohm line: 2.A5-41-42. 304362 . List Price $\$ 3.00$ YOUR PRICE
\$1.76
 Showing Line Matching Transformer Hook Up The ahove dlagram shows how to use the line matching transformer with two 8 ohm dynamio speakers operialing at half power close to a microfeedback. Hlagram also shows how to connect in the same clrcuit fwo 12 ohm dynamic speakers operating at full volume at distant points employing two adilitional transformers. Tajs permit matering es and prorlde for balancing sumber of speakers to a 500 ohm llne. Many other combinathons may be arranged to achieve distribution 0


Mixing and Line to Line Transformer

To be used in ennstruction mixing namels used for nubli address, eentralized radio, re Mounted In shielded case to pre vent hum pickup. Frequeney from 50 to 10.000 cycles.

| Btock <br> Number | Primary <br> Imped. Ohms | Secondary <br> Imped. ohms | List <br> Price | Your |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Price |  |  |  |  |

## Tube to Line Output Transformer

 For use particularly in matching output tube of microphone pre-amplifier to low impedance line. Two lead primary matches single tuhg sueh as 56 , prevent hum plekun. Frequency pharacterdstic es sentially ?lat from 50 to 10,000 eycles. 3E3859-To poup $3 E 3860$ Fo
## Microphone Transformers



Thordarson
Single llutton
For use from single button microphone to grid. Turn ratio 200 ohms: Primary impedance 100.000 ohms. resistance is 1.9 ohms. Second ohnis. Visperiatly designed for use with Universal Bahy. gira Mike. Mandi-Mike Model "A", or any other single button mifcrophone. High clase construction; completely sh
$\mathbf{3 C 4 3 4 5}$ Thordarson Type T-2357. $3 C 4345-T h o r d a r s o n$
List $\$ 3.00$, YOUR PRICE
$\$ 1.77$

## Double Hution

Double button from microphone to frid. Turn ratio is $1-22$. Frequency curre is excentionally thit from 30 to over 7000 cycles. Center tapted pri impedance is of the order of 200,000 ohms to match grid of nractically any amplifler Input tube Matches 1 mpedance of all standard type, carbon, button micruphones.
3C4346-Thordarson Tyue T-3020
List, $\$ 5.00$.
your price
$\$ 2.94$
Broadcast MicrophoneTransformer Thordarson Type T-3180
Double button mitcrophone to grid. Turn ratio is 1-27. Center tapfed arimars is 100 ohnis fimpedance overall. Secondary impedance is 3on,0no ohms to match srid of practically any amplifier input tube. One of the finest microphone transformers ever built. Precision made-real Thorlarson quality. Matches impedance of all standard carbon type 2 hutton microphones.
3C4347-List, $\$ 8.50$.

## YOUR PRICE

$\$ 5.00$
Used by many of leading broadcasting statlons. Primary and secondary wound in sectons to reduce distributed capacity, and insure p
between the halres of the windings.

## Radolek Double Button Microphone Transformer

 ratio 625 to 1 . Frequency rurve is exceptionally fat from 60 cycle to 5000 cycles. Primary Is split 200 olims each shile and the lecondary inipedance is of the order of 250,000 ohms at 60 cycles and 3 rolts A.C. Primary D.C. resisa. Secondary D.C. reaibtance is 6650 ohms. D.C. in mimary balances out. Primary inductance 2.02 henries secondary induction 498 henries. Matches impedance of all at and-
ard type, carbon, 3 button microphones. Fully ard type, carbon, in a hack enameled steel case. Inaulated color coded fige. $2 \mathrm{~g}^{\prime \prime}$ " deep. Mounting hole centert htgh
2 范"

## 3D3949-

YOUR PRICE
$\$ 1.19$

## Line to Tube Universal Input Transformers

Used for counling clircuit to an ampliffier inbut using practically directly coupling sirgle button carbon microulone, condenser or dynamic mhonograph pidk-ub. low impedance radio outbut, or other mos annce radio oulbit, or other plifier input. Mountei in shtelaed case to prevent hum pickup. Frequency characteristic essentally flat from 50 to $\mathbf{1 0 , 0 0 0}$


| Stock | Primary | Secondary | hisi. | Your |
| :--- | :--- | :--- | :--- | :--- |

 | 3E 3861 | 200 | or 50 | Sg1. 100.000 | $\$ 3.00$ | $\$ 1.75$ |
| :--- | :--- | :--- | :--- | ---: | ---: |
| $3 E 3862$ | 500 | or 125 | SR1. 1000000 | 4.00 | 2.35 |
| $3 E 3863$ | 500 | or 125 | P. P. 200.000 | 4.00 | 2.35 | 3E3864 200 . 400 . 600 $\quad$ Sgl. 100,000

## Ribbon Microphone Transformers

 Practically flat frequency response from 40 to10.000 C.P.S. Case fully shielded to prerent irimary exactly matches output of ribtion mi 3E3865-Secondary inipelance 200 or 50 ohms lor use welen mike is oneraled it a distance ${ }^{1} 10 \mathrm{~m}$ preamplifie
3E3866-Secondary impedance 100.000 ohms to 3E3B6G Sect when milcrophone operated withinh amplifier. List I'rice Each $\$ 3.00$.
\$1.76


Jefferson

## Single liution

Turn ratio 1 to 64 . Impedance ratio 1 to 4000. Windings completely shlelded in black enameled pressed steel housing. Isinding post rimbections, For 200 ohm ilngio high, $2 \% /{ }^{\prime \prime}$ wide. mounting holes
2\%/4 centers. $3 C 4290-$ 'nle YOUR PRICE

167-261.
$\qquad$
Double Button
 centers $2 \%^{\prime \prime}$.
3E427

## YOUR

## \$1.47

Jefferson Phonograph Pick-Up
Transformer


Designed for coupling lon mpedance phonorrash pick-up (on order of 700 ohms @ 1000 cycles) to grid of amplifles. Turn sletely thieided In hilack enameled prepued steel case. Binding post connectiont. Size 2 A " high, $21 / 2^{\prime \prime}$ wide. Mounting hole centers 2
$467-181$.
3C4292-Code
YOUR PRICE
\$1.18

## Microphone Input Transformers

A Ine quality microphone transformer. Proper desien and proter ratlo. The same monel extensirely used by $c$ manufacturers of
all size 2\%" hish, 1 \%/",
ricic, mounting holes $2 s_{H}$ " round mare. solder lue conFor use with stand
ard 200 ohin ber button microphones.
3C4220-For single button "Mike
YOUR PRICE
3C422I-Fo
YOUR PRICE
94c

## Three Contact Sockets and Plugs

3C2945-Plug with Porcelain Base
socket.
PER SET ..........................
\$0.
3C2844-Microphone
$\$ 1.47$


Microphone Plug
 $3 C 2947-L 1 s t$
YOUR PRICE

399


## Microphone Receptacle

## Receptable for three prong polarized

 micropitone mlug. Fits standard switeh box. lilate ts brown bakelite. size 3 C 948 No plug included. 3C2946-1.1st Price $\$ 2.00$. PRICE

Esibecially and jack for use with deuble button carhon microbsone Very hamdy for une fll construction of mizIng manels dut to empactness.
YOUR
PRICE
44c
3E2846-3 conductor jack only, List 50
YOUR
298


## SHURE Condenser Microphone

## Bullet Type with Pre-Amplifier

Condenser Mierophone. with Two Stace I're-amall enclosed in Bullet type case, 12 foot cable and suspension adapter
3E2878-List. $\$ 60.00$.
your price

## \$35롱

2
For U: In Broadeast Stud. los. Sound Recording 8tudios and Public Adtions. Free from hiss or other background noises which are prosent in carbon button microphones. Frequency response is exceptionally good from 3it to 10.000 ryeles. Sensitivity is such that distant sounds whirh do not affert other type of microphones can the bliked ut with ease. Output lecel of Ire-amilitier aime that of carbon mike. Sensitirtty and frequency response remains constant over wide variation of atmospherte conditions. Conthser heal is on swivel wheh allows su degree desired. Hook is provided for overhead suspension. Threaded base allows mounting on sny Shure mi crophone stand listed on page 107.
Current regurements of at $60 \mathrm{Ma}: 180 \mathrm{~V}$ at 3 Ma. which can be supplied from noirer supply listed on page 107. Head is finished in chromium plate and suspented from baked ruiber black the ished case. Head $3^{\prime \prime \prime}$ dia.. case $3 y^{\prime \prime \prime}$ dia.
Overall height $117_{8}^{\prime \prime \prime}$. shipilng weight $6 \%$
Out Output impedance $200^{\circ}$ or 50 ohms. Dlease suectify which is desized.

## Microphone Springs

IIfitifuman - Loop ents. Tempered spring steel. prevent rusting.

Pregrooved Aluminum Discs
For Home Recording
Unitersal pregroored. aluminutn dises assure a greater volume. brlllianey and durability. Dises are mitting recording on inth sides. Arailable in four sizes- $6 \mathrm{in} .8 \mathrm{in} ., 10 \mathrm{in}$. and 12 in . diameter. Records may be made with ordinary blunt home-recording necdle and play back with wood or fibre needles.

| Stork |  | List | Your |
| :---: | :---: | :---: | :---: |
| Number | Size | Prise | Price |
| $3 \mathrm{C2862}$ | 6 in. | $\mathbf{8 0 . 3 0}$ | 18 c |
| 3 C 2863 | 8 in. | . 50 | 30 c |
| 3 C 2864 | 10 ln | 75 | 44 c |
| 3E286 t | 12 in. | 1.00 | 59 c |

## Blank Aluminum Discs

## No gronves. Can only be use heads that cut thelr own groores.




A Prartical Recording Derice for Recording Favorite Radio l'rograms. Musical accompaniments. Home Morie Sound Fif fert. Transcription l'rograms. Adecrising Talks, Campaign sueerhes. etc.
It must he used in conjunction whth a milcrophone and amplifier. Recrut is made on a specially prepared dise revolved by any ordinary phonograph motor, and can be replayed on any standard phonopraph.

## Easy to Install and Operate

One single $\% / 8^{\prime \prime}$ hole is all that is necessary to mount it in recording. it is onty necessary to move the arm to the center of the record and throw the litting lever to the down position. This starts the recording which evenly grooves the record. 96 grooves per inch are rut which allows as long a playing time as standard thonograph records. The recorder may the operated at either i8 or $331 / \mathrm{k}$ R.1.M.
Recorder makes records that are outstanding in quality and are comparable to standard transeription records. Records are best resilts frem barkground mise and needle wratch. For listud use Nur stock number 14010660 amplitic

## enser Microphone.

## Input Control and Mixer

## For P. A. Amplifiers <br> Handies Microphone, Phonograph and Radio Inputs

A complete microphone, phonograph and radio, miser and fader. in a neat, fully enclosed and shielded impressile appearing black enameled metal case. For
coupling any portion of mimephone. phonokraph or radio signals to any I'ublic Address Amplitler using a miph imbedance finput. Contains: (1) double bution mirrophone transformer: ( 2 ) $41 / 2$ volt mierophone batrangement to indleate current on earl buton of microphone; (t) mierowhote current control: (5) mirronhone-radio-solumer and inixer control; (G) phonopraph or radio-volu for shiming and mixer control', (i) quick change
 Radio or phono sifnal may be smoothly mixed or faded into mifrophone sighal by promer easy handfing of the molume controls, ferfert fading from full whme to zero on mlerophone while fading simultaneousls from zero to full
rolume on phono or radio cath he accomplished tolume on bhono or radio cath he accomplishod. Mising of the macrophone injuu: using roire into a musical barkground
from phonograph or radio can also be accumplishat at ans from phonograph or radio can also be accomplished at any may be substituted for one or two single button mirrophones may be substituted for the double button micrombone. thus nermitting two separate single button microbhones to be operated from two different polnts, as in diebate work or for soloist with orchestra at a distance.
praperly designed component warts make this the use of frelent unit. liesi quality of make this a highly ofnossible unit. belume, from inality of renroduction whith greatest ossible rolume. from injut signats available, are assured. provided. If a shatictided microphone pable is aling effect is to rase, any transient currents that may is alsa prounded to rase, any transicht currents that may be pirked uby by a
long microphone cable can be eliminated. Case size $8 \times 10 \times 3$ inches. All conncet lons and controls plainly marked. Mount-

## Duralumin Diaphragms

For replacement in any make, stretched diaphragm type microphone. 24 karat cathode sputtered pure rold stiot renter on each side. 0018 thick. Heat treated, No harmonic distortion. Size $\&$ inches $3 \mathrm{C2933}$ - trimmed to fit. YOUR PRICE
$\$ 1.50$
3C2934-001 Diralumin Diaphragm. Without Kolit sinots. Size $4 \times 4^{\prime \prime}$ for condenser nin your Price

506

## Gold Spotted Buttons

Far replacement in any make microphone. Pure 24 karat gold spotted. Standard size \% inch diam eler. Fitted with "fse screws.
YOUR PRICE
$60 ¢$

## Carbon Granules


rent without burning. Visl contains sumfient granules to
microphones.
$302930-$ Size No. 100. Highor sensitivity anit higher backaround noise. Provides beat quality reproduction but packa quite aanly.
3 D293 I-8izo No. 80. Best Reners! purpose granules. Lower hiss, good quality reproduction and does not pack easily.
302932-Slze No. 60. Best for sound trucks and hard usage. Low hiss, more freedom from packing fair guality reproduction.
Lit price Per lial $\$ 1.00$.
YOUR PRICE
589

## Universal Recording Lead Screws For ${ }_{\text {RPM }}^{33}$ Records ${ }^{78}$ or <br> 

Exact, accurately machined lead screw. Used with recordtng needled piekub and diamond or sapphir spaces 80 lines ner inch. Only ons hote required for mountims. Comblete with cuide, shoe and out hasd hearing. For 10 or 12 inch records. Records Irom outside to inside.
3E2836-List Price, $\$ 10.00$.
3E2837 For 16 inch $Y$ Y00 3E2837-For 16 inch Records. Records 100 lines wer Inch Cuts from inside to outside. YOUR PRICE
$\$ 8.82$

## Recording Needles

Genuine sapohire points. For use with above Recorder.
3E2894-For cutting and recording on ungroored aluminum record blanks.
\$2.06
3E2895-For recording and reproducing on pre trooved Victor or celluloid recording dises. YOUR
PRICE
3E2896celluloid blatiks.
unaterete
YOUR PRICE
3 E2897-Fibre needles for playback of
and all other records.
YOUR PRICE Per Pkge, of 100
59 c

# RACON HORNS and UNITS 



14D10225-Reaular: Eaulpocd with motal
 Indour use on
List, $\$ 22.00$.
YOUR PRICE $\qquad$ \$12.94
14D10226-DeLuxe: Equipped
with metal
 Weight. 7 lbs.
YOUR PRICE $\qquad$ \$16.15
14D10227-Stormproof: liquipped with metal beaded edge, metal terrule and suspension ring Guaranteed for one year. For outd
List, $\$ 44.00$.
YOUR PRICE
\$25.88


Dynamic Baffles
Combination baftle and exponential air column for dynamic speakers. Increases volume and Improves tone. Made in tour stzes; all arail able for any sizo dynamic speaker. In ordering state diameter of speaker. Bell
size,
Inches
Depth,
inches
Prico


## Dynamic Baffle for Cone Unit

Correct acoustical de-
slign for use with cono
 Histed below. Projects
sound over ireater distances than conventionin type of baffie. Gives
area equivalent to 10 effectire baffle lenroduces low frequencles down to 58 cycles nerfectly. Horn
inches owerall length ineluding box 2.4 diameter 22 inches oreran length incher box Regular: For indoor installations or for temporary use out of doors.
I4EIO712-List Price, \$13.50.
YOUR PRICE $\qquad$ $\$ 7.94$ Stormproof
Installation.
14E10713-List Price, $\$ 18.00$.
YOUR PRICE
\$10.58
Hote: We supply any type Racon Horn at disyour order for any horn not listed.

Public Address Cone Unit For Use With Above Trumpet


## 6" Cone Diameter

Has the power handiling capacity of the dynamic
unlt yet retalns the full rich tone of a cone speaker. Adapted for use in installation where sound must be trans${ }^{\text {sound }}$ mitid ored a great dlstance. Oversize field coll and correct spacing of voice coil with reference to field make this unit excentionally sensitive giving a high ratio of acoustic
outnut to elcetrical input. Cone is made of an output to elcetrical input. Cone is made of an
especially tough yaper that will handle enormous especially toukh paper that will handic enormans
volume without breaking down. Extremely flexihlo splder allows full movement of cone yet keeps it sperfectly rentered at all thes. Will handle 15
 $64_{4}$ impedance by $53_{4} /{ }^{6}$ deep. Shipping welght. 10 lbs . 14 EIO716-With 1000 ohm field disstpating 10 watts in field. Can obtain field supply from Radolek 6, 15 or 30 watt A.C. Ampliters.
14E10717-For 6-8 Volt fleld exeitation for use with Radolek Battery Amplifier. Draws $1 / /$ amperes at 6 volts.
Llst Price Fach. \$25.00.
YOUR PRICE, EACH
\$11.85

Electro-Dynamic Horn Units
For Use on Trumpets or Theatre

## Super-Giant

Type B Diaphragm 1000 ohm field for 110 V . D.C. excltation. 15 ohm roice coll
impedance at 1,000 cycles. Continuous oberating capacity 25 watts. Peak load capacity
50 wat s . Particulurly a 50 watis Particularly a-
dapted for theatre and auditorium use where the finest
 $14010235-L i s t$ l'rice, $\$ 66.00$. YOUR PRICE


## Master

1000 ohm field for 110 V . D.C. excltation. 15 ohm voice coil impedance at 1.000 eycles. Continuous operating capacity 20 watts. Peak load caparity 50 watts. Lightwelght hi-rowered unlt especlally sutable for portable ysedis and permanent instalpurfeet reproducer. Wethht $131 / 2$ younds.


## Junior

1000 ohm field for 110 V. D.C. excitation. 15 ohm voice coll 1 im -
1,000 cycles. Continbedance at 1.000 cycles. Contin-
hous operating capactes. 15 to 20 vatts. P'eak load capacity, 50 Watts. Weight 11 pounds. 4DiO238-List Price, \$35.75.
YOUR
PRICE

$$
\$ 21.00
$$



Type A 1000 ohm tield for 110 V. D.C. Baby Unit
 pedance t 15 ohinn voice coli imtinuous operating capacity 5 watts. Peak load capacity 18 watts. Weight $6 \frac{1}{4}$ pounds.
4010239 -List Price, $\mathbf{\$ 2 4 . 7 5 .}$ YDUR
\$14.55

## High Frequency Tweeter

 Built to meet iho or wide rance requrs roduetion. Covers 3000 to 10.000 cycles. When uscd in conjunction wlth dynamic sueaker giving poodlow frequency responso
high fidelity reproduction is ontalned over the entire audio band. Fleld resistance 1000 ohms for 110 volt D.C. operation. Volce coll Impedance 15 ohms and will handle ${ }^{5}$ watts continuously with ${ }^{7}$
watts peak. Size $6=3 / 4$ long overall. Horn bell ${ }^{3 \prime}$ "E dia7 14 -List Price. $\mathbf{\$ 2 7 . 5 0 .}$ YOUR PRICE $\qquad$ \$16.17
Two Path Filter Network For coupling abore speaker and low trequency dynamic speaker to 500 ohm output of amplifice. Ono path cuts off sharply at 3000 fycles for low fre-
quencles. The other path is from 3000 eycles up 4EIOTI5-List I'rice, $\$ 20.00$.
YOUR PRICE ...................... $\mathbf{\$ 1 . 7 6}$

All of the above horn units can obtain field supply direct from the Radolek 6. 15 or 30 watt A.C. Amplifiers. 6 volt fields for obtaining field current from storage battery can be supplied at no
extra cost.
Specify fleld desired when ordering.

Magnetic Speaker Chassis
$83 /{ }^{\prime \prime}$ Diameter
4D10450
YOUR
PRIGE ......
The unit is of the balanced armature type and is mannclleally and mechanically centered.
stand 0.7 watt power
ideal ssieaker for original
Installation in battery set
or for use ${ }^{38}$ a ${ }^{2}$
sets using dynamic speak-

for usc in public address systetns in schools and thotels or for call systrms. Makes an ideal marnetic unit to use in the walnut cabinet shown on page 41. Perforated rigid steel frame with quality wheles in outer diameter. Exceltat wo speaker winding 1000 ohms. Diameter $83 \% "$. Depth $43 \%$. No cord facluded

Outdoor Speaker Housing
Weatherproof Spun Copper
 housing on the market for any outdoor use, as in parks, skating rinks, dance pariltons, bee gardens, and "over the sldewalk" store aver
ising. Spectal oiled Masonite l'resswood hafle with comper mesh "hug" screen over speakel opening. Arranged with spectal quick mounting slots for "locking" speaker into place. Weathernroot rent hole at top of housing for speaker leads and air clrculation. No "poom" or resonan distortion. Four rigld eyelets for use with wir suspension. Eftectlve baffle area equal to 30 squar Inclues. Operates best when used 12 to $^{15}{ }^{15}$ fee diameter $11^{\prime \prime}$ tapering to $8^{\prime \prime}$. Height overall, $71 / 2^{\prime \prime}$

## 25 W att Electrodynamic Unit

unit design which em-
bodies the most ralu-
able characteristics of
flat and cone shaped
diaphragms. Extraor-
dinary flat response over the entire range of speech and musical
frequencles.
Quality is unusually natural a $n$
brilliant. diaphragrin of

special light alloy is
shaped to forth ins own eore for the voice coll Voice coll and diaphragm located for maximur sensituvity end assembled as an integral unit A. C. at 2 ainps. Foice coll inpedance-1 ohms. Field requires 1.5 ampa at 6.8 volts
Powerful-exceptionally high Transformation. P'recisety built. Pot has durab Transformation. Precisely built. Pot has durab baked crackle finisth. Outer pole face plate bright
ly chronium plated. Wt. 15 lbs. $14010240-$ Without Coupling
List $\$ 49.25$.
\$29.55
6 Foot Aluminum Trumpe Single or Double Throat

30 in. Bell

Detnountable into tour section With felt washers hotweet throat, sturdy clamping edges an re-inforced 30 " hell rim. Proper aconstic desig co reproduce the qull wide range respense. Brl $14010219-x i n g l e$ Throat Horn for one Unt Llst. l'rice, $\$ 55.00$.
your price
$\$ 29.4$
14010220-Woulle Throat Ilorn for Two UnIt:
List Price $\mathbf{Y 6 5 . 0 0}$
\$38.2:

## Victor and Columbia Double Faced Records

Electrically Cut
Many Popular Current Recordings 4E 10736 -Assortment of 25 records.
YOUR
PRICE
\$2,55
Sold only in assortments records are genuine victor and Columbia prod-
factory rejects are in lactory rejects are in ings by famous Columbia and Vietor artists. For-
trots, Waltzes, Vocals,
Trots, Waitzes, Mands, Murches
Tankoes. Banderan. Ted
Weems, Na t Shilikret. Victor Salon Orchestr: Gcorge Olsen. Jesse Crawford, Gene Austin. Fatn
Brlec. Duke illinkton. and others too numerot to mention. We ship these records to you in th will not be possible for us to state at any tin cxactly what numbers are included In each assor
Use for Public Address Applications Ithough these records are not last minute rit leases there will be many eurrent popular number natic phonograph service

# Jensen Electro Dynamic New Auditorium Speakers 

Baffle Opening 12"-Cone Size Overall 13喜"


These fine reproducers are $400 \%$ more efficient than conventional types. Adulng one of thent to an amplifying system is the equivaler.t of
 $845^{\prime}$ 's In the place of 50 's. They qrovide the
most economical means of greatly |ncreasing the power output of the system without adding to the cost of the amplifier itself. Capable of carrying 15 watts, continuously, peak loand with nerfect fidelity at ans velume Revel. Voice Coll Lmmedance 8 ohms or 200 ship. Wt sycles. Diam. of roice coil 218
watts:C. models Power dissibation of fieid


Three Exactly Engineered Models
$\begin{array}{ll}\text { Series } M \text { designed for general use. } & \text { Series } L \text { used mainly in conjurction }\end{array}$ Unform response characteristic from "ith . Tweeter speaker for "wide 30 cycles upl. Particularly recom-
nended where the reoroduction music is the chlef reaproduction of

Series $V$ intended chlefly for Voice reproduction thost efficient in the upper frequencies and somewhat less
efficlent in the low frequencies. Very desirable for theatre and public address systems.
or field excita
"D.C." Type,-For field exc
tion from 6 volt battery.
8 ohin Volee Coll $\mid 200$ ohm Volce Coil

| Number | Series | Number |
| :--- | :--- | :--- |

14E10300
V

14 E10303
$14 E 10302$
Less output
List. $\$ 48.50$
YOUR PRICE
$\$ 33.27$
"A.C." Type

Field exitation tron rectlfied 105-120 unit with type 82 tube Included. 8 ohm Voice Coll|200 ohm Volce Coll | Number |
| :--- |
| $14 E 10306$ |
| 14 E10307 | $14 E 10307$

$14 E 10308$

$|$| Scries |
| :---: |
| V |
| M |
| L |

I.ess output $t$
L/st. $\$ 73.50$.
Y YOUR PRICE
$\$ 50.43$
$\substack{14 E 1010308 \\ 141030}$
50.43 range" sound reproduction. liest et fichency in the lower renumenes and
somewhat less cffletent in the higher somewhat
frequeneles.
All types avallable for use with any output tuhe combination or any lime Thnedance-Be sure to specity tubes
used and how they are connected, when used and
ordering.
"D.C." Type-For field exeitation from Ampllfer. Suphled with 3.000 olmm resistance field-the eorrect re-
sistance for Hadolek 15 and 30 watt A.C. Anpliflers. Other ileld resis-
tances can lie supblied to your spepiflations. No imut transformers included.

| 8 ohm Volce Coll |  | \|20, ohn Volce Coll |
| :---: | :---: | :---: |
| Number | Sertes | Number |
| $14 \mathrm{E10312}$ | v | 14 E 10315 |
| $14 E 10313$ $14 E 10314$ | M | 14E10316 |

Less outsut transfor
List irtce. $\$ 48.50$.
$\$ 3327$
YOUR PRICE
Output Transformer
Output transformer to match 3 ohm voice coll speakers listed.
4EIO318-List Price, $\$ 3.00$. YOUR PRICE

5176

"D.C." Types
For field excitation from Amplifier. Supplied with 1500 ohm resistance
field-the correct realstance for Rindolek field-the correct resistance for Rindolek
15 and 30 watt A.C. Amplifiers. Other field resistances can be supplled to your specifications. No in-
put transformers included.

| Number | Series | Number |
| :---: | :---: | :---: |
| $14 \mathrm{E10320}$ | V | 3 |
| 14 F10321 | M | $14 E 10324$ |
| $14 \mathrm{E1} 0322$ | L |  |

Less outnut transform
I.st
Price.
$\$ 34.50$.
YOUR PRICE
\$23.67
For field excitation from 6 volt battery. 8 ohm Volre Coll 200 ohm Volce Coll Number
$14 E 10326$
$14 E 10327$
Less output transformer
List 1'rlce. \$34.50.
YOUR PRICE
-Dynamic Series
The Speaker without Transient
Distortion- $25 \%$ More Efficient

## tortion-25\% More Efficic

An excentionally fine reproducer for elther publio address or radio uses. Ressonse curve unusually continuously averake. Nitnimum 12 walts. Voice coil diameter 2 ". Voice Coll Hupedance 8 olms or 200 onection at cun he used with amplifiers haring 200 ohm nutput tap when speaker is located at a distance of over 50 feet froms amblifier. No internediate transfomer is nccessars. Ship. Wt..
A.C. Mode! 34 Hh.. D.C. Models 27 His.. Cone diameter $12^{\prime \prime}$. Overall helight $12 \% /^{\prime \prime}$, devith $7 \%^{\prime \prime}$

## "A.C." Type

Field exctation from rectitied 105-10n volt 60 cyele A.C. nover supply. Rectither

| $\bar{x}$ ohm Voice Coll $\mid 200$ ohm Volee Crill |
| :---: | | Stork | stork |  |
| :--- | :--- | :--- |
| Number | Scries | Number |


| $14 E 10332$ | V | $14 E 10335$ |
| :--- | :--- | :--- |
| 14 E 10333 | M | $14 E 10336$ |


Available for use with any output tube combination or line impedance. Be sure to specify tubes used and how they are connected when ordering.
Input Transtormanformer mput Transformer to match 8 ohm 4 mice on sur eikers listed.
YOUR PRICE
$\$ 1.37$
Three Series list respond to those described aliovo cor der the New Auditorlum Model.

These models have a pleasing dept and brilliance of tene which is only rosithe because of the intense mag. nelde.
nelder
Folec coil handles 15 wats coninuousty with 8 watt peak. Voice have 15 watts fut hest oneration.
$121 / 2^{\prime \prime}$ Concert -11elght $12 \%{ }^{\prime \prime}$ denth
Concert-Ireight 14"
 Prices D. C. Types
For field excitation from ampllfier. Concert Models supplied with 1500 ohm resistance fleld. Juntor Models supwhed with 1000 ohm resistanco slelil. Other fleld resistances ean he sunplied to your speciticatlons. No outsut transformers included. Stock

| stock <br> Number | Model | $\begin{aligned} & \text { List } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Yous } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| $14 \mathrm{E10630}$ | 1235* Coneert |  | \$8.50 |
| $14 E 10631$ | $12{ }^{1}{ }^{\circ}$ Junjor |  | 5.85 |
| 14 E 10632 | 14* Concert |  | 9.85 |
| 14E10633 | 14* Junior |  | 6.95 |

Output Transformer Output transtormer to mintch volce coil of A.C. or i,C. Oxford sweakers to impedance. Be sure to sfecify tubes 4EIO645—IIst, $\$ 2.00$. GE YOUR PRICE

ROLA Permanent Magnet


Model PM6
Volce coll imbedance ohms, nower handling capactty 5 watts continuous. proserts $3 / 8$ in. from edge of cone Brerall depth 3 in in baffle hole
 should be $63 / 4$ in. diam. shimin
welght, 11 llos. Less transformer.
$\qquad$
\$5.75



## Jensen Concert Model D9 Speaker


whericulariy designed for Public Address use where a large amount of power output mus tion of both voice and music. New one piece
to mality reproduc. cone with special resillent mew one piece maintains the roice resillent micara spicter regardless of expansion or eontraction of To diopliragn with temperature champes Foice coll limpedance 8 ohms. Exceptionally mounted on fequens response especially when toils can be connected direct to output bolce former of anmbitior and tratisformer of amplitier when used not over fifty it is advisable to use 500 Obm line mate ing transformer $\mathbf{3 E 4} \mathbf{3 6 0}$ - listed on mage to lifier. outwut tap on

## Junior Auditorium

Siame construction as Concert Sleaker. but uses a smaller fledd and is therecert model. Recommanded tor installabe usel to divide nower from are to fier. Volce coil handies 10 watis concoil dissipate 10 watts for best operation Sizes
$8^{\prime \prime} 12^{\prime \prime}$ Junior-llelkht $12 \frac{3^{\prime \prime}}{}$ depth $8^{\prime \prime}$ haffle opening il", net welght.
$93 \%$ lbs. Shlpping wetgit. 13 lbs. 14" Junior-lipight $14^{\prime \prime}$. denth $9^{\prime \prime}$
lus. Shimplng weight. 14 lbs.
Prices D. C. Types

For field excitation from 6 volt battory. | Suek |  |  |  |
| :--- | :--- | :--- | :--- |
| Number | Morlel | $\begin{array}{c}\text { I'lst } \\ \text { Your }\end{array}$ | Price |

| 14 E 10635 | 12 5 \% Concert | 58.50 |  |
| :---: | :---: | :---: | :---: |
| $14 E 10636$ | 12.2 Junior | 5.85 |  |
| 14E10637 | 14* Concert | 9.85 |  |
| 14E10638 | 14* Junior |  | 6.95 |
| Prices A. C. Types |  |  |  |
| Field excitation from rectified 105.120 volt 60 cyc!e A.C. power supply. Ree- |  |  |  |
|  |  |  |  |
| tlfer unlt with type 80 tube. Included. |  |  |  |
| Stuck Number | Model | $\begin{aligned} & \text { Ifist } \\ & \text { Price } \end{aligned}$ |  |
|  |  |  | Your Price |
| 14E10640 | 121** Comeert |  |  |
| 14 E 10641 | 12, ${ }^{\text {a }}$, Comiort |  | \$13.05 |
| 14 E 10642 | 14" Concert |  | 15.75 |
| $14 \mathrm{E1064} 3$ | $14^{*}$ Juntor |  | 12.85 |

## Dynamic Speaker

Requires no field current. Especially designed it is impractical to address installations where coil. Sensitlcity and pione fidelits the feid arable to that of the tinest clynanic spoakers ital parts shielded akainst the cntrance oi netalic particlas and dust. An entiroly new construction of the magnetic core gives greatls bandllar flux density and greater fowe. is used throumhout. Connections can be mado direct to voice coll or if used on boo ohma lne use matching transformers listed on baga

## Model PM8

Voice coil impedanee 2 ohns. power Jan Orerall cone diam. 83 th. Mrand

Foice coil dia, $1^{\prime \prime}$, impedance $9.4^{\prime}$ thon for best operation. size $115 /{ }^{\prime \prime}$
 Field coil necessitates is watts mini welght. $9 \frac{3}{2}$ lbs. No outbut iransforme num and lo Watts maximum disslma - included. $111 / 2$ Inches
Cone Size 112

| Stock <br> Number | Fielel <br> Fxeltation | rifold <br> Ohms | I.Ast <br> 1riee | $\begin{aligned} & \text { Your } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 14 E 10340 | From Amılitler | 500 | 514.75 |  |
| 14E10341 | From Amplitler | 1000 | 14.75 |  |
| 14 E10342 | (f) 5, Battery | , | 14.75 |  |
| $14 E 10343$ | Keetinerl A. C. | 1000 | 29.25 | 519.95 |
| 4E10344 Output Transformers for Motel D9 Sueais ers. Ise sure to suecify nower tulies used. |  |  |  |  |
| List Price. 75 c . YOUR PRICE |  |  |  |  |

## OXFORD AUDITORIUM <br> Super Dynamic Speakers



Easy to Assemble and Wire Point to Point wiring, color coded Re sistors, plainly marked Condensers and a convenient roomy chassis to work in

## Educational—Profitab/e

## Building an amplifier. Testing 1 twith your own

 oice, adding the little tourhes that distinguish eus om-built produrts, proudly showing it to your somers,-it the most rascinating experience in Following the design as you solder each wire in place, you see the reason for its position. the part bout an amplifier by building one than all the Make a Triple Profit: On every Madolek P. systen you buld, you protit by your thark un on abor, the resale of the parts at list priee and the sale of accessorics Whith shmmar low prices ith anole margin for pront and at the eiler the permit you to bid competitively for ambliller bus
## Big Market For P. A.

Build Radolek P.A. Amplifiers in your spare time. Turn out these sine protessional ap. pearlng amplifiers and add $\$ 20$ to $\$ 50$ a week to entertalnment, ball-parks, races, polititul gathernigs, schonls and huredes need public atdite am Mithers. Are you ready to suply their needs? their own services for exers big kathering. You Fames, the Intercsting sports events, at all the ig banquets when sou rent sour itadolek Custon built i', A. system and personally owerate it


## Every Part You Need

Plus a generous supply of hardware and wire. You need only a screw driver, pliers and soldering iron to build these hits

## 6 Watt Battery Amplifier Kit

For 6 Volt Battery operation with l'lenty of output for sound trucks. For bucation where commereial boker tubes. Two or three 6 roll field speakers are recomnended
Input to the 6 watl battery onerated amplither is of the high lmbediare one the walt amplifiers. Finuloys 1-39. 1-37, and 2-12 tulzes. Reoulres Complete technical details of this unit is given on page 120 . kit is 14 EIO694-Complen



Push-Pull2A3-15Watt A. C. Power Amplifier

For 115 Volt, 60 Cycle A.C. This powerful amolifier, capable oi delivering 15 watts of audio power the most pomalar type kilitakers tal offers. it is eass to assomble and smonth in opreration. Independant of is ilter circuit. it sumpies . 0 watts Completely described on page lly an assembled unit Klis contann esery part for fle amplitler prober-sneakert mirond be selected alsershere in thas caltiluz lentuires 1-55. 1-56, 1-5 K3, and 14EIO697-Comple YOUR PRICE ......\$24.50 |4EIO698-Comple nitelhed ltastheun
Tubes. Your Price . $\$ 28.90$


15 Watt Battery Kit
For your sound truck! A powerful ampliffer klt for use wilh a Genemotor "13" supply and 6 volt storage battery. Fxcellent for all mobile instadiations where rephar A.A.
sump is not avallable. Amplifier requires 1-39, 1-37 and 2-2A3 tuhes. 72 1).B, gain. 15 watts output. For complete ternnical amplifier in finished tested form is listed. Fit includes amplitier essentials only
I4EIO696-List l'rice, $\$ 32.50$. Amplifler YOUR
PRICE
$\$ 16.50$
14E10691-Tomplete k゙ル lart Rattery Amplifier with Four Matched Rastheon YOUR PRICE
\$20.10


Schematic 15 Watt Battery Amplifier

FEATURES of Radolek P. A. Amplifier Kits Heays steel chassis base. drilled to exactly fit each - sinooth tone and volume control on each amplitler. - liest ruality filter condensers and bower transtormers. ocersize rhoke indurtances. tuency range of any similar type amplifiel - lowest hum level of ans conmervial type power am Complies with all tire and underwriters reduirements. Fitched metal fidicating plates for the volume, and imple provision for sentilatien
Simmlitied circuit for external comections
Complete plans with values of all parts supplited. Matched parts, designed to work together with the bach kit supplifed complete with every item just as if

## 5 Watt 2B6 Amplifier Kit

 For 115 Volt 60 Cycle A.C. Complete Klt less tuhes anl$\mathbf{1 4 E I O 6 9 2}$ List, $\$ 24.40$. YOUR PRICE $\qquad$ \$8.95
I $14 E / 0693-1, i s 1$. $\$ 35.25$. Matched meake? YOUR PRICE
s33.25
\$13.80 More than twice the power and volume of radlo receivers using push-pull 45 tubes! You must hear this amplitier to appreciate its amaking performanre. Sou must huide it yourself to ret the real thrill out of using it. When youl sell it. Yout
make the regular manufacturer's profit along with Centertapped transformer for singe or double but con microphone mounted on dedk of chassis. Com plete technical detalls of the flnished amplifier Any four to six watt, 2.500 ohm field dynamic speaker with a 2136 matching transformer Is sultable for thls amolifier. For operating several magnetle speakers on a 500 ohm line, we recon-


Parallel P. P. 30 Watt 2A3 Kit
The Biggest and Best Amplifier Kit you can build! See Page 119 for echnica dotalls of assembled anmbinme all values given and with commlete instrue for huidding. Requires 1-57. 1..j8, $1-523$ and $4-2.13$ tubes. For 115 V. 60 Cycles 10

$\qquad$



# Highest Efficiency at Lowest Cost 

- Two Stages
- Push Pull 2A5'S
- Improved Class "A"
- Tone Control
- Five Out-Put Taps
- Master Volume Control
- 10 Watt Speaker Field Supply


## Finest Quality At Low Cost

Ths amplitier is very similar in deanosite paige. Quality of refrrotuction is In every way eccual to the 15 watt
the blg dilterence thelng in outisut capactity. fier will cover indoor audiences of fith people or aliout 3000 square feet out loors. These higures are coniservativ and are based on tests made with
high noice liack grounds. Vinder ordinars holse conditions abuit twire this cover age can be exnected. Amplliler will
operate
one
sinkle Whatiser or two or three smillier ones. or one dynainic horn unit: or 12 maknetic speakers; or 100 headphones: or any pioportionate cumbination of them. can be placed in front of the audience or three dynamic speakers can bic placed back 10 hack in the center of auchence. to giv.
butlon of sound.

## Carrying Case

For 15 Watt Amplifier

$14 E 10673$ \$12.50. our price $\$ 5.75$
Hosids amplifie with or with out shleld be bolted bermanently to bo room for carrying control unit am microphene th addition to anmpiner bly-wood construction. Mandsome


## Amplifier Characteristics

1.-W Watts undistorted Power Gut- out to bakelite strip with valies en out to soeaker voice coils:-2 - Sidp graved at earh binding post ;-10.-1. plles 10 watts for thousand ohm feld rolts fuput slanal recuired to obtain coils (enough for one large synamic with 1000 ohm fielt or two sinaller ones In barallel with 2,000 ohn thelds) :-3, $\rightarrow$ Two Stages with sour tubes, $1-$ "56 transformer coupled to
 fier:-4.-60 D. B. Gain at 1000 cy-cles:-5.-Practically Flat Frequ:ncy Characteristic Curve within 3 D. IS. from 50 to 8.000 cycles:-6.-1aput
impedance 200.000 ohms:-7.-Master impedance 200.000 ohins:-7.-Master Volume Control with etched metal indicating plate:-8.-Combined Tune Control and On-off Suitch:-9.-Dut out Impedance Tapped at 3, 6, 9, 15

For Microphone or Phonograph Amplification
Phono-pickup. of high impledance type. dias be cinmectert divertly to ammpiter Input. When using microph ne ht is stork number 4 E10700 descriled on iransformer. Control unit can nlso be used for mixing or
graph with milerothone.

Master Volume Contral
 buned. is mounted on amplificer classis. Beautifully et died control blatea are
nownted under both volume control momnted under both rellume control
maximum outbut:- 11 .-Hum level less than 10 milliwatts (almost below the audibility point):-12.-1'ower (fonumption $0 x$ watts:-13.-1'ower Subply reduired $105-120$ rolts, $50-6013 \mathrm{cle}$ a nection cord with suber serrice connection cord with untreakibic Fuse in power sunply:-16. Thottoin protecting plate with four rulber feet cntirely encloses ba, es:-17.-Ample prorision for rentilstion:-is.-Rich Baked-On Black Enameled finish:-19 -Orerall height $\mathrm{i}^{\prime \prime}$; Base width $9^{\prime \prime}$, wt., 20 lbs., shib. ut. 35 l'zs.

## For Recording

xtreniely low hum Ievel and stratgh me tidelity characteristics nake this amplifier particularly destrable for recording Programs, sound e.fects for Broadrasting jurposes. home talkies Fink talks, bilitical sueches blance of equifment used is of good quality

Heavy Duty Chokes
are built into amolifer. D.C. dyname speaker field colls are not a part of the filter system in this amplifier. "external chokes or resistors are
reculuted.

## Prices

14E10660-Factory wired, laboraList l'rice. $\$ 45.00$

## \$2150

## 14E10661-With four Raytheon

 matched Tubes. 1-'56: 2-2 $15 \cdot \mathrm{~s}: 1-80$ List l'rice. $\$ 50.00$. YOUR PRICE${ }^{\mathbf{s} 24}{ }^{\circ}$
For instalation in recording studios, clubrooms. stall gudtoriums. smatl call systems. lodge halls. De luse phonograph Installations, school rooms.

Layout and schematic diagrams olving all essential speciA.

## Carefully Designed

 Highest entitiens is engineered Into every minute detatl. Ample vemthation keeps operating temperature at howest molter condensers and voltare amblitier tubes are fully shielded. The skillful engineering and careful desien have reduced hum so low that hum nolse practically inaudible exen withena fe molles of speaker with volume cuntrol all on but with no input connected. All wirins and narts easily accessible teayout diagram, showing exact position of each wire and part tozether with shematic hookud. are furntshed. All darts used are standiard. climinating guess work in replacement and making reparing quick and easy. In addition to the diagrams a comprehensive instruction shect for the assenibly of a high quality soundsystem is Included with each amplifier.

## Installation Shield

## For 6-Watt Amplifier

## 14E10672-

List I'rice. $\$ 8.00$.
$\$ 4.60$
lleary sheet mieshield. whould be
burchased with each amullfier or complete system. p'revents tampering or unit or theft and aceidental ance and adas greatly to value of ainplifier.

## Components for Complete 6 Watt "P. A." System



## Equipment Included

6 watt Amplitier. described above:-Four Raytheor
Tubes, 1-56, 2-2A5. 1-80:-Input Control Panne (fully described on page 111):-'Two 11 lach dynamic cone sueakers:-Ten foot 2 conductor shielded $\mathrm{mi}^{2}$. crophone cable:-Ten feet single conductor shifiehted cable for connecting Input Unit to Amplither. Fin quality double button carbon mleroshone with elght yuaility double hurton carbon maricra
springs and microphone des stand

14EI0662 List Irice. $\$ 90.041$
$\$ 4995$
4E10664—ame equipment as above Micruphone. Tst 1 'rice. $\$ 125.00$
OUR PRICE
OUR PRICE

For 105-120 Volt 50-60 Cycle
A.C. Current Supply

For store advertising, call systems, inter-offlce communleatoon, valdeville acts, restaurant order systems, churches. Iodge halls, etc. Especially adapted for arerage s!zed! automobice or truck sound Installatlons. Volume and quality of reproductlon are such that rolce and musie will attract esidentiul districts. The 100 watt 1powerack converter listed on nage 124, ohtainulng power from car motor can be listed on bage I24, ohtaining power from car motor can be Jut has sufficient rolume to cover an indoor audlence of 900 people or ant outdoor area of about 4000 square feet. Yay be installed wherever $105-120$ volt 60 cycle are feet. available Microphone or phonograph can be ampliffed through this system. Master volume control is mounted Mixer Unit Gives Perfect Control
Input cantrol unit is supplied for connection of ahove cound saurces to amplifier. Deter and switching system Is incorporated in input unit for reading current on elther or both buttons of microphone. Controls on unit enable mixing or 1 ading from microohone to phonograph. A pleasing and novel effect can be obtained by providink a musical harkround for roice. This feature is a splendid adtantage for home entertainment or adiertising stunts.
Output is tapped for rarious connection combinations to Output is tapped for sarious connection combinations to suraker volee colls or 500 ohm lline. Two 500 ohm field dynamie soeakers are supplet obtatimg their fleld sujp bly dirert from amplifier. Two adistional dynamic sneakers syst me give a more thorough coverage of the area to be supmied with sound. They must obtain their field supply from an outside source such as a line or 6 volt storage battery. Heavy duty ehokes are bulit into amulifier, hence D.C. drnamic speaker flelds are not a wart of filter system. This makes it possible to substitute up to 12 magnetic speakers or 100 headphones in pluce of tlynamic speakers. Hithou connection of external resistors or chokes, magdynamir. speakers ines can also be used in conjunctions Soeak. ers may be operated at any distance from amolitler the only liniting factor being the revistance cirop in the connecting wires used and the resultant nower loss.

## Fropit 15 WATT "P. A." SYSTEM

For 105-120 Volt 60 Cycle A.C. Supply


Make BIG PROFITS. Sell and Rent P. A. Systems for - ATHLETIC FIELDS - AUDITORIUMS

CHURCHES SCHOOLS

SOUND TRUCKS

Sell a complote amplifier! Your customer will want more| Profit from Rental. Many Radio Servicemen through tental than gust an amplifier-results are what will bring you of P.A. emuipment inctease thelr froflts. fircellent ghick payment and profits. "COMI'LI'TE, ready to use" shoula be your sales slogan. Fsisential parts of the
Radolek is Watt system are Hsted on this page. In Radolek 15 Watt bystem are Msted on this bage. In
additinn you will meed wire, addilional minophones on larke instatiatlons. phono birkilis. bhono-record turn tables, remote monitor sueakers. "T Had attenuators need es listed in this catalok. Allow yourself a generous profit on every ttem you sell. Your market indludes Auditorlums. Parks. churches. Nchools. Hefectorles. Hallrooms, Theaters. Hibtels, and Dance Orchestras. I'rove that P.A. increases a clients business.

Complete Ready to Operate A powerful publle address system particularly sulted for installation in auditorlums. automoblles. and trucks lodge halls, churches, large store advertising systems, theatres, etc. An Ideal system for sound truck installa. tion. sound can be theard clearly and large call systems. athletic fields, distinctly understood for up to about two clty blocks under favorable nolse conditions. When usel for auto installat lens. fan belt driven $1: 00$ to 135 watt Auto Fan lielt generator is used for 110 volt A.C. nower supply. At maximun power, system will give rolume to coser indoor audiences of 2500
neovle or about 10.000 suture feet outdoors. These figures are conservative and based on tests made with hlagh
nolse lackirounds. I'nder ordinary nolse cinditions, about twice this colerage can be expected.

For Microphone or Phonograph Microphone and phonograph inputs tan be amplified through this system. High impedance phonorraph picxutf can be connected directly to amblifin.r. When using microshone, an impedance matching device is necessary. Inpat control unlt is sumplied with system for this purpose and is arransed for the most convenient connert ton of all switches to are inplifier. Meter and unit for reading current in inp.1t or both luttons of micront on wither able resistor re of indmophone. Variable resistor regulates microphorie curmounted on microphone stand far easy mounted on microbhone stand for easy age to miscophone and assists in conage to myrophone and assists in controne rone feedhack.
Tows comptrate mounted on amplicer allows complete variation of tone. Also assists in reduelng feedback and coms-
pensating for romm acoustics.

Portable P. A. Speaker Housing PRICE
Case is divided diagonally and will house two speakers When put together case is
oniy sughty larger than pase oniy slightly larker than rase necessary for only one speaker.
When set on flonr sueiters throw sound upward and out Into the romm. Nowakers may be hung from celling anil pointed down. "rwo holes in slde of case prevent formation of air cushion which interferes with cone action. When case is closed speaker cones face fabrikoid covered baffle area giving maximum protection against speaker damage. Baffle is hinged so that each section can reacfiy bo opened and inner spare used for storage of cables, microphomes, "te. Baffie opentng is $12^{\prime \prime}$ : case will accommodate sjeakers with cone diameter up to $13^{\prime \prime}$. Case is rigidly constructed of laminated mlywond covered overall with durable and beautiful black fabrikoid. kelnforced with metal


14E10486\$1 150 markets for rental servee are County Falrs. Folitleal MeetIfeetings and sporial advertistn. Football Games. Iep merchants. $\$ 10$ to $\$ 25$ per day is the usual charde for use of a Two speaker 15 watt iph with attendant

Mobile Advertsing. Sound truck advertising has leecome panel the best types of 1 romotion publicity ifrallable. Danel truck with spare for advertising logners and the


Complete Control
Over-all Inputs
Two volume controls on the Control
 mixing or fading from mierophone to
ninonogranh.
$A$ effect 'an be obtained by providing a musima! backgroumd for voice. Thl fenture is a sinlendid adrantaze for
 stunts. Two suditorium N.C. drnanite
speakers are used for sound output. speakers are used for sound outnut. amplifikr. Heasy duty chokes are buitt Into amillifer. hence dynamic speaker nelds are not used as part of filter system. This makes it possible to
substitute subsitite $43{ }^{40} 130$ maknetic rone speaker. or 200 headsets in Hlace of
dynamic speakers. of inanic speakers. Without connection of external reststors or chakes. Maonetic cones or headohones can also be used in confunction with dynamic speakers
bination in any proportionate com-

## 175 Watt Generator

For Auto Public Address Installations


Supplies 175 watts of 110 volt 60 eycle A.C. Operates off Fan belt. 1'rovides rery sat:sfactory current sumply for
wete description.
14EIOBO3-
YOUR PRICE

USING

- Three Stage 15-Watt Amplifier
- Five Raytheon Tubes
- Input Control Panel
- Two DC Auditorium Dynamic Speakers
- 50 Ft. Shielded Microphone Cable
- Shielded Input Cable
- Double Button Carbon Microphone
- Microphone Stand 111 These Component Parts ONLY!
Equilment isted aboro.
14E10674-
List Price. \$139.00,
your price.


## s6950

Ampllfer used is completely described on page 11 i .
Speaker and mlcrophone cables are $113 t$ ed on bage
500 ohm
500 ohm line to speaker volce coll ransformers listed on page 109
Optional Equipment


## nstallation

Shield
Is recommended
for use with com plete system. It
adds to abuear ance of installa tion and aives
extra protection. Allows plenty of ventilation to
amplifier. Listed and described on omosite page

Mike and Stand The above system will Rive excellent results in where better reproduction is reauired we recommend the use of a hleher qual. ity microphone. The balance of the equipment is sultable for the very best
Shtens. Model 22B Mi-
Shure ronhone and floor stand instead of milke and stand listed above.
3 E294ist Price.
$\$ 35.00$.

Avallable at this price only when purehased with above system. Add $\$ 12.65$ to the total durchase price of $\$ 69.50$ specified.


Amplifier Carrying Case For use in transporting amplifor from one installation to another. Bottom tray is so constructed that amplifier may be attached permanently. All controls and connections are readily avatlahle. Will fit 30.15 , or 6 wat amplifler with or without installation shield. With amollfier in case there is enough ailditional roon for carry-
ing control unit and microuhone Ink control unit and microbhone. Beautiful black fabrikold covering. Soltd Laminated plywood construction throughout, strongly reinforced corners and handle. lositive Minge fasteners Stze $21 \% / 4$ long. $11 \%^{\prime \prime}$ wide. $123 / 4$
14E10673-
Ist Price. \$12.50.
YOUR PRICE
$\$ 5.75$

## 15 WATT "P. A" AMPLIFIER The Eemeral Purrose Motel Best for $80 \%$ of Your Jobs

- Three Stages
- Push-Pull 2A3's
- Five Tap Output
- TONE CONTROL
- Hum Free Operation
- Master Volume Control
- Improved Class " $A$ "' Prime - 30 Watt Speaker Field Supply I4EI0670-Factory wired. Laboratory Tested without Tuies.
List Priee, $\$ 60.00$.
your Price
$\$ 2750$
14E10671-With five kaytheon matched Tubes Mist Prlce, S68.85.
YOUR PRICE
\$3190


## For Every Type Installation

Ample volume for 2500 people: Will provide good sound coverage for conventions, school auditoriums, lirge refectories, counts fairs, ball-rooms, athletic fields, and other locations where plenty of volume with good clarity is required. Economical and efficient. Easy to install permanently or for part time use. Excellent for use with room. Extensively used in schools and colleges for 'pep' mectings and experimental work. The splendid tone characteristic of this amplifier arlapts it for "sound" novie installations and for sound recording studios. Uses the new 2A3 tubes, (superior to old type ' 50 tubes). Improved class " $A$ " prime. giving the high efficiency of class " $B$ " with the beautiful tone quality of class " A ". Over 75 DB gain. Only . 015 volt input required for maxinsum output. Splendid for use in sound truck employing 175 watt

## Handles 8 Dynamic Speakers

Provicles 15 watts of power for speaker voice coils. This output can be used to operate 3 large dynanic speakers or 8 smaller ones or 3 dynamic horns or 30 magnetic cones or 200 headsets or any proportionate combination of them. When using 3 large dynamic speakers they can be placed in front of the audlience. 8 smaller dynamic speakers can be placed back to back in the center of the same size audience to give a more even distribution of sound. At maximum power, amplifier will give volume to cover indoor audiences of 2500 people or about 10,000 square feet out loors. These figures are only approximate as definite information cannot be given due to varying conditions under which equipment is used. Where prevailing noise levels are low a larger coverage can be expected.

## Installation Shield



14E10672—
I.1st. \$8.00.

Your Price
$\$ 4.60$

Heavy sheet metal perforated shteld, 1'rotides bertect mechanleal protection. More than enough ventilation to keep amplifler at proper ojerating temperature, Fits
amplitier snugly. Baked-on black enamel finsh. Adds a urofessional aptrearance to
any installation that easily bring you $\$ 8.00$. additional.
You should sell this shield with every Amplifier. It is well worth the additional investment to your customer.


## Amplifier Characteristics and Specifications

## (1) 15 Wa <br> \section*{voice coils.}

(2) Supplles 30 watts for 1000 ohm field coils (enough for three large dynamics). Commentions provides for one. two or three separate sjeaker field.
(3) Three Stager with five tubes, ' 57 reststance coupled. to 50 thanstormer counled, to two 2Ais's (4) 72 D.B. Gä $\mathrm{n}^{2}$ at 1001 rycles.
(4) 1' D.B. Ga nat at 1000 rycles. Curve practlally flat frequency Characteristic
 (7) Master Volume Control ohms.
(8) Ting plate.
(8) Tone Controt and On-OH Suit conb (9) Output Impedance On-Orf Swith Conblned. 500 otums. Connertions brought out to bakelite strip with values engraved at each blnding post.

## For Microphone or Phonograph

## Amplification

Phonosraph may ise connected directly to afrplifier inisut. When using a comrol unit like stoek number 4E10740 described on page 111, of sultalite milcroutione Transformer. Mleroishone trinstormer, is nol mount d on chassis because this is primarily bad en :ineering and should be avolicid wherever possible. The barels iec in ous ampifiers is so low that it, is outbu: when this low hum level can be maintainet mis away frout transiormer ls momted at leas: a fowt fleld. Construction of implifier inakes it muthl mure conventent for the hookus; of multi-mixer dircuits, Master volume control gives control over all imatsCombanation tone control and on-off swifch mounted on amplifier rhassis. Connertions for out-iuts of 3. 6, 3 or 15 ohm innedances, permitting the proper connection of dynamic speaker or sueikers of any voire coll mpectance-separate wimsink of or more headibhones or masnetle sueakers. or for $5 y n a m i c$ gjpeakers when used it it distalles. 500 Ohm Speaker Line Matehing Transformer. for use with a number of dynamic speakers on the
500 ohm line output listed on page log.
 ohtain maximem output. ape good guafity lower than encountered in averof any amplifer we have ever observed).
(12) lower consumption 150 wates.
(13) 1'ower Supply' required, $105-120$ volts, $50-60$ rycle A.C.
(14) six foot super service tower ronnection cord with unbreakable rubber attaching plug.
(15) Renewab'e Glass fuse in power supply, (16) Ihottom protecting blate with four rubber fee entirely enclozes base.
(17) Ample arovision for ventlation.
(18) Jich Baked-on Black Enameled finlsh.
(19) Overall helght $8^{\prime \prime}$ : 1hase whdth $9^{\prime \prime}$; Length (20): Height $23 / 4$
(20) Net weight, 25 lbs., Shlpying weight, 40 lbs

## Fi Built for Heavy Service

Finest Quality-Carefully Engineered Power input line is fused with standard tubutar klass fuse An parts alloy metal. Entire unit flnished in rloh baked on lhack enamel: layout of romponent parts insures high-ef-ficlency-Ample ventilation keeps operating teraperature at 10 we g t main filter condensers and voltage
ampllfier tubes are fully and sellarately shifoldend. We do not attempt to lower the quality and save a fetv cents bs pacing all barts under a single overlieatink, meald make the unit suscentible trical feed-hack, (Motorboating). All whring and parts easlly accessible. Layout diagram, showing exact nositlin of each wirc and nart together wit schematic mokup, are furnished-All narts used are standarin-liapram gives all essentlal specill cations of each part making repalr work quic and easy.

Wide Range Frequeney Response: Cathode Ray Oseillograph tests proved that the output of this amplifier was linear over practically the entire audio rangs: and free from distortion harmonles within the rated output.

## Simple Efficient Circuit

## The outstanding feature of the circut of this Amplifie

 s the unique method of securing bias voltage for the Push-Pull 2A3 power tubes. This is accomplished through a 110 ohm section of the bleeder resistance; the blas resistance carrying a constant current of 100 MA in additlon to the 53 Mi for tha 2A3's. A pe cularity of the 2 ais tubes is the increase in ulate current with strong signal inpuis. The design of the Radolek ampllfer bias circuit makes an increase in power tube plate current surh a simall portion of the total curren llwing the not apprecitibly recuce the effective power outbut.Fteld current supply is 300 volts at 100 Ma . or 30 watts across 000 ohms resistance. Three tans are
incornorated one at each 1000 ohms. The combinations incorporated one at each 1000 ohms. The combinations
of nower for sueaker flelds are many. The folds as many as tin dynamic speakers of the smafler typo as many as tin dynamic spe

# STADIUM "P. A." SYSTEM <br> 30 Watts-For <br> Maximum Coverage 

## Made Up of Radolek Standard P. A. Units



## Auditorium Dynamic Speakers

The two speakers furnished are of the highest Will handle the iremendous output of deseription. fier with a full natural tone. fise of extrat heavy field colls in speaker construction together with many times as sensitive as the average unit. Speakers can he used up to 1000 feet away from amblifier. If 500 ohm line connection on amplitier is used. 500 ohm line matching transformers are not furnished with system. See juage 109 stock number 2F.4360 for suitable trallsformer. When using
speakers within seventy-fire feet of ampllfier connections can he made from amnlifier tlirect to voico colls. Sucaker fields are 1500 ohms and obtain current supply from amplifier.

## PRICE

30 Watt Stadium P. A. System As Illustrated and Including Units as Specified Above
System as described. 14EIO688YOUR PRICE $\qquad$ 50

## For Portable Installations

 Ifse I4El0485 speaker housing listed on page 116. When system Is used in bermanent instailathon use as large a speraker baffle as is prac-tical. To obtain the best volume and duality of reproduction from this system do not use a baffle which has an effective area of less than nine

## Our Finest and Most Powerful Public Address System

Partirularly sulted for large installations requirlag a 4 reat amount of power with highest guallity tone Frequency resumse of systen is excentionally flat Dance Halls and Auditoriums will find this system well sulted for permanent instaltation. Ideal for use in Deluxe sound truck installations. Sound can be heard clearly and disthetly understood for about six rity blocks under favorabie noise conditions. At maximum output using the two piant dyanuie speakers included. the system will cover indour audiences of ub to 8000 beople. or an outdoor area of about 25000 square feet. All connections are plainly marked making it easy to correctly and qutekly as* semble system

## 3 Channel "P.A." Rack and Panel



## For Centralized Installations in

Schools, Hotels, Clubs, Etc. A complete assembly of all parts on a neat and convenient rack for bermanent instulla tion. Eiduiphent included consists of 6 tube radio tuner, two syeed thonograph motor and mekup, two mirroyhone mixer, 30 walt nower
ambliter, speaker swlthing panel and monitor speaker. All units are interconnerted
for the must plezible and efitcient oneraton for the must flezible and efficient operatlon The Radio Rece superheterodyne. Completc deseription of set sent on request.
Built-in Phono-Motor and Plekup plays both 331 :, ind 78 R.P.M. records. Specially
 welghted 12" turntahle kiees smooth operation on serfectly balanced gives liest results on either speed record. Automatic stov and on either switer also Inludrd.
Three Channel Mixing Panel provides two Three Channels mirrounges and one for phonochannels for midrouhmes and one or phono-
graph or radlo. Complete description is given in next columin. 30 Watt Power Amplifier is three stage modifed class
unit. Complete technical description of amplifler is given on 20 Speaker Switching Panel for remote rontrol of all or anit one Ne ennla tien plating your particular installation. When phacing your order he surc to state the duse master Volum you tish to use.
Master Volume Control brovides volume adMastment over all three chamnels.
Master Tone Control controls
me from bass to treble for all three channels.
Complete as described with set of matched
 I $4 \mathrm{LEISt} \mathbf{O 6 9 0 -}$
s195응
We are prepared to supply complete Public Address Rack and Panel equipment to meet any requirements. Send us the specificatlons on your and all asslstance neessary department win be glad to give you quotations facilities assure you of quality merchandise and we assure you of a price on which you can make a handsome profit.

## 3 Channel Input Control \& Mixer For Public Address and Broadcast Work



## Mixer and Fader

A hizh quality unit for mixing and fading the outputs from two micro. phones and phonograph or radio. Connects directly to grid of first input tube on amplifier. Three distinct input cbannels are provided. Two channels are for carbon merophone or low imbedince phonograth piekup or for conder.ser, velocity or crystal mlerophones when used with preamplitier. The tilird rhannel is for connection of bikh mpedance bhono pickup and radlo with swlteh for changing from shono to ractio. The three channels can be faded from one to the other or mixed to any deslred degree. Seliarate transformer and T nad volume control is provided for earh input channes. A fourth transformer ties the isput channels into one output channel of high impedance to match Microphons Current Control A separate microphone current control is brovided for the two microphone in-

put channels. 0.25 milliammeter in conjunction with four togkle switches Indicate the current on each microthone button. Switches ran also be hrown so as to read current dratin arrangentions at once. Awitching arrangement is very slmple and gines absolutely acturate readings. 2-4 4 roll C batteries are mounted lowide case and iurnish miernthone button current. All conneelions to unnt are thade through extr Metal case provides perfect sockets, ing. here is nots are erounded so that unlt to nevent hum shient hins should be used for couneting cable plifier insut and for conecting high impedance inputs to control panel in ase is of 16 gauge stecl finished henutifully etched metal enamel henutinhy etchen metal indicatink rol. Case sume rol.
$71 / 4$ " wide. Shiving weight 16 lbs .

## Prices

Complete with Triplett meter 4E1O7O1YOUR PRICE
\$21.95
Complete with Readrite metor. $\left.\begin{array}{ll}\text { YOUR } \\ \text { PRICE }\end{array}\right\}$

## 30 WATT <br> "P. A."AMPLIFIER

- Three Stages
- Tone Control
- 5 Tap Output
- Master Volume Control
- Parallel Push Pull 2A3's
- Improved Class "A" Prime
- 30 Watts Speaker Field Supply Prices
14E10685-Factory wired; Laboratory tested; S3750 I4EIO686 With Neven Naytheon Matched List IPrice $\$ 88.35$ YOUR PRICE

Layout and schematic diagrams giving all essentla spectications and information are included.

## For Microphone and Phonograph

 AmplificationHlah impedance ohonograph nickup may he comnected chrectly to amplitier. Throphone connet tons The aloove connections can be made and controlled Through input control units deseribed on pazes 111 through input control units deseribed on pages 111 andicaling plate are momeded on amplifler. Control cives complete volume variation for anl input sigEives
nals.
Comblination tone control and on off switeh with etched metal indicating Mlate are also
mounted om amplifier. Tone control allows accentuation or attenuation of lows and highs. This feauation or attenuation of is useful in assing to eliminate aroustion ture is usethl in astisting to eliminate aroustir

## For All Large Installations

Adapled for very large installations, such as
athletic nelds, auditoriums, conventions, aviation athletic fields, auditoriums, conventions, aviation fields, large deluxe call systems, large hotel in stalations, oolitical atherings, etc. A bery nower-
ful sound truck installation ran be made with this ful sound truck installation ran be matie with wing the 180 watt Fan Helt drive
 stallations call also be very satisfactorily ank eronomically bullt up around this unit. At max.
imum power thls amplitier will give sufficient volume to cover indoor audiences of 8000 veople or about 25,000 square feet outdoors. These ligures are convervative and based on tests made with high
noise butkgrounds. Provides 30 watts for speaker noise buikgrounds. Provides 30 watts for speaker
volce coils. This output can be used to operate 5 large dynamic speakers or 12 small dynamic or Kinematic units or 5 dymanic horns or 30 magnetic concs or 400 headsets or any proportionate comblinationt of them. When using 1 to 3 dymate
speakers they can be placed in tront of the speakers they can be placed in tront of the
audience or up to 12 dynamile speakers can be audience or to to 12 dynamis speakers can be
plared bark to bark in the center of the same sized audience to give a more even distribution of sound

## For Greater Output

Two or three of these amplifters can be connerted a much lower total rost than a single amplitier of such output using 845's or similar tubes, Corerage at b0 watts would be 16,000 people indoors and 60.000 square feet outdoors.

## Amplifier Installation Shield

For 30 Watt Amplifier


14E10687-List Price $\$ 10.00$. YOUR PRICE
\$475 Ileary sheet metal perforated shield provides per-
fect mechanlcal brotection and allows ample von tllation for amplifiers. Fits amplifier perfectly. Haked-on black pnamel fintsh. You should sell this shield with every amplifier. It is well worth the additional investment to your customer

For $\mathbf{1 0 5 - 1 2 0}$ Volts $\mathbf{5 0 - 6 0}$ cycle A. C. operation


## Amplifier Characteristics and Specifications

## 30 vat

## voice colls.

2. Suribiles 30 watts for 1000 ohm field cois (enough for three larke trnamisit.

ance roupled to on transformer coupled
to four es.-s in warallel push puls.


f. Input smpedsince 200.000 , ,hms 7. MASTER VOLUME CONTROL wh rechrd metal indicaling mate.
 9. Ootput impedance tapped at 3. Ni. 9, $1 \%$ ant son ohns. Connterions bought ont to bakelito
with ralues enmraved at earn innaling pust. 10. Gnly . 01 volts input signal requirc
tain maximum output.
Tremendous Power with Finest Tom: Quality
This anpllifier giles more undistorted power that has evez prevtousty heen oltained from an ealivilent corrbination of tube. The added power fr. quency response, and abitity to operate at very lew volume "Ithout distortion more than outweiglty atre adpanta e thit class " $1 B^{\prime}$ or full class "A prime pure reoroduction that could formerly be obtain.d only lys the use of four 2.50 tulics, in straight chas A" combination. The characteristios of the intuplifier are such that it will falthfully repeoduce all voise and music. ineluding that of the now

## Amplifier Carrying Case

For 30 Watt Amplifier

gond qualty level lower than encomitered In average level of ally A. . kadio. (This is the lowest lum 12. Power amplifier we have erer observed.) 13. Power supply required, $10.5-120$ volts, $50-60$ 14. Six foot super sorvice nower
ronnection cord with unbreatable not ronnection cord with unbreakable rub-
her ataching niug. her attaching plug.
15 . Henewable $G$
supply.
Bottom protecting plat
 four rubber iect antirely encloses base
18. Alch Baked on Black
18. Rich Baked-on Black Enameled finish 19. (werall helaht \&1,"; base wldth $9 \%$, lerge $200^{\circ}$. height 20. Net weight, 32 lbs. shipping weight. 50
20 .

## Very Finest Construction

Heavy duty chokes are built into amplifier. I.C. diynamic speaker field colls are not a part of the filter system in this annulifier, whlle this type best filtering action is provided for any make D( speaker and in addition no external chokes are eve required, is ate neressary on most other ampliflers, when they are used with A. (\% type dynamic speak ers. masnetic speakers, dymamle sueaker units or head srts.
dil marts mounted on stcong, rigid, nonrusting alloy metal chassls. Layout of component parts insures highest encrating oderating temperature at lowest point. All transformers, ehokes. main hiter chaledser silltulam amplifier lubes are fully shielded. homing and design have reduced hum so low
gincering and gincerms and do low that hum is armes of speaker with but with no input connerted. Layout diagram showing exact position of pasi wire and part, toshowing exact wher whith schematic honkup, are furnished. All

 Will House $8^{\prime \prime}$ to 14" Cone Speaker 14EI0485-LIs Price $\$ 7.00$.

Durable Fabrikoid covered case with Deshened for use with all types of Imbon a n a outdoor pulbice address equipment for expellent tone reproduction. For mounting all stindard sizes of dynamir and magnetic speakers protects cone from bugs and dirt. Button Fabrikoid flap over speaker opening for protection of eone acainst weather. Extra strone wood frame Thoroughly impreanated to resist molsture. Specify size of speaker opening, desired when ordering.
Fimensions, $15 " \times 15 " x 1)^{\prime \prime}$. Hefer to page 116

# BATTERY 



## 6 Watt Battery PA Systems

## Used Where Power A. C. is not Available

Especially suited for call sysi Emy, political gatheringa, audi Corlums, Etore advertising sys emy, winclow display demonsira tions, etc. This is the itical system for a low cost effricent
Autrmnobile
Sound Installation whene coverage of an average city block in residential discricts At maximum output has sufficient power to corer an indoor audlence of 600 people or an outdoor area of 3000 square reet. and based on tests made with higk noise backgrounds. Vinder ordice this coverage can be cx pectid. Can be completely oper ated by one 6 valt storage bat-
tery when used with our public midress "13" power supply,
stock number 4E/O:96 on page 125. The tube flaments. of coure. obtain their roltage direct from storage battery. If a
" $\mathbf{B}^{\prime}$ supply generator is not de-


## Microphone and phonopraph can

 be amplified through this system. Master volume control is mounted on amplifier chassis giving control over all inputs. Input control unit (completely described on page 11t) is supplied for connecLlon and control of above sound sources to amplifier. Controls on unit enablo miring or fading from microphone to phonograph. A pleasing and norel effect can be olytalned by providing a muslesl background for voice.The two speakers furnished with the system will handle the full output. Additional speakers mas be used for giving a non-directional coverage. Speakers used obtaln fleld supply $111 / 2$ amperes each) from 6 vols storage bettery, and may be operated at any dislance from ampilicr, the only lmiting factor the lines and the ance drop in the lines and the
resultant power loss.

## Equipment Included

 6 Watt. ${ }^{3}$ stage Class " $A$ " Battery Operated, Push Pull Amplifer: High quality Double Bution Carbon Microphonn with elght springe and stand; Fwo unlt (complemic decribed on paze 111): 10 toot 3 contuct or shifilied microphone cable: set four matched Raytheon tubes; 14010655 -Complete system as specified above with " $\mathbf{B}$ " Supply generator to operate from 6 volt storage battery. List Price ${ }^{\text {S } 136.00 .}$ YOUR PRICE$\qquad$ . 6 6600 14D10656-Complete system as spectfled ahove with 6-45 volt "B" Batterles. List Price sios.00.
List Price $\$ 108.00$.
.
*4950
6 Watt Battery Amplifier Only
14DI0657-Without tubes. List Irice $\$ 27.50$.
YOUR PRICE
E........... \$
$\$ 16.50$
14010658-Complete with four RayList Price, $\$ 33.40$.
List Price,
YOUR PRICE

6 Watt Battery Operated Amplifier Specifications Class "A" Output
> 1. 6 Watts undistorted Power Output $\ell$ speaker voice coils four tubes, 39 tube resistance coupled to
transformer coupled to two $42^{2} s$ in push pull -3. 72 D. B. Gain at 1000 cycles:-4 Practically FIat Frequency Characteristl Curve within 3 D. B. from 50 to 8000 eycles -5. Input impedance 200.000 ohms:-6 Master Volume Control with ctehed meta indicating plate:-7. Combination Tone Con trol and on-off switch:-8, Output impedane Tapped at 3. 6, 9,15 and 500 ohms. Connec tions brought out to bskelite strid with ralue
engraved at each binding post:- 9 . Only 0 engraved at each binding post -9, only .o. output:-10. 1'ower consumption 2 anpere for flament, 87 MA . for plate -11 . Power Sup ply, ${ }^{6}$ volts for fiament. $2 \pi 0$ volts for phate ber feet entlrely encloses base:-13. Riel Bakeon Black Enameled Anish-14. Over all helght $7 /=15$ base width $6^{\prime \prime}$. ${ }^{\text {l }}$ length ${ }^{1+}$ helght 2 elght 16 libs.

All parts mounted on strong, rigid, non rusting steel chassis. Layout of componen parts ingures highest efficiency. Transformer and voltage antilifier tubes are fully shielded dolng away with any residual hum. All wir ing and parts easily accessible. Layout dis gram, showing exact position of each wir and part, together with schematic hooku re furnished. All parts used aro standard Diagram gives all essential specificatlons ach part. ellminating guesswork in replace ment and making ropairing quick and eas


## 15 Watt Battery Operated PA Systems



For Microphone and Phonograph
Master volume control is mounted on amplifier hassis giving control orer all inputs. Input control unit connects sound sources to amplifer. Meter and switching system are incorporated in input unit for reading current on elther or both buttons of ml crophone. Controls on untt enable mixing or fading from microphone to phonograph. A pleasing and novel offect can be obtained by providing a
muslcal background for volce. This feature is a splendtd advantage for home entertainment or advertising stunts.
This system is particularly well adapted for soind truck installations. May also be used for athlarge store advertising systems large call systems, etc. At maximum output, system has sufflelent power to cuser an indoor audience of 2.500 people or an outdoor area of 10.000 square leet. These figures are conservative and hased on tests made with nover ordinary noise con-

## Equīpment İncīuded

Used Where Power A.C. is not Available 15 watt 3 stane Class "A" 1Rattery Operated Push Pull Ampllfler: High Guality Double Button Carbon Microphone with eight springs and stand: three $111 / 2$ inch Dynsmic Speakers; Input Control Unit (completely described on page 115) ; 10 foot ${ }^{3}$ cinductor shielded microphone cable; Sot four Matched Raytheon Tubes: 1 1-39. ${ }^{1-37}$
$2-2 \mathrm{~A} 3: 1-45$ volt "C" battery: $1-221 /{ }^{1}$ voit ${ }^{\circ} \mathrm{C}$ "
battery.

Prices Complete Outfits
14D:0677-Complete system as specifled above storage battery
Ifist Price $\$ 165.00$.
$\$ 9.50$
YOU PRIC $\qquad$ -
with six 88 "
generator, List Price, $\$ 137.00$.
YOUR PRICE

# Moderate Power with ligh Quality 

31/2 Watts Output 2A5 Power Tube

 I4E1065!-Whth three Malched IhayIst Price $\$ 23.95$-.j. COUR PRICE............... \$11.65 praph amplifter, telephone booster inter :ommunicating or small P.A. Systems. Has gain of 8 D. B. more than 2B6 am. pliffer but does not have as great a power Has Many Uses Both models are andared for installations ;uch as window display demonstrations, itore advertising call systems, inter-office lassrooms, restaurant installations, small jances. social gatherings, racing returns Dhller will cover imborr audlences of 200 people or about 2000 sciuare feet outduars. it maximum power $31 / 2$ watt 2.45 ampli ner dide or about 1500 square feet outdoors.
weoples of These figures are conservative and are sased on tests made whth high nolse bark trounds. I'nder ordinary nolse condlatoms Provides $31 / 2$ or 5 watts rolce coll. This outwut can be used to perate one li.C. speaker and one A.C. 40 healsets or any mroportionate come Jination of any of them. Field rurrent supply 3 watts through 2500 ohm reststanee. Sneaker field is used as nart of thlet

Mixer and Fader
Three controls are mountell on amplifier, one of whleh is used to control microphone Inpilt volume, one for controlling volume of phonograph or other high impedance inondof sultch. Beautifuliy tone control on-off switch. Beautifuliy etched conirol. This combination allows onerating either input at any volume desired. elther The rolce with conjunction then another. used for many novel effects, for home Catures $\mathrm{F}^{\prime}$ ding from one inpur fing features. Fadlag from one input to th
other is also accomblished gulte easily,

For 105.120 Volts 50-60 Cycles A.C


- Microphone Input
- Phonograph Invut
- Tone Control

Speaker Field Supoly

- Mixer and Fader
- Two Stages


## Characteristics and Specifications

## Of $31 / 2$ Watt 2 A5 and 5 Watt $2 B 6$ Amplifiers

Supuly field current for whe 2500 ohm flell speaker

> Sulny fele current fri one Two staces vith three tules. $52 \mathrm{D} . \mathrm{B} . \mathrm{K}: \mathrm{ln}$ at 1000 cscles with 2 B 6 Model; 60 D .13 1'ractically Fiat Frequency Characteristic Curve within Inrout inplecance 400 ohins center tapped for inlerophone. 50.000 obrns for phano wiekup and other lanputs.

D"al Vo'um" Controls and Mixer, etched metal plate
8. Comblualing Tone Control and on-off switel.

Output imperlances $50 t 0$ ohms from plate of 213 b tubs; 7000 ohms from plate of $2 \mathbf{5}$.
10. Only 1 volt. imput stgnal recuited for maximum output. 11. Ilum level -Wer than in arerage good qualits A.C. Madlo. Power Consumption 45 watts. Sower suphly restured. $105-120$ volts, $50-60$ cyrles A.C. rubber attaciting plug.

## closes base

16. Rifh baked-on black mameled finlsh.
17. Overall heipht $63 / \%$; base, width
$23 "$

## 5 Watts Output 2B6 Power Tube

## 14E10680 Faciors wired laboritor


14510681 -Wtil tree Nuthed tee Lurus tines, $1.57,1.2 .116,1.80$ tit 1 Prife, 329.85 rour price
$\$ 12.10$
Conseratively rated at 5 watts, artunaly





 stiphity iniblere galn that is obatited trom 245 tubes.

## Universal Input

Mierophone Input is through transformer Microphone input is throtgh transformer is of special construction so as to redure resther singic or double button microvhone is supplied by $41 / 2$ volt "CC" battery mounted inside amplifier. This battery will last about 3 months operating an arerage of 5 hours ber day. Phonograph direct to gride of $5 \bar{i}$ tubes who volume control cmmected across foput. Input and outptt connecitons are conveniently made to mug-in sockets and jack. Output is dircet from bewer tube and proper matching transformer must be used externally tonal sheaker. anck for plug-in of addi-

## Finest Construction

A. parts mounted on strong. rigld, non rasting alloy metal chassis-Fintle unl finisited in rich baked black enamel-Layout of component parts Jnures highest effiriency-Ample ventlation keeps oberform temberalure at lowest polnt-Transformers, main filter condenser and voltage engineerlng and desien have rediced himi to a pery low point-All wirlug and paris easily accessible-Layout diagratn, show. ing exict position of each wire and part, rogether with schematic hookum. are furn ished- Ill warts used are standard-Dlagratm gipes ali essential sjecifications of placement and making repairing fuick and

## A Complete Outfit

This equifoment includes i comnlete speerl and bhonogranh Amplffler with Spatier mounted in a portable Carrying Case. For oneration on 105.120 tirely in small aintomobite installations using the 50 watt fan half driven 110 alt A.C. generator.
stock number $4 E$ OROI desrlifer on page 124 portable $P$ sycm 124 amsilfier described above and Raytheon tuhes $1.5-$ amsifier described above and zaytheon tuhes 1.5 .
$1-2 A 5,1-80$. $14 E 10652$ YOUR PRICE
\$29.75
Portahle P. A. System cimplete will 5 watt $2 B 6$ amnllfler described above and Ireturus fllbes $1-57$, $1-2130.1-80$.
$14 E 10682$ List YOUR PRICE.


## Portable 'P.A.' System

## For Small Indoor and Outdoor Audiences

For store advertising systems, home movies, political gatherings. parties and similar small audiences. this type of sound equipment is ideal. For window demonstration work this system affords immeasurable advant ages over the old method of using printed cards for delivering the advertiser's

## Equipment Included with 3 1/2

 and 5 Watt Portable P.A SystemAmplifier-ats two stage class "A" amplifter is included with $31 / 2$ wat system, 2136 two siage class "A" amplifler is included wifi 5 watt
system. 13oth ampliflers are fully described at top of page.
Microphone included wlth both sys. tems is a fine quallty single bution Kellogg hand microphone. A high grade $\$ 12.00$ list two bution microghone with desk stand can he supplled instead of hand mike if de sired. Allow $\$ 6.95$ extra when plac. Ing order.
Carrying Case is strongly reinforeed and covered with handsome black gralned Fabrikoid. Two sellerate sections; ampliffer is contained In one section. speaker is contalned in other allowing its use al a disance from amplifler. Case size closed $16 \frac{1}{2}{ }^{\prime \prime}$ high I $13^{\prime \prime}$ deep I 141/2" whide Cabies- 30 feet of shiclied meroohone eable connection of mike to int operation of speaker at a dis. tice from amplifler.
Tubes-Three Kaytheon tubes 1.57 .
1.80 are suppled with $3^{1 / 2}$
systrm. Three Arcturus tubes
$1-2 B 6,1-80$ are supplied with

## Tremendous Volume

5 watt system has enough volume to cover an indoor audience of 200 people or an outcloor area of 2000
sruare feet. $31 / 2$ watt syem corer an indoor audience of 150 corer in indoor atudience of 150 phople or an outdoor area of 1500 servative and under farorable condl. tions greater corerage can be expected. An additional dynamic pected. An additional dynamic more thorough coverage. This sueaker must olitain fleld excitation from external nower source. Amplifier furnishes fleld current for one 2500 ohm D.C. dynamic speaker Ene 2500 lent baffilng is provided for speaker by case. Sufficlent cable is furntshed with system so that sieaker can be mored and used un to 20 feet awas from ainnlifler. Speaker can be used up to 50 feet away if desired by adding additional cable. lnput connections are for mirronhone and phonogrash or other high impedance input. Microphone leads may he run up 1075 feet away from amplifier. High impedance and phonograph innut leads should not he over 15 feet long. Microphone transformer is mounted directly on ampilner. Microphone current is supplied by 4,2 volt "C" batiery' mounteri in amplifler for single or cription above for further detalis.

## Manferniw 6 -MATT PORTABLE "P.A." SYSIEM

For 105-120 Volt 50-60 Cycle A. C.
Highest Quality - Newest Design Unequalled Value

- 3 Stage Push-Pull
- 5 Newest Type Tubes
- Completely Self Contained
- Variable Tone Control
- Complete Mixer and Fader
- Microphone Transformer
- Microphone Current Supply
- 20 Watt Speaker Field Supply
- Microphone and Phonograph Input
- Separate Volume Control for Mike and Phono

Equipment Included
Completely enclosed and shielded ${ }^{3}$ stage 5 tube Fush Pull if Watt Ampliffer with buitt-in Controls, Fader and Miser: Twelve inch Dynamic Speaker with titty fee
super service : conductor rubber cowered connecting cal)le Fine quality 'fwo Button Carbon Micraphane with elght
 he subthituted if preferred). All enclosed and mounted in strong, durable. Fabrikoid coveredl semarable. two sect ion carrylng case $181 / 2 "$ wite. $161 / 2$ high, $121 / 2$ " leep Haytheon Matrherl Tubes,

## Meets Every Requirement

For all types of public gatherings-rlub meetings. funcral services, entertainment, amwouncing athletic events, large store advertlsing. etc. Provides suf
flelent volumic for indoor audiences up to 600 people or corerage of outdoor area of about 3000 square feet.

## 



## In-Built Control Panel

 The outstanding teatures of the sis Control. Wierophone current (contmol. Dicruphone Volunse Control Ihonograph- Ratio Volume Control so that input signals mas be faded or mixed into eaeh other in any deired ratio, siring announcements a abrunt breaks in backgroumd musile. Mixing and fading system is rery complete and simple in operation.The rance of response provided by his alnolifler is so wide that a Tone Conttol is not essential, but one is necentuated when desired. nay be employed in some instanves and to conmensate for acoustieal feets of a room.
Microphone eurrent is read on an $0-25$ milliammeter mounted on panr and controlled by 1500 ohm rheostit Two switches are monnted on side or amplliter for use, with meters. I mesturing current on each nifrophone
button. For further convenience, an button. For further convenience, an
additional micoobhone eurrent eontrul is mounted on the base of the misro phone. In addition to adjusting ar used to a limited extent for climinatused to a limited extent for climinat
ing acoustleal "feed-back".

## Extra Speakers May Be Added

Mountel] speaker has 50 foot eord attached and. If desired inay be operated even further from the amplifier. When in additional speaker is necessary tor more compl erage, or for reproduction in an adjoining roome is simply or fugged into the amplitier. rhis convenient fea ture. exciusive with kadolek, is arransed by mounling wo speaker output sorkets, ready for instant use, on the umplitier. W'ten only one speaker is in opelation, a dummy plag is used to the second sorket. the speaker furnished with the system is so whed that it can be used blone or with a second speaker without ehange wiring of either amplifier or speaker. The speaker Insted below is wited for use with this amblifer as a second This is
This is positively the best englneered, best built, most complete, be st beforming $\Gamma^{P}$. A. system of this type ever acturing have beld the prlee down experience in manluacturing have held the prlee down so that this system where near its price. You can depend on this eduipment (or conipletely satisiactory performance.
Ready to operate. system can be set up and placed in oleration in three minutes, No tools, no "fiddling" around. Just insert plugs, furn on current and the system is ready or work. Very convenient for use in automobiles equipped with fan belt driven A.C. generator.

4E10665-Radolek fo Wat Amplifier. Comnlete as described whith Rastheon Matched Tubes. YOUR PRICE


6 Watt Portable Amplifier Characteristics

## 6 Watts Undistarted Power Output to suener

 Soils. Suple : 20 Watts for 2500 ohm field coils (enalsh for two slynamies). Wither one or twn Triw Thre Sroes wit nuo thes iss mums oupled to 5 Sti transtorwer coupled to two 2.15 in push bull. SZais rectitier.1raminally Flat Frequency Characteristl Curve within 3 D. is. from 50 to $8,(001)$ cyeles. (o. Input ionperdance toul ohms renter tapnei


7. Microphone Volume Control aud Phono graph or Radio Voluine Control intrreonneeted to allow mising or falling of imput
8. Microphone current contral and mete th two switches for reading eurrent on clthe 9. Variable tone control (a distinctle cuture) 10. bitelied metal indienting plates under 11 controls and awitrian
1200 ohms.
12. Only . 07 volts input sigmial required to biata maximum outputt.
13. llum level luma 13. Ilum werage kood west of any alatity $\mathbf{A . C}$, rallio (-hls is th 14. Ilug in recentarles for all conserved akelite olugs includ $\begin{array}{ccc}\text { 15. Ioser consumption } & 02 & \text { watts:-Power } \\ \text { ipply required. } 105-120 & \text { volts. } 30-60\end{array}$ 16. Six font superion 16. Six foot super service nower connection with unbreakable rubber attacning nlug. flonewable Glass Fuse in power supply liack protecting plate entirely eneloses of amplifier.
19. Inple brori-ion for rentlatien,
20. Rich Baked-on Black Enamed
21. Werall height (without tulies) $8^{1 / 4}$ (leptic $4^{3 / 2}$ " $16^{\circ r}$ long.


Portable Electric Dual Speed Phono Motor
 tmadels of tadelek Amblifiers and other impedance innut circuits



$\$ 2550$

\$2970


Portable P.A. Speaker for 6 Watt Portable
 Purticulary designed for use as second speaker with the above
 10 watt. without overloading. Invut Trathsformer matenes output of allove loptable Amplitler when user with speaker furnished
in syatem. 50 ft . rubber covered super-service cord with polarized in sisetem. 50 ft . rubber covered super-servise ferd with tharized
pluy for guick connection to Anplifier supplied. Speaker I'lug
 nect inoorrectly. No clanges in wiring necessary. Case equipned with metal corner tuards, leather hankile, copper screen of protect
speaker, and button Fabrikoid flap cover openlng for pro14 E 10667 -I ist. $\$ 25.00$. I4EIO667
YOUR PRICE
\$14.75


POWERACK-110 Volts A.C. In Any Car


A complete power plant that runs directly on the motor fan belt. Generates $30 / 120$ whit $50 / 180$ cy. A. C. for the oberation of A. C. ladio Sets.
1 . A. Ampliffers, upholstery vacuun rleaners. portable fans. neon signs, ramp lighting. ete Within lis bower riting. Espectially sultable for
sound irutks and motor boats sound trueks and motor boats, I'ositively no drain on battery. No commutitor or slip rings: Ball-hearing rotor. Very ruggedly ronstructed.
Easy to install. Comes complete with forged Eisy to install. Comes complete with forged brackets for mounting on engine block, double able with rheostat and switch. and fuld directions for


I 4EI0802-100 Watt Model.
ILISt, $\$ 45.00$
YOUR PRICE I4E10803 YOUR PRICE
$\$ 38.22$ NOTE

NOTE: These are the new Model Poweracks the output of the charging current from both third brush. Much better voltage regulation than previous, cheaper models which are suit able only for the operation of neon-signs. For those who require Powerack for neon-advertising and other uses not demanding good voltage regulation, the less-expensive Powerack models are available.


## Janette Rotary Converters

 Compact. dynamlally hal.anced rotary converters anced rotary conserters
which change direct current to 110 rolt. 60 cycle
A. A.C. radio sets and alb-
pliances within the nower ranise of the conserter Laninuted stect pole Diceis and stce! frames,
Perfect Radio Reception
These converters are equipped with a special
ilter whtels prevents renverter interference from Tilter whters prevents ronverter interference from with radlio. dedurt so..0n if tilter is not wanted.

 $\begin{array}{lllll}14 E 10817 \text { CA- } 18-\mathrm{F} & 150 & 8.5 & 46.161 & 31.56 \\ 14 \mathrm{E} 1818 \mathrm{CL} \\ 14 . \mathrm{F} & 300 & 15.0 & 64.50 & 44.25\end{array}$ $\begin{array}{lllrr}14 \mathrm{E10819}(\mathrm{H} \cdot 12-\mathrm{F} & 400 & 19.0 & 99.00 & 67.91 \\ 14 \mathrm{E} 10820 \mathrm{C}^{\circ} \mathrm{F} \cdot 12-\mathrm{F} & 600 & 24.0 & 133.00 & 91.24\end{array}$
110-115 V. D.C. to 110 V. 60 Cycle A.C.

Stock Vumber 14 El 10830
$14 E 10831$ 14E10832 IUE 10834 14E10834

## Carter Genemotor "B" Supply

1

## driren heaters. auto

radio, elgar llghters, spot lights and sleet shidelds often tax the generstor heyond its normal capacity, car. No holes to drllt. Altach the clamp-on receptarle to the dash and connert one lead to the ann charger in the garage and jlug it Into the dash receptacle at night. Will boost up the battery overnight. No more hari starting in cold weather.
Start of in a tlash every morning. Charges radio
batcriaz ton for $105-190$ rolt $50-60$ cycle
 A. to $3 \frac{1}{2}$ A. as fully charged. $1 \mathrm{n}-$ put 115 V. 50/50
Cy. Polarized clamb-on reecp-
tacle for dash,
dell Elkon dru-dis

## 4E10858-tist. \$115 <br> YOUR

Mallory Elkon 5 $1 / 2$ Amp. Charger


## 3E8570-

our phice..... \$2.05
nereases the charging rate of the ear generator by cutting out 3rd brush each time the radio is turned on. This syatern apolds the generator set high as is the
the radlo switch. When set fos turned on a high resistance relay closes a swltch shunting the re-
sistur in sories with the third brush of the erator All necessary hardware for installation and complete instructions.


RCA.Victor MAJESTIC PHILCO General Elec. 66 6F, $9 F, 10,5 T$ While these Vibrators are the exact rellacuments
physically. for the Sets listed, they are bik Immrovements orer the orikinals electrically and will give long, trouble-free scrylec.

## 

$\frac{M}{\mathrm{~N}_{2}}$


Page 124

## Pioneer Gen-E-Motor Compact Units

To Replace Vibrator Type Auto Radio " $B$ " Units


Replaces Vibrator Units in
Following Auto Sets Alrline
Arcadia
Audiola Belmont
Bosch 150.160 Cadillac
Ford 114
Gulbranson

Operates from 6 Volt Battery - Guaranteed for One Yea - Noise-free in Operation - Extremely Easy to Install Auto Sets
Install one of these rotary Units in the place of a faulty or inoperative tibrator type " "13" supply and note the improrement in the oreration of the Auto Radio. Provides a unl form voltage and will eliminate nois. and weak recention prevalent in most vibrator type Auto Recetvers. No circuit rhanges necessary to in high, $51 / 2=$ wide, $27 / \mathbf{y}^{\prime \prime}$ deep. Re guires no adjustnicnt, no attention no olling, and no servicing. Uses original filter system of vibrato Unit which it renlares. In shielded metal case. Complete Instructions for Installing furnished.
$4 E 10198-M o d e l ~ J W-25$, delíver 3.8 Amps. List. $\$ 13.00$. $\$ 7.6$ YOUR PRICE
$\$ 7.64$
4E1O199-Model JW-so. delivers 4.2 Amps. List, Si3.00. YOUR
PRICE
$\$ 7.64$

## Pioneer Auto "B" Supply

Motor Generator-Dynamotor New compaet dynamotor type Auto " 1 B ' supyly. Motor generator operates from the 6 volt D. C. current kenerates smiooth fitered humless output operates the radio with plenty of "puach" and power. Reduecd in size the new "Pioneer" will fit under the seat of most cars. Miay be
mounted in any mosition. Size overall $27^{\prime \prime}$ high, $53 / 3^{\prime \prime}$ wide $5 \%$ long. Yeighs only 10 lbs lligh olage outpul-200 volts at 40 milhamperes will and ball leargings auto sets. New type brushe oiling. Terminal strip provides cas;' means of cased and shielded hy formed steel housing

| $\begin{gathered} \text { Stock } \\ \text { Number } \end{gathered}$ | $\begin{aligned} & \text { Output } \\ & \text { Volts } \end{aligned}$ | MilliAmps | Inter. Tap. | Dra | $\begin{aligned} & \text { List } \\ & \text { I'rire } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { 4D10190 } \\ & \text { 4D10191 } \end{aligned}$ | 180 200 | 40 | None None | $\begin{aligned} & 1.95 \mathrm{amps} \\ & 2.75 \mathrm{amps} \\ & \hline \end{aligned}$ | $\begin{array}{r} \$ 18.00 \\ 18.00 \\ \hline \end{array}$ |  |
| 4D1019 4 Cl 1919 | 180 135 | 30 30 | ${ }_{67} 90$ | li.95 amps | 18.50 | S10.7 |
| For 32 Volt Farm Plant 4DIOI94-135 volts at 30 M. A.: tapped at $67 \frac{1 / 2}{}$ volts. List l'rice, \$23.00. <br> YOUR PRICE |  |  | Special for Sound Trucks <br> Standard 6 volt Input. 12 or 32 volt supplied to order. <br> 4DIO196-265 rolts at $75 \mathrm{M} . \mathrm{A}$.; tapped at 75 V . List. $\$ 31.00$. <br> YOUR <br> PRICE |  |  |  |
| 4010195-180 volts. at 30 M.A.: tapped $22 \frac{1}{2}, 45,671 / 2,90,135$ volts. List Price, $\$ 25.00$. YOUR PRICE <br> \$14.70 |  |  |  | 4DIOI97-300) volts at 100 M.A. tapmed at 100 volts. <br> List, \$34.00. <br> YOUR PRICE |  |  |



## List Irice, $\$ 17.50$. Complete-including cable

YOUR PRICE (Any TYDC)
When ordering for Sets other than those specified above give make of Set with number and type of tubes used, also "B" voltage Mallory Replacement Elkonodes

## Self-healing Rectifying Elkonodes for all Elkon Eliminators

4 E1O120-For all Type l0s 4E1O123-lior all Type 13s 4 EiO121-For all Type 11 s 4 EIOI22-For all Type 12 s List (any Type) $\$ 7.00$
YOUR PRICE EACH


## New Carter Super Genemotor

With Built-In Filter-New Compact Sixe
 Nollest Nuto Eillminator made. destan motor field coils used for chokes. All niter condensers are lofilter needed. Ideal for replacing unsatisfactory "B" Eliminators and "R", batteries. liacy to install, nothing to take apart and put together. Will run in any position. Gives the old car battery. Nep Operates on 6 volt neyer heed olling. Slze $27 /{ }^{\prime \prime}$ " high tride. 5 long. Fully guaranteed 4E10140-Model 1:80A? List 4EIOI 4I-Model IGisAS S16.50

## s970

\section*{| Sitock | $\begin{array}{c}\text { Model } \\ \text { Number }\end{array}$ | $\begin{array}{c}\text { Input } \\ \text { Volts }\end{array}$ | $\begin{array}{c}\text { Vitput } \\ \text { Volts }\end{array}$ |
| :---: | :---: | :---: | :---: | <br>  <br> Carter Sound Truck <br> Genemotor <br> For 6 Volt and 12 Volr. Input <br> The most reliable and "ronomical power sumply for ous rating Class "A" designed espectally for hicition Motar ontput. No input filter choke is furnished as none is required unless a radio is operated fom salue battery. Ball-hcaring motor and output iliter for connecting and full dircctions furnished.}

For 6 Volt Input

| $\begin{aligned} & \text { stork } \\ & \text { Number } \end{aligned}$ | $\begin{gathered} \text { Norel } \\ \text { Number } \end{gathered}$ | Ounput Volt | $\begin{aligned} & \text { Out put } \\ & \text { N. A. } \end{aligned}$ | Draln | $\begin{aligned} & \text { 1.ist } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { YOUR } \\ & \text { PRICEEA. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { 4E10130 } \\ & \text { SE10131 } \end{aligned}$ | 3500 3100 | 350 300 | 100 100 | $\begin{aligned} 10 & \text { Amp. } \\ 9 & \text { Amb. } \end{aligned}$ | $\left.\begin{array}{r}\$ 3509 \\ 35.00)\end{array}\right\}$ | 8 |
| 4E10132 | 5075 2505 | 265 225 | 75 65 |  | $\begin{aligned} & 32.50 \\ & 3.50 \end{aligned}$ |  |


| For 12 Volt Input |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Stock } \\ & \text { Number } \end{aligned}$ | $\begin{aligned} & \text { Model } \\ & \text { Number } \end{aligned}$ | $\begin{gathered} \text { Outprat } \\ \text { volts } \end{gathered}$ | $\begin{aligned} & \text { Output } \\ & \text { M. A. } \end{aligned}$ | $\begin{gathered} \text { Baters } \\ \text { Drain } \end{gathered}$ | List Price | $\begin{aligned} & \text { YOUR } \\ & \text { PRICEEA. } \end{aligned}$ |
| $\begin{aligned} & 4 E 10134 \\ & 4 E 10135 \end{aligned}$ | $3500-8$ $31000-13$ | 350 300 | 100 100 | $\begin{aligned} & 5.5 \mathrm{Amp} . \\ & 4.5 \mathrm{Amp} . \end{aligned}$ | $\begin{array}{r} \$ 37.5101 \\ 37.50 \end{array}$ | $\$ 2205$ |
| 4E10136 | 2565-13 | 22.1 | 75 | 2.5 Amp. | 32.50 | \$19.33 |

## Multi-Tap Auto "B" Supply

$U_{p}$ to 250 Volts 50 M.A, "B"
Power from 6 Volt Car Battery An haproved full-wave ribrator 'Thje " B 90 F., 135 F .1180 F ., or 500 r . at rarious taps-sultahle roltages for servielug Vibrator has over size contacts for lons llfe. Floated in :ponge ribber to insure yuiet operation. Free from hum and it F disturbances. Eil.ctrostat wally shielded transformer. All chokes and rondensers of tinest quality. Housed in stcel cabinct
 complete with conuerting eables and instructions reads for quick, easy installation


List, $\$ 15.00$. YOIJR PRICE
\$8.82


## RADIART Auto "B" Supply

Prorides constant, quiet, dependable " $\mathbf{B}$ ' curren for any Auto Set from the 6 volt storage battery put of 180 roles at 45 it delivers a maximum out 2.2 amps. Prom hattery. Voltake is alwaws peak and well filtered. Entirely automatic No meak barts. Reruires. no attention. Gibrictor No rotary parts. Reguires no attentlon. Vibrator sealed in in cadmium plated steel case size $7 \times 3 \times 43$ IIoused Easy to Install. Complete with size $7 \times 3 \times 43$ inches

4E10100—List, $\$ 17.50$
YOUR PRICE

## Emerson Auto "B" Supply

 Completely encosed in dust-pronf stee asc. Full size fiter in hase. Motor-Generamorbing bushing tasc thriugh rubber shockat 40 i. A. A. Drain on stcrage bat-lery only ${ }_{2}^{\text {Amps Has lmw roltane }}$ taps, at $671 / 2$ and 40 V. Orrall size, Electrical eficlencs aliout tio C , high. 4DIOIOI-List $\$ 19.50$.

# Radio Batteries High Grade-Full Voltage 



These wonderful, oversize, long life batteries are made by the inakers of one of the finest and best known brands. Buy this private label lattury of us and get exactly the same quality that is offered in a well known advertised battery, but at our bargain pricea real saving for sou. Actual usage will more than prove our claims
Every battery is full voltage, positively fresh stock and will rive extraordinary long servirt. Thes are ruggedly built and thorourhly tested. Eatch cell is sealed individually before being pitched, hiving full insulation against short circuits. Compact. space-saving and hum-free-a line that we are poud to recommend and that you will be pleased to handle

## 

six for ..... \$4.95

An exceptionally fine quality and powerful 45 volt "B" batters. A big. burly batery which is sold under an adie tised brand at a much higher price. Il hile low in price, do not confuse this hattery with many inferior batteries selling elsewhere at the sane or even hirher prices. These are rualIty latturies. Size: Ht., $7^{\prime \prime}$. Wd., $8^{\prime \prime}$ Deptn, $3^{\prime \prime}$. Shipping weight, 11 lbs.

## Giant 45 Volt "B" \$ 32 $3 D I^{\prime}$-Iast. $\$ 3.75$. YOUR PRICE. Each

## six for..... \$7.18

A giant in power. Almost twice the capacity of the standard 45 -volt size. Especially made for the multitube sets that draw more current and require an extra heavy, oversize battery. Jou and sour customers will find them most economical in the long run. Extra protits for you. Upright only. Size: It. 7" Wd. $8^{\prime \prime}$ Dpth, 4". Shipping weight, 14 lbs'


22 $1 / 2$-Volt "B" \& "C"


A quallty battery that will give long, uniform current flow
Ifeavily stock. Tpright only. Size, Ht
 $2 C 14$-List. SI. 75.
YOUR PRICE, Each.. $74 d$

No. 6 Dry Cells


These Dry Cells are made under the most risid built up with the highest grade materials. High amperage, $11 / 2$ volts. They have remarka ble strength and lastinf qualities. Meets every
radio need. Wt.. 3 lbs. $\left.\begin{array}{l}\text { 2CIB-NO. } 6 \text {, List, } 60 c . \\ \text { YOURPRICE, } \\ \text { EACh }\end{array}\right\}$ Each

Ten for.......\$1. 98

serpice. Cost per hour ong life and cconomical Uses standard Shipmed ready to use. Hird ruhber case with
 high orerall


## Elkon 5,000 Hour

"B"' Rectifier
Used to Replace Tubes Heplaces rectiffer tube in "B" Eliminatur. Bry. solid. rugred. self-healing.
Jutr remlace the prapile 1.000 hour tube "lth thin surdy si, 000 haur rectifier. 3E35-FOr BHy tye tubes. YOUR PRICE

79 c

Eveready Air Cell "A" Battery


For "Air Cell" Receivers
An air depolarized, constant voltage. non-rechargeable primary battery. especially designed and guaranteed ONLY' for use as the "A" Battery for Alr tell Receivers. High canacity of 600 ampere-hours is sufficient for at least 1.000 hours operation. At an arerage use of 3 loours daily, it will take a whole sear to use up the 1.000 hours battery life. Uses a lifuld electrolyte, but is shlpped dry. Can the activated for service by flling with water at any thme after manufacture and still deliver its fult quota of amnere-hours. Length $131 / 2$ inches: width. $6 \frac{3}{3}$ inclies; height overall, 10 inches: weight dry, 25 nounds; filled with water. 37 pounds.

S.C.D.C. Set using un to 10 tubes. Draw and heivy duty load. Fomploys tuned interrupter and heary duty nower transformer. Fully filtered ar alient operation on Hidlio. Will also operate small i.C. household appliances such as induction fars. Arink mixers, etc.. though not recommended for heating amhlianres or electric clorks, Onty one moving Dart, Requires no olling. No nolarity t olnserfe. Has recentarle for Radio blug. Off-0n
toggle switch and variahle innut adjustinent to $\mathrm{com}-$ togrle switch and variahle innut adjustment to comwensate line arom
witie $33{ }^{33}$ hirh.
$4 E: 0845-\mathrm{L}$
YOUR PRICE
32 Volt "A" Eliminator
For Farm lishting Plants
3E4456-For ${ }^{2}{ }^{2}$ roll


- You price $\$ 6.50$.


## \$3.82

Connects to 32 molt rent to proper noltage for 2,4 or 6 vole tolues. For any set using not orer amneres "A wrrent not neer 12 thes of 36 series, any num ollage. IIeter indicates foltage to set. Adjustahile resistance. Switch to turn current on and or. 6 felt cort with attaching plug. Connections for Genemower.

"A" Eliminator for 32 Volt Farm Plants

## When plugged in 32 volt socket will deiver 6 volts D.C. Ellminates storage hatery and rharger. Sjecily liot lipht is used onsider it as one 201a tube. Nothing to wear out or replace. <br> $3 E 4450$ Anlp. <br> $3 E 4450$ 1/4 for 5-201a or edulralent 3E445 112 for 6-201a or equivalent 3 E4453 \% for 8 -201a or equisalent <br> List Price. \$2.00. <br> 

## Ward Leonard Battery Charger

 For 32 Volt Farm Plants
## Charges 6 V. Storage Batteries

 Vitrolm Resistors with slandard Edison arrew basc for use in serdes with radio and ather type storage batteries while bicingcinarged from 32 vole farm lighting plants. cingred from 32 volt farm lighting plants.
One resistor reguired for paich 3 -cell bat tery under charge. Has nany adrantages aber lamp-banks because it is especially devigned for the service and has a bermanent ohmie value. 6.4 ohms. 140 watts. SE44 M5. List, \$2.25.
$3 E 4455-$
YOUR PRICE
\$1.32 분

## Readrite Battery Tester

Nickel plated brass cases, with glass face Long insulated cords, with contact prod on each end

> 3E2695-Storage Battery Tester. Indicates condition of


EACH 54C
 Battery Test Meter. 54 CA
EACH
3E2697-0-50 volts: 0-40 amperes.: Combination

EACH
82C

# BURGESS BATTERIES 

New Reduced Prices! Our Large Stock and Volume Sales Insure Your Getting


## Super "B"

No. 21308-45 Volts
3C20 Hetail Price $\$ 2.50$.
YOUR PRICE, single lots $\mathbf{\$ 1 . 8 9}$ IN FIVE LOTS. Each.
. $\$ 1.71$ Helkht $8^{\prime \prime}$. Width 8 y" Dept to
 maximum electrical capacity for sets of hlgil current drain. Extremely rugred construetion. The size that real radio
fans want. Shelf life well over one year.

No. 22308-45 Volts
$3 \mathbf{C 2 1}$-Retall frice $\mathbf{5 1 . 9 5}$
$\$ 1.48$
$\$ 1.34$
YOUR PRICE, Sing!
iN SIX LOTS. Eant
Depth $3 \%{ }^{\prime \prime}{ }^{\prime \prime}$
Wetght io nounds. innals

illators, Ohmmeter,
Sets and Portable

No. 5308 45 Volts
$3 E 32-$
$\$ 1.15$.
YOUR PRICE Single Lots 86
$\underset{\text { Each }}{118}$ LOTS OF FIVE, $: 3308$ is standard equipinent in hun-
dreds of
test instruments. it in matches in heikht and depth the standard No C. 1 battery and is about twice as

"C" for Test Equipment
No. 5156 22 $1 / 2$ Volts 3E30-Hetall Price

YOUR PRICE
Sinale Lots 64C
IN LOTS OF FOUR
Eaca

|  |  |
| :---: | :---: |
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|  |  |
|  |  |
|  |  |
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|  |  |

The longest life TEN, Each 24 c
mate-service of two rears not un-
usual with this sturdy litlle power
unit. Used in miany test osillater
unit. Used in many test oscillators as the source of flament current. hut Should not be expected to suptrly more service. Thesp batterles are aroduced with remarkable uniformity and are excellent in test equipment. Fou Hyz volts. Slze $3^{\prime \prime} 4^{\prime \prime}$ "l 3 3"。

Ohmmeter " $C$ "
No. 5360 $41 / 2$ Volts

3E33-Retail 1 P | YOUR PRICE |
| :--- |
| Single Lets |
| 1 | IN LOTS OF TEN,

Each in Jewell and west
Tand in Jetwell and Weston Analyzrers ang in majority of olmmeters refuiron Internfitant 1 milliantere life Tsed In Zenlth. Overadio. and RCA battery radio sets as "C" bias. Size


## Test Set and

## Flashlight Batteries

FLAT 532-4 $1 / 2$ Volts
Same Size as Eveready 703

 tiant springs on top. Re t:ill Price 30 c .
FLAT 4.32 Same Size
3C37-3 rell. Size $2 \% \times 2$. Brass ontact springs on top. Hetall lotice YOUR PRICE
In Single Lots
$20 C$

## Uni-Cells



For Flashlights or
No. 5540-71/2 Volts
$3 E 29-$ Ret al
Price. 55 .
YOUR PRICE Single Lots

## 414

IN LOTS OF
TEN, Each. 37 c
For $71 / 2$ rolt ohmmeters and as a seleclue source of "+"" Bias. Choire of
$11 / 2,3,4 / 2$, and ${ }^{1 / 2}$ wolts. Brass posts and one flesible terninal, $23 / 4$ "x

## Standard "B" Batteries



No. 10308-45 Volts 3C22FRetail
YOUR PRICE, Single Lots $\$ 1.43$
IN LOTS, OF SIX, Each....\$1.30
 tended for use on sets drawing oy ${ }^{2}$ one year. $\mathbf{N o . ~ 2 3 0 8 - 4 5 ~ V o l t s ~}$
 Single Lats IN LOT Height. $8^{\prime \prime}$. Width $81^{\prime \prime} "$ Depth o give +2210 and +15 volts. Oc cuples minimum table space. Hecommended ior sets drawing 10 milliam-
ineres or more. Shelf life over one
vear


No. 2156-221/2 Volts

## $3 C 26$ lietail YOUR PRICE, <br> YOUR PRICE,

Single Lots
IN LOTS OF FIVE, EACh... ©7¢ Helght . 1, "\% Weight "\% pounds. Taps to give The ff tife over volts. "Nias 'raspe, be used as grid blas or "CC" battery

NOTE:-Dimensions are given on all batteries in the following order:-height, width, depth. Dimensions are overall and in. clude kerminals on top of batteries.

## Burgess <br> Ben Hur Batteries

Built lis Burgess- f fine precisely constructed fand the famous lisurgess long life mans the famous murgess long ife
mix. finest grade insulation frovides full pro.ection against internal sinorts. Tleal for service reblacements. Lach bnttery carries the lsurgess na

## No.281Standard 45volt"B"

Ifipright tyne with $22 \frac{1}{2}$ and 45 volt afl., I 3E43-YOUR PRICE in u PKG, OF ${ }^{6}$,
NET EACH

769

## No. 1081 Heavy Duty 45 Volt "B"

Tpright type with $221 / 2$ and 45 rol denth 4\%" Weisht 12 H.. 2 PKG. OF SIX, \$1.01 EACH


No. 1040
3 Volt "A"' Battery Pack For use with 2 volt radio revelivers Requires no reenarking: no sertionk no flling with water; nothing t.s shill:
no crepping or dangerous liquids. Whil bire 400 hours of service at it hours er day on $1 / 2$ amnere load. Has remarkable recunerative powers. Wiasy t

3 E40 Retall Price, $\$ 3.20$
YOUR PRICE
$\$ 2.32$
in lots of four, Each . $\mathbf{5 2 . 1 1}$
Auto Radio


## 45 Volt "B"

No. 2305
3 C 34
Retall Price

YOUR PRICE
Single Lots
Height ${ }^{\prime \prime}$ O $W$ Six. Each;... 1.34 Ws". Welight 19 weunds. Terrinnals to gre $+2-2$ ancl +33 Solts. Gives Hulle rullo sets shelf lito buto

No. 21305-45 Volts
3C35-hetall Price $\$ 3.35$.
YOUR PRICE, Single Lots $\mathbf{\$ 2 . 5 4}$
IN LOTS OF SIX. Each .... 52.30 Hepisht w, whe "15 pounds. Termidnals to tre $+22 \sum_{2}$ and + thy volts. Fir extra

A Battery-6A
Dry Crll
Standard $1 / 2$ Iols 3C31-lietall prive 40c YOUR PRICE, 306
SIngle Lots IN LOTS OF ${ }^{2} \mathfrak{5}$
Each ….........27c adints adants it for use on the hlament circuit of a lataio $\underset{\text { covers rander didy during }}{ }$ size $21 / 2 x 6$ inches.


No. 21 Unit Cell
Fits standard and tubular flashlights. 3E46-

$41 / 2$ Volt "C" Battery


## $\frac{\text { ngle Lots ........ } 20}{\text { No. } 6 \text { Dry Cell }}$

Gencral purnose ipnition, twlephone
and "A" battery Mt. 6 fa". Wht. $21 / 2$
3E48-YOUR PRICE in urit
Pkg. of 25 .
EACH

Elkon Replacement


## Rectifier

replace nient unit for Majestlc also be used on follow－ ing eliminators：Mayo－ lian，Elkon，Philce． Wclister，Knapp Gen－

cral Inst．，Metro，Fada Hernard，Sentinel，and liriges \＆stration．
${ }^{\text {Amp．charger．Shpe．wt．．} 31 / 2}$ Lus． YOUR PRICE
\＄3．73

4hpme$\underset{\text { Manufac－}}{\text { turers＇Type }}$ Rectifying Unit
The＂B＂＇B－L full wave pertifying elements are use of manufacturers of varions efpummen refulifing rectified currents， Mate for such devices as dy－ namic spenkers，
railroad slgmals， $\qquad$ battery chargers．

Type B－I2 is tor such＇A＂＇powers as Acme，
Sterling．Arco stewant．Frince．Galvin Sterling，Arco，Stewat，France，Galvin，Greene－ Brown，ete．i and for such chargers as Braun，
Knight．Villey，Webster，etc．Output 1 amm，at Knight．Jalley，Webster，etc．Output 1 ams，at 3C60 Tyue $\mathrm{B}-12$ ．volts．

## \＄2．65

Tybe＂B＂－16 is for（ireene－Brown type $D$ ， Valley tyme，Dita，etc．Output utchman，webser， $\begin{array}{cc}\text { athp at } \\ \mathbf{3 C 6} & \text { volts．} \\ \text { Type } \\ 5-16\end{array}$
List，$\$ 5.00$ ．YOUR PRICE
\＄2．94

## Elkon 5，000 Hour ＂B＂Rectifier

Replaces rectlfler tube in＂ $\mathbb{B}$＂Flimi－ nator．Dry，sollit，rugged，self healling， Just replare the fragile 1.000 hour tube With this sturdy 5,000 hour Flkon Fill
and the phange is made．Not affected b accidental surges or overloads． 2C85－For＂IB＂Eliminators using hastheon 18
List．$\$ 6.00$ ．
YOUR SPECIAL PRICE
794


31／2Foot 4 Conductor Cable
rubber curered
ductors．cabled qether with a cotion brald overall．Stand－ ard batters elibs are
attached on two ends．
 302330
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14¢

Porcelain Sockets Tor Candelabra Base

3E7116－ YOUR PRICE，EACH

Quality worcelaln sub－manel socket for candelabra base neon whow lamps．top of socket mounts hush rs，continuity esters ant other test apparatus．

## Edison Medium Screw Base

## 3E7117－

 Sub－panel Mounting16c
Poreelain suli－panel socket for standard Edson base neon flow lamps．Name style and mountlong is socket 11 sted
ing
connections

## Cleat Mounting

3ETIIB－
（4） Cleat mounting Edison base nor－ celain sorket，May be mounted work screw terninals allow easy changlng of hook－ups．

# Tungar Type Rectifier 

 Tubes
$3 E 865-A . \quad 0.6$ amps．． 7.5 D．C．volts．Used
infetly in sinall chargers for trickle charging 6 chietly in sinall charyers for trickle charging 6
volt batterites．Fll． $1.8 V .-6 A$ ． List I＇rice $\$ 4.00$.
\＄175 YOUR PRICE $\qquad$ 3E866－B． 2 amps．． 75 D．C．rolts．Has 3 connection serew base，is used in small home charg－
crs．Fll．2V－12A．List I＇rice $\$ 4.00$ ．
YOUR PRJCE．．．．．．．．．．．．．．．．．．．．．．．．．．．．
$\qquad$ 4Bey
Anode con－ 3E867－C． 2 amps．． 30 D．C． $\begin{gathered}\text { ans in older type }\end{gathered}$ single battery chargers．List Prlce，$\$ 4.00 . \$ 1$ ．$\$ 0$
YOUR PRICE ．．．．．．．．．．．．．．．．．．．．．．．$\$ 1$ ． YOUR PRICE $\qquad$ 3E868－D． 6 amps．． 15 D．C．volts．A low rolt－ age lults used in chargers having a fixed Piputa
also in Fixciter Lamp Rertifiers for Motion Picture applications．Fil． 2.2 V ．－I8 Amp． Clst I＇rice $\$ 8.00$ $\qquad$
6 amps． 3E869－E， 6 amps．， 100 D．C．volts．For usc In all tybes of chargers hitring an adjustable con－ trol，sinste and three phase rectifiers for low in－ tensity arc projectors and exciter lamb rectifier har－
the adjustable taps．Llst I＇rice $\$ 8.00$ ． YOUR PRICE
\＄3．95
3E870－F． 15 amps．， 65 D．C．rolts．Can be ustd in certain tybes of special withersingle and three phase rectifiers for supplying current to low intensity arc projectors．Specially seasoned for mo－ tion thrture rec
YOUR PRICE
$\$ 8.90$
（0）Neon Glow


## Lamps

Genuine G．F．neon gas lamps that glow with a brillant orange－red radiance．Both elcctrodes klow on A．C．One remains dark on D．C．Op－ Used in tube checkers for Inter： A．C．or D．C．for continuity，leakage，and high re－ sistanee tests．Ised as inlot or signal limp on all in autoradio noise elimination work Volages disted are minimum striking voltage：minimum perating voltage may be approximately 50 volts lower for A．C．or 10 volts lower for D．C． 307！19－MIdget $1 / 4$ Watt．Candelabra Base Pear Shape Clear Bulh ${ }^{2}$ didameter．deplace－ neon short tests．For $105-125$ elts． 10 employing YOUR
PRICE，Each
36¢
3E6912－Medium $1 / 2$ watt．Standard Edison medium serew base．Clear Globular 13 ulb， $11 / 4$＂ diameter．Electrodes shaued like half eylinders． Approximately $5 / 100$ candle power．For $105-125$ rolts A．C．only．

366

3E7（20－Medium $1 / 2$ Watt．Same as above but with skirted candelabra base．
YOUR PRICE，EACH ．．．．．．．．．．．．．．．．．．．．．． TEN FOR ．．．．．\＄3．65
3E69II－Medium I watt．Standard Edison medium screw base．Ciear Globular IBulb， $11 /{ }^{\prime \prime}$ dianeter．Approximately $5 / 100$ candle power． Central cylindrical electrode surrounded by wire
spiral electrode．For $105-125$ volts $A . C$ ．or 1 ．C．
 EACH
TEN FOR ......s3.2

3E7122－Same as above with skIrted candelabra base．A．C．or D．C． $105-125$ volts．
TEN FOR .....\$3.25
$3 E 712$ I－Medium I watt Standard Edison medium screw base．Chear Globular liulb， $11 / 4$＂ liameter．Electrodes shaped like half cylinders．
For 200－210 volts A．C．or $1 \mathrm{C} . \mathrm{C}$ ． YOUR PRICE，EACH
$\$ 3.25$
3E6910－2 $\overline{\text { Witt }}$ standard Eallson medlum screw base Clear wear Shaped liolh．Diameter $1 \%^{\prime \prime}$ Flectrodes in shape of split disc． Approx．1／2 candle－power．For 105－125 volts A．C．
or I．C．Most ponular size for night－light，ad－ yertising，exit indicator，stroboscope，and signal use．

> TENFOR ........ S4.OS

3E7123－Same as atove with Red Bulb．

## YEZI

PRICE，Each
TEN FOR
49C

## Replacement Celis <br> for Wet＂B＂Eliminators



## FOR USE WITH PHILCO－

WILLARD－USL＿IESTA
and EXIDE ELIMINATORS
For replaring exhausted cells in
 with electrolyte and screw top hold－ ing two electrodes．Ready for instant
ind service．Exact slze used In elimina－ tors listed above．Guaranteed by the manufacturers to give satisfactory serv－ ice in 13 eliminators designed for 3C65－List，per set of four，$\$ 4,00$ ． YOUR NET PRICE．
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## Wet Cells for＂A＂Eliminators <br> CORRECT TYPE <br> FOR PHILCO SOCKET POWERS <br> For power units using chectrolytic rectifiers 3C66－Type AA．Large jar for 6 Size $7^{\prime \prime}$ hifh．width $6^{\prime \prime}$. <br> 

 depth $4{ }^{\prime \prime}$ ．FLalst．$\$ 4.00$ ．
YOUR PRICE $\qquad$

## 3C67－Type A．8＂high by $4^{\prime \prime}$ diameter．Small

 jar for 4 －volt units．For all 4 －volt l＇hilco Elim－ List．$\$ 3.00$ ．YOUR PRICE\＄1．39


## Battery Terminal Connectors $3 C 2449$

3 C 2449
YOUR PRICE，Each．． 18 C TEN FOR ．．．．．．．．．．．．．$\$ 1.69$ storage battery to adapt it for use with radio set Has binding sereu for connecting lead wire per－ tect contact alvays． for

Universal Battery and Radio Clips


No．45－Per Wee Clip．For Radio Test Work Length on both jaws which mesh．Jaw spread 3／8＂ 302448－Each．4c
TEN FOR
No．48B－A small clly for＂B＂radlo hatteries and general use．Teeth on both jaws which mesh． 10 lt．spiting．Jaw spread，品 in．Cadmium plated， 3C2440 long．
3 C 2440 －rositive（ + ）．
3C244i－Negative（一）．
Each 6 c
33 C
Tyne $21.1-25$ amp．Canacity．For radlo sterage A batteries．Teeth on one daw and notch on the other；fits in．Lead coated． $37 \%$ in long spring．Jaw spread， 42 －Postive（ + ）． $3 / 8 \mathrm{in}$ ．long．
3C2443－Negatire（－）．
Each 8 c
．Per box of 10 ．
65
Type 21A－50 amp． 33 lb ．spring srotected by copper shunt．Jaw spread， $11 / 2$ in．Lead coated． $37 / 6 \mathrm{in}$ ．long
$3 C 2444$－Positive（ +1
3C2445－NegatIve（一），
Each 16 c ．
er box
10．\＄1．35
Type lla－l 100 ampl．Canacity， 38 Ib．spring．
Jaw spread， $11 / 4$ In．Lead coated， $57 / 8 \mathrm{in}$ ．long． $3 C 2446$－Positive（ + ）．
$3 C 2447$
$3 C 2447$ Negative（一）
YOUR PRICE，Each．

## Rubber Insulators

For Use with Universal Battery Clips


Protect against clectric shock．Furnished half ed，half blaek to indicute polarlty． 302424 －For 45 － 10 for

## Auto Radio Running Board Aerial

4010179--Last Price $\$ 3.25$ your price<br>ST57

## RUNNING BOARD

This Flap Increases Pickup $200 \%$
New weatherproof aerial designed to mount under the running board of any car. Aerial wire is stribs $37 / \mathrm{s}^{\prime \prime}$ wlde. Two surips are mounted parallel strips $37 / 8$ " "ide. Two strips are mounted paralle
 tach portion of each strip extends to a joint just

## Auto Axle-to-Axle Antenna



Spring Tension_Waterproof Rubber Casing
Low mounting position bropgdes great capacity offect to *round Gives utinust sensitivity, with clear
sinals with in minmum of interference. Eilectrosignals with as minimum of interference. Electro-
slatic shifelding effiert of rar frame and boots tends lo redure disturbance of ras framed and cars. Con sists of closely woven wire webtuing moulded in toukh wateritronf flexible rublier 6 ft. ling $x_{\text {a }}$ i
inches wide. Two stronk web fabric straps with seif-grip tuckles for attaching. A strong spring 4 CEO 80 -list. 52.25 . Your price
\$1.33


4D10182-List Price, \$1.25.
YOUR PRICE
49C
Metallic conductor, enclosed in $\begin{gathered}53 \text { Inch lone } \\ \text { in }\end{gathered}$ wateruroof fabric envel
or chatn on both onds.


An auto antenna system for All Conditions. Elim inates interference and increases volume. Can be duirkiy nitached to ehassis of any cilr, Hlustration of: 1-Antenna impedance matchlnz transforner. Iof: 1-Antenna Imbedance matching transformer.
receiver impedance matching iranstirmer. 10 it "Nostat" shiclded transmis slion-Itine. Mho" auto antenna wire. 2 rear axle insulator as Mho auto antenna wire, rear axilet insuator aty
 sary hardware for conneeting Included,

## Lynch Kit A-2

Includes the antenna and receiver impedance match-Sision-line Hardware for connecting, Wil reduce interference and raise the volume if BE8527-list Price, $\$ 5.00$. YOUR PRICE
\$2.94

## Copper Wire Screen For Auto

RTMenman Roof Aerials
rew nches above the ground to proylde extreme sensitivits Easy 10 Install, all mounting
melued. a heay
spring take
Flexible
un
all
not crush.

## Spark Plug and Distributor Suppressors <br> For Auto Radio Motor Interference

 For silencing engine noises due to sparlic radta ton in auto Kallo installarions, Hesistance ele ment enclosed in wateriruof tube. Cannot short The two types Insted below are The twa tynes listed below are the most popular and conimnony used untes. (sed on prictically aill makes atm modiels of cars whereper the available space allows except the new Ford Modelwhich remuires a spectal tyne sunuressor. Which remulres a spectal type sunpressor


3EI989-Standarl dis-| 3E1986-rnserts in tributor type, desligned to iknition cable. r'sed on malntain a good. tght $\begin{aligned} & \text { cars } \\ & \mathrm{ar} \mathrm{r}_{\mathrm{e}} \text { whot } \\ & \text { who }\end{aligned}$ connection

Auto Generator and Ignition Filter Units and Suppressors

| For use on interruptor and battery sides of tgnition coll, tall light, windshield wiper, cigarers and other electrical accessories on the car. All of the Single Capacitors have the same applications: the greater the cabacity the gieater the fitering vilue. <br> TYPE AG.1. ("apacity . 35 Mfd Size $/ 8 \times 13$ <br> 3E5175-List, 80c. <br> YOUR PRICE. EACH <br> TYPE AG-2, (‘aballty . 5 Mfd. Si <br> 3E5 176 -L/st, 95 c . <br> YOUR PRICE, EACH <br> TYPE AG-3a. Cumacity 1.0 DIf. <br> 3E5 177-List. \$1.25. <br> YOUR PRICE. EACH <br> TYP ${ }^{\text {E }}$ AG-4b. Cupacity 1.5 Mfd. <br> 3E5178 Jist, \$1.75. <br> YOUR PRICE. EACH |
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Dual Capacitor and Inductive Units TYPE AG-7. Consists of two MPd. caparliors and a choke in one can. Size 1 Tras
illtering storage battery
sor
sup-
 system ausedl electrical aut rates of eharge and discharge an installations. Diagram for cominerting fumishect
3E5179-1.1st, $\$ 1.75$
your Price
49c
TYPE AG.8. Two . 5 Mrd. capacitor, properly grountled in one can size $17 / \mathrm{d}^{2} 3_{8}^{\prime \prime}$ " for filtering menerator cut-out
$3 E 5180-L E t$
3E5180-List, S1.50
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34C
3E1985-Special type resistor for use in all auto radio installations in late model Ford cars. Ford $\forall-8$ ind additional resistance is theritore
 neres sary at the spark l'lug, sumulied with a
special resistance of 50.000 otmms. sipecial resistance
YOUR PRICE


## New Inductive Wire Wound

 Spark SuppressorsResistance 12000 ohms. Resistance will not pary. Tough bakelite case-will withstanil vibration. heat and abuse without injurs. Alfects engine starting. speed or ras consumntion only a small frac-


3E1995-
Distributor Type 3E1997-

## Cable Type

3E1996-


Special Dome Light Filter $\quad B_{2}$ TYPE AG.6. Consists of one . 5 Mid. caps-
citor and an efficlent choke in one tibre tuhe Plextble leads for casy
connections to circuit

 luecommended for any lighting, electric accessory or Lgnition circult where Interference proves to be particularly stub| bern |
| :--- |
| 3 E | 3E5181-List. \$1.50.

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rove pacte, ecen 210

## New Ward Leonard Inductive Suppressors



## Inductance Capacity Filter <br> Iome Lights, <br>  <br> upholstery Will deliver rood rolume wiy to

 dinished to harmonize with the finest car interlors.Attached to rear of car. Metallic conductor en-
closed inside of waterproo fabric. Web strapa closed inside of
for attaching.
waterproof fabric. Web strab
10 foot rubber covered lead-ln.


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* No Plug-In Colls-Turn Knob to Select Band
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The "SRXRIIfor Home Use product organization specializing in sy an wave Radio apparatus. It is so simple in operation that it can be successfully operated by anyone cient that its performance will delight even the most critical short-wave yan don't have to talk yourself to death to sell it. The "SKYlRIDER" is a complete, self-contained Short-Wave Rectiverit is not a converter. Its efficiency on short-waves is much greater than
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Receivers because it is designed and built for the specific purpose of covering only the wave lengths between 13
and 200 meters ( 25,000 to $3,100 \mathrm{KC}$ ) Doubtless, there are many men in your locality who have looked longingly toward the fascination of shortnovelty, but have hesitated to give up their good broadcast Receiver.

The "SKy Easy to Operate SKYRIDER" was designed fcr the man who demands the same simplicity of operation in the short-wave Set he buys as that of his broadcast Receiver. There are no troublesome plng-in cols to change since its four wave-bands are selected by means of a conveniently located Knob on the fare of the panel. A Continuous Band Spread adjustment, also on the frort panel, extends the tuning spread of any frequency 25 times that of normi-
al. This permits the selection of stations no ordinary leceiver could locate. There is also a sensitivity cortrol which, when adjusted to masimum, permits the reception of cortinuous wave code signals.

The over-all efficiency of this Receiver is such that good volume on practically all of the powerful shortwave stations in the world may be expected in any location where such prigrams are heard on the most ex-
jensive types of Receivers.

Technical Features The "SKYRIDER" is all-electric. Operates from 110-120 volt $50 / 60$ cycle Dynamic speaker and specially filtered l'ower l'ack in one crackle-finBright metal front panel. Has jack on front panel for plugging in head-
phones or extra speaker. Tubes used: 2-6D6s, 1-6C6, 1-42 and 1-80. lutorlyne R.F. circuit having an extremely ing freedom from ordinary noises which are encountered in heterodyne leceivers. The stage of tumed R.F. ahoad of the autodyne detector preDual gain controls, one for audio volume and one for controlling the regeneration of the detector., Specially designed coils of "square" proportions. Coupled coils are interwound.


The Radolek "COMPANION"


Mith NEW TYPE TUBES I4E1O953YOUR PRICE
 Lats of ${ }_{\text {Three Ea. }} \mathbf{\$ 9 . 9 5}$
 Weters —For 105/120 cycle A.C.
 Circuit Dial minated -Genuine WalTubes Used:
1-2A5, 1-57,
$1-58,1-80$


Radolek "UNIVERSAL" AC-DC RECEIVER


Operates on Practically Any Form of
Commercial Current 4E10950Retall Value, \$19.50. YOUR PRICE In Single Lots


Lots of
Three Ea..... \$9.50
An efficient Dynamic|The Radolek "UNIVERSAL'" Speaker provides excellent Tone Quality and ample volume for all ordinary re-
quirements. Tle New Type Tubes used hare much better performance characteristics than the older trpes and ievelop results comprevious five and six tuhe Sets. Tubes used, 1-78, 1-77, 1-43, 1-25Z5. Walnut Cabinet The attractive Cabinet has walnut front and top, beautifully finished in twotone, hand-rubbed American walnut. Gracefully curved top and oft-set ends.
Overall size $101 / 4 \prime$ long, Overall size ${ }^{101 / 4^{\prime \prime}}$
$71 / /^{\prime \prime}$ high, $51 / 4{ }^{n}$ deep.
performs with equal effciency on 110-120 volt airect or alternating current, 25 ,
50 or 60 cycles. Has great nower for its size and is Reveiver. So conmpact it fits in anywhere, and so portable that it can easily be carried in operation wherever suitable current is available. An eflicient $\mathbf{D} \boldsymbol{y} \boldsymbol{n}$ amic tone quality and ample volume for all ordinary require-
ments. The New Type Tubes used have much greater efliciency than the older types and clevelop results which
are comparable with that of
previous five previous five tube Sets.

# NEW PHILCO 

## EVERYONE'S A PROSPECT

Your sales possibilities are unlimited! Iractically everyone you know can be sold a new I'llil.CO Auto Radio. There is a real sales story for every class of motorists. Here are your best hets and the sales stories you should give them:


FOR TOURISTS Motor along lakes among hills or through the countryside-enjoy
fine PHILCO music!


## FOR SALESMEN

 AND DOCTORS

Thileos newost sensation-the most desirable Auto Radio ever produced at this low wice. Supmraterodyne circuit. "perates entirely from car storage battery. las nn"w
full-wave Vibrito two " $B^{\prime}$ " sumply tising a tone st rectitier tube. Special input and output chokes in the vibrator circuit prevent engine ignition noises elloring fieceiver through this portion of circuit Power supnly requires no adjustment. 3gang ball learing Tuning Cobdenser. Etricient Al' maintains uniform yolume inSpeakrr, and Chassis housed in sterl case, 4) " wide, for" high, 71:" derep. Nemets undern+ith cowl. llluminaterd Tun ng ('ontrol mounts on either sifle of steering (rolumn. Comes complete with $6-s p a r$ s plue Suppressors, 1-distributor Suppressoa, $2-$
Filter condinsers tor Anmeterani Ginnerator, 6-I'hilco Tulyes and instruetion: for installing. Tubes used: $2-44 \mathrm{~s}, 1-55,1-7$ $1-42$ and 1-84.

## MODEL 11

## SIX-TUBE SUPERHET

14EIOI6I-IMilco Mordel 11. C'oun Mete adererith din 539.95 . Dealer CASH PRICE
s2617



## FOR CAMPERS

Camping trips, outings and picnics are more enjoyable when you have a PHILCO in


## FOR SPORTSMEN

No matter where you are, a PHILCO provides a grandstanl seat for your favorite sports broadcasts!

## FOR TAXI OR BUS

Happy passengers mean increased business. Music and entertainment make the longest journeys pleasant!

## FOR BOATS

In rough seas or calm, PHILCO will provide the same fine reception that you enjoy on land!

MODEL 700

## SIX-TUBE SUPERHET

I4EIOI62 Phileo Murdip 700. Complete as described. !.i:t. \$49.95. Dealer's 1'riue 29.95. CASH PRICE

```
5333
```

New Airplane Type Dial which gives full tuning vision.

- Large-size Dynamic Speaker for :ich, full Tone
- 4-Point Tone Control which enables the user to adjust to the requirements of any program.
- Automaric Volume Control.
- Trememlous Power for open-car driving.
- Uniform performance over any road at any speed.
- Everything in one Unit $10^{3} 4^{\prime \prime}$ wide $\times 6^{3}{ }_{4}^{\prime \prime}$ high $x$ 8" deep.
Easy to insta:l, only 3 holes needed.


The M-ndel 700 is a recent Philco develon ment ditered in response to the demand among liealers for a 6-Tube Superhet of better performance characteristics thal those of the popular priced Model 11. It employs essentially the same circuit witl further refinemonts which fully justify the additional cost. A larger and more efficient Dynamic Speaker-t he Nodel "S". provide s ereater bow handling capacity
and in prowed tone. Illuminated Airplane Dial mounts on either side of steering column. A Four-step Tone Control effectivily qeduces stitic. l:uilt-in Tube rectifying Tubes Eliminator. One unit construc and 1-st. Size 103 "/" wirle, 6 ," high, 8 " deen. Mouns underneath cown. Comes complete with G-Spark llug Suppressors 1-Wistribntor Suppressor, 2-Filter Con arnsers and 6-1'hilco pubes.

## AUDTO! Most Complete In all the World

# Askes No Gdds in Pertormance! 

## Re:potsk I ALL ETETRIC

14EIOI50-Radolek 6-Tube Auto Radio complete with RCA Tubes, Spark cyltinder cars. List. $\$ 42.50$. YOUR PRICE

This new Radolek 6-Tube Super heterodyne is the most compact Auto Radio on the market. The case which contains Chassis, Dynamic Speaker and " 13 " Elimininator measures only $83 / 4$ " wide $6^{\prime \prime}$ high, $61 / 4$ " deep. Copper plating inside prevents rust and increases its shielding properties.

## The Circuit

Advaneed ongineoring plus a well plan. ned layout. plus the hest materials obtainable have resulted in the best pactness. A $\mathbf{3}$-gang Tuning Condense whth tandem-offset vernier drive which prevents creeping is one of the main features. The following latest tyne Tubes are used: A type 78 in the first R.F. stage followed by a $6 A 7$ MixerOscillator. A stage of doulhe tuned I:F. employs another type 78 which in IUrn is coupled through a single tuned aype is second Detector.

## $\$ 2,4.99$

Automatic Volume Control The type 75 Tube provides AvC both the R.F. and I.F. Tubes. The Hi-Mu trinde portion of the 75 is Hr-Mu trinde portion of the 75 is
resistance coupled to a type 41 Power Pesistade whirh drives a very powertul. high-grade Dynamle Speaker.

Full-Wave Power Pack
The Power-Pack uses a full- wave Vibrator and a type 84 Tube for fullwave rectifichtion. This assembly is is eastly accessible for adjustment. Airplane Dial
An Jllumlnated Airplane Dial of new design is accurately callbrated in kilocycles with large white figures on a black background. Very easy to read day or night.

Easy to Install
This new Radolek Auto Set is the easlest to install-only one hole to drill and onls two connections to make: Ammeter and Antenna. Feature this
Set for full Pronts for yourself.


- Complete in ONE Unit
- Superheterodyne Circuit
- Automatic Volume Control
- Dynamic Speaker
- Illuminated Airplane Dial Vernier Drive
Kilocycle Calibration
- Combination Volume Control and Locking Device
- Fits All Type Cars
- Easiest Auto Radio to Install Single Hole Mounting Only Two Connections


# Every Sale a Santitied Customer? <br>  



14E10151-Sheridan 5-Tube Superhet Auto Set complete with 5 Sylrania Tuhes for 6 -cylinder Cars. Liat $\$ 37.50$. YOUR SPECIAL PRICE

## s21.95

 The SHERIDAN 5-Tube Superhet is the lowest-priced, satisfactory Auto Radio we know of 1 is a good leader for you and will be very popular among those of your customers who do not care to invest in a six or seven Tube Set.- New Type Tubes: 1-6D6, 1-6A7, 1-75, 1-41, 1-84 - Superheterodyne Circuit
- Automatic Volume Control
- Airplane Dial
- Dynamic Speaker
- One-Unit Construction
- Easy to Install
- Works with Any Type Aerial
- Marvelous Sensitivity
- Ample Selectivity
- Plenty of Power
- Furnished Complete

Ready to install

## 6 Tube Performance

In performane Performance equal to older 6 and 7 Tube Auto Sets. mulei-purpose Tubes which are actually twa Tubes in one envelode. Excellent Selectivity and Sensitivity have been secured thraugh the emplosment of sclentifically engineered ultra-high gain mols and the use of five tuned circulis. A type 41 Pentode Power Tube delivers 1.2 watts to the Dynamic speaker and provides enough volume for all ordinary requirements.

Automatic Volume Control The New Ga7 and Tis combination Tubes proride Automatic Volume Cantrol action which tends to maintain the volume at a constant hevel regarlless of signal strength: also to counteract fading.

The Chassis, Dynamic sneaker an Rectlfer Tybet ary contained in a sub stantial crackle-finished steel case siz $7^{71 / 2 "}$ deen. $91 / "^{"}$ wide, $x 7^{71 / 4 "}$ high This rase moun:s underneath the ron by (1rtiling only one hole. The Remot
Control nounts on either Control mounts on elther side of th steering column and contains an at tractive Vernler Driven Airolane Dia and Combination off-on switeh at
Volume Control. The Volume Contro Volume Control. The Volume Contro Knob has a key base and is remop able, acting as a protecting loc
against unauthorlzed use of the against
celver.

Easy to Install
The SIHERIDAN is very easy to instal and can the succe:sfully placed in on eration in any ear within a few mn ments. This simplicity of installation enables you so sell the Receiver "in stalled' whout secrificing your profts No agrressive Radio Dealer or Service man ran alford to neglect the mark which already exists for a thorought good Auto Kadio at a low price an here Is a Set vith which you cas
dominate this rich market.
Order on dominate this rich market. Order in
of these Sets TODAY and begln Nov of these Sets TODAY and begin No to cash-In on thild ble field.


## TUBE .

## 7

## 180-550-METER

 COMPACT
## Compares Favorably with Most Six Tube Receivers

4EIO966-Radolek
Compact 5-Tube kecelver
for 105/120 Volt. 50/60
cycle A.C. complete with
5 Triad Tubes. List.
$\$ 23.50$.
YOUR PRICE
\$1工 44

TRF Circuit-Latest Type Tubes

- Illuminated Dial-Kilocycle Calibration

Full-flux Dynamic Speaker-Ample Powe:

- Tunes 180 to 550 Meters-Police Calls

Excellent Sensitivity and Selectivity

- Very Compact, Completely Portable

How is competition for the Set business in Performance comparable with 6 or 7 tube Sets your locality. is. $i \dot{C}$. 1 it very kecn? it 15 . here is an $1 \mathbf{C}$.
This New Radolek 5-Tube A.C. Compac is just the type of siet many people are look. ing for-It is small light. performs well: and is very attractive in appearance. Yet the price is amazingly LOW.
It is very Sensitive and Selective, and while not intended for use as a distance-Receiver. you will be amazed at how easily and clearly it brings in stations which are beyond the reash of other less modern 5 -Tube Sets

The Cabinet of this Receiver is far more in pressive in design and finish than you woul expect to find on a Receiver at our extremely Low Price. Front panel of select walnut veneer, top and sules of solid gum wood Neatly carsed on all three exposed sideRubbed, American Walnut finish. Overall size, $113 / 夕^{\prime \prime}$ long, $61 / 4^{\prime \prime}$ deep, $73 / 4$ inches high. An ideal size for one's "personal" Receiver Easy to carry about. Just the thing for office Sun Porch, Den. Bedroom. Nursery or Kitchen. Nany dealers and Servicemen are also using this type for retital.
Tubes used and furnished with Receiver $2-6 \mathrm{D} 6 \mathrm{~s}, 1-6 \mathrm{C} 6,1-80$ and $1-42$ (Triad).

# RHDOLEAK DULIL W/AVIA 

## 5 tube AC•DC fuperhet

## 75 TO 555 METERS

- The Smallest Superhererodyne Marle.
- I'ses Latest Type High-gain Trbes. - Vernier Tuning, Kilocycle Calib-ation. - Built-in Antenna far Local Prograras.

Flre Tubes are necessary, for satisfactary resules if the A.C-1), set to reach out beyond the "locats". to reach out beyond the "locals"; will provide sufficient selectivity to enable him to take full advantage of avaitable Racto entertainnent. D. $\mathbf{C}$ Sur D.C. Subcret fulfills inth requireinduls conpletely. In adilition lits Meters curing range of 75 ta 555 Meters orpers up awonues to manys thriling e:tures whinh are unatlain:ble
leceiver.

## This

till Dual-Wave Feature alone "ill close many sales for yat becaust here, at last. is a sinall Set that actually provides satisfactory Latest Gn the short-wave channels. clrcuit results in remarkable power.

It: beautiful bronze Dlal with Vernier Tunirg and Kilocycle Call. grat.en are alad bla elling features. Thes add attractireness and comcenionce by erabling the user to
 anknawn me freguenry, or latning A separate Short Wave Swltch on the rear sitle of the chassis is plipped to change from broaseast to the lower wavn lengels. Swith is so convenleutly s.thated that user may reach behind Receiver and chanre Tram onfp wave band to th:
wif houl mor The Cabinct me set.
The Cabinet is a handsone design With two-tone evinut and bird's eye marile vencers. Very substandialle miade: duabls and artistically Thishere Its comuart size-only 95
 tnehes high


14E10967-hadolek 5 -Tube A.C.-D.C. Supernet for operation on any 25. 40 or 60 ce.e 110 volt A.C. or lic consplete with and $1-18$ ). IAst I'rice. $\$ 28.50$. YOUR PRICE. ONLY

## Hown Customens waset to hear



Tunes 12.5 to 550 Meters and has These Features
-Latest Type High-gain Tubes -Silent Meter Tuning
-Stepless Tone Control
-Three-gang Tuning
denser
Con- -European Reception
-Electro-Dynamic Speaker
-Gear-dxiven Vernier Dial

- Accurate Kilocycle Calibration
-Finest Performance on broadcast
-Phonogzaph Connections

Thrill your clients with Old World programs! In any location where you can recelve 1500 mile broaticast programs at night, this frowerful receiver will pick up European Short Wave Signals under reascnable atmospheric conditions, In full Daylight. Thousands of foreign born Anericans deligit in hearing theit fatherland, they thrill to the native music they left behind. With this re celver you can gratify them-at a nice profit.

## - Covered By Regular R. M. A. Guarantee

FOUR TUNING BANOS-The Radolek '"TRAYELDM, Meters. The selector lensths from 12.5 to exposes the proper tuning scale (graduated in
kilocycles and megac"cles) for each frequency band. Harmes: 535 to 1500 kilocycles Broadcast. 1.5 to 4 megaeyeles for police calls, 4 to Europan megacyrles and
EFFICIEN ON ALL RANGES-Uie of an indepencient Oscillator circuit in this Reacelver climinates the "hirdies" and cross-talk common in most Sels nut expressly designed for high frequency reception.
METER TUNING-Illuminated Shadowgraph Tuaing indicator permits tuning in signals turning. It also provides means for more perfect turning. It also provides means for more nerfect recemtion of anl stations.

AUTOMATIC VOLUME CONTROL-Counter acts fadirx and tends to maintain an uven THREE-GANG TUNING CONOENSER and Ix sharply tuned circuits provide knife-edge selectlvity and render all available Rudio MICROVOL
reaching VOLT SENSITIVITY provides far ang coverage on all wave lengths.
LATEST TYPE TUBES glve 8 Tube performance. The six tubes used are: 1-2A5 PHONOGRAPH CONNECTIONS provide for tho additeon of electric wick-un and turnable for the ofturtin of ultra-fine music from phonograph recoris.
TONE CONTROL for the atjustment of bass for treble to sunt the individual taste and for the suppression of static.

## TABLE MDDEL

Uses the same marvelous Chassis as that of the Console Model. Tunes in foreign stations, polsce calls, airplane signals, as well as regulal broadcast band, with better tone and greater volume than is attainable on most larger, more expensive models. Re commend this model to those customers who want a Table Model Receiver of exception ally fine performance. It has every modern improvement necessary for real radio recep tion and will prove its worth as a really efficient, dependable performer. The cabine is of hearatiful walnut vencers and hand rubleed frish. Distinctively modern in design. Will harmonize with the furnishings of any home. Orerall size, 15 inches high 13 inches wide. $71 / 2$ inches deep. 4 E 10980 - ladnlek Tahle Model 'TRAVELOG'* for 108 list Price, $\$ 59.50$.

 right up-to-the-minute in design.

## 32 VOLT ALL ELELTRIL

## Operates on Any 32-Volt

 Farm Light Plant A new 5-Tube Superheterodyne which plugs directly into the socket of a 32 volt light plant outlet. All electric in operationderives all $B$, and $C$ current from an eff cient built-in all-wave Vibrator-no batter ies needed. " $A$ " current taken directly, from the 32 volt storage batteries. Very economical to operate; draws only 3 Amps. total.Your customers who have Delco or other 32 volt systems will be delighted with the performance of this ness lecelver. it offers a greater range arm finer Selectivity. Being a Superheterodyne, it Is yery sensitise. Irings in distant station "Iocals" and cuts out over-lapning signals.
Automatio Volume Control maintalins even volume levels. Blasting while tuning is eliminated and fading is greatly reduced. A Full-range Tone Control provides controlled frequency discrimina thon to suit the individual taste and effectively reduces statle disturbance.

Dynamic Speaker of finest quality. I'roduces a deep. rich tone that heretofore was vossible only with A-C Sets. The Speaker is onerated without excess battery draln.

## RANGE 75 TO 555 METERS

This Receiver brings in Prolice Calls, Airplane Contacts and Ships at gea on the short waves: and atations near and far on the regular broadcast band. The Dlal is vernter driven and accurately callbrated in kllocycles for quick and easy tuning. Five Naw Type Low-draln Tubes are used: 1-6A7. 1-78, 1-75 and 1-84. The Beautiful Cabinet used Is shown ahove. Made of the cholcest walnut veneers with contrastinig overlays. Mand-rubbed Amerlcan walnut finlsh. Overall size $9 \mathrm{fa}^{\prime \prime}$ wide, 61/2" deep. $141 / 2^{\prime \prime} \mathrm{high}$.
14EIOQ88-Radolek 5-Tube Superheterodyne for 32-volt D.C. operation. complete with fire RCA Tubes.


3425


## CHASSIS TUBES AND SPEAKER PRICES

These two Chassis offer sou a wende:tul opeo Cunty for modernizin: obsolete hatitery-operat sh keceivers. You only need to demarstrate the no roved berformance of eitrer of these Chassis. tc interest anyone who is now getting along wi: one of the "old-timers"
14El0995-Radolek 5. Tube Dusl-Wave Chass is or 32-volt D.C. operation, 61/2 matehad Dynamic Speaker and $5-\mathrm{RCA}$ Tubes. ( $1.6-6$, -78, 1-84) Chassis siz4: 8 "78" wide. YOUR PRICE $\qquad$ \$23.23

14E10996-Radolek 5-Tube Dual-Wave Chass is for 2-yolt Battery operation. 6 . West Kinematic Speaker, 5 RCA Tubes (1.1A6.1.19. 1=30, 132 . 1-34) Chassis size. $8 \% / 2$ wide. 0 diep. $1 / 4$ hn. List Price. $\$ 27.00$
YOUR PRICE
S15.88


## Band No. 5: 790-2540 Meters

This is the first successfut 5-Band Receiver ever offered at a popular price. Everything on the air is Within its range: American and Forelgn
Broadeast. Amateur Calls, Police Calls, Airalane Broancast, Amateur Cains, Police Calis, Airalane
Communications. Weather Forecasts, Time SigCommunications. Weather Forecasts. Time Sip-
nals and many other imteresting features which nals and many other interesting features which
are not attainable with the ordinary single or are not attainable
dual-hand Recelver.
Coverage of the entire spectrum of frequencles now in practical use is accomplished without the use of troublesome plug. in coils. Tuning on any ware lencth is accomplished by simply selecting the desired band by turning a knob on the frent panel of the set, and then tuning the desired signal hy means of the vernier drisen Tunlng Dial. For easy identification of each of the five hands covered. the color of the dia! Hight automatically changes as each coll is switched into the circuit.

## Stable in Operation

Improvements in coll and circult design have resulted in amazing efficlency over the full range of the Receiver. The Set is outstandingly stable in oneration and prorides consistont and dependable performance on any wave lengihs.

## Many Refinements

The Radolek 8-Tube All Wave Superheterodyne Incormorates every practical rethement known to
Radio: Its Improved Automatic Volume Control Radio: Its Imnroved Automatic Volume Control.
lis lirated in kilocyeles anel has a separate circlo of readings for each ware band.
Eight Ineh Dynamic Speaker, a size rarely found in a Receiver of this tyne. is used in the Radolek All-Wave Superheterodyne. "The letter the Speaker, the better the liadio" and our
Enginecrs have selectet a speaker whtch doe Enginecrs have selected a speaker which does Fulli-Range Stepless tormance of the chassis. Full-Range, Stepless Tone Control enalles the ormer of this Set to adjust to that frequency
response which response whtch hrings in the various types of
programs to their best advantage programs to their best advantage. The Tone Control is also very effective in reduclug static
noises. noises.
New Type Tubes: 1-37, 3-78s, 1-85, 1-'80 and $2.42 s$
desp nush-pull output are used in a elrcuit desligned to ralize from these new type tubes
their full efficiency their full efficlency.

## Phonograph Connections

of ructions are furnished for the installation of an electric plek-un for the reproduetion of cords. In entertalnm fint fons phonograph refind sultable elertric. 11 y driven turn-tailes and pick-ups with whict you can transform this Receiver into a comination lusirument of the finest quallty.

## A Beautiful Cabinet

The Cabinet of the Radolek All-Wave Superhet Is certainly one of distinetion. Burl walnut peneer center panel st flanked an each side by Walnut reneer. The paneling effect is apmlied to the sides as well as the front, a feature not found on any but the most expensire cabinets. The top is also flnished as beaulfully as the front: A center panil of grooved hardwood in contrasting flifish emphasizing the modernistic lines of the Cabluet. Overall size, $13 \omega_{4}$ inches wide, 81/2 inches de $\quad$ D. $161 / 8$ Inches high.

## A Very Popular Receiver

The Radolek 8-Tube All-Wave Superheterodyne wilt be one of the most pobular sets you hare erer handled if you $v 111$ hace onv on demonstrawhat a remarkalle vilue can se. for themselres it performs on all wa re lengths; what wonderfur Tone it has, how keeniy sensitivo, and how acutely selective tt i. This keiciver offers the most arailable fin the way of variety and guality of entertainment for the mones:

Modernize Old Sets
Or nerhaps you know of sereral people who have obsoletc Receivers in Ane Cabinets which could be economically modernized by the installation of a new Chassis. For such jobs, the Radoleh All- Ware Chassis and matched Dynamic Speake offers an ideal solution The chassis ineasures 8 inches deep, 13 inches long and : inche: high, overall. It employs all modern refinements new plove-filting tulte shielis ball bearing Tuning Condensers, Deer-eapacily Power 'Transformer. Condensers and Kesistiors and a vers sturdy chassle base

Price List
14 E10970 Set Complete with 8 HCA Pubes for L145 120 Volt 50/60 Cyele A.C.
LISI Price, $\$ 54.50$.
YOUR PRICE ..........


## Prices Chassis-Tubes-Speaker

 $14 E 10973$ Chassis, 8 RCA Tubes and Muthed $8{ }^{\prime \prime}$ manple Sweaker. For 105-120 Volt 50/60 ":rel. A YロuR Price, \$48.50.YOUR
52350
FRICE
3000


## RCA"W orld Wide"Antenna System

Model 9500 . This switem makes axall- The two antennas are tuned respect
Modet 9500. This sustem makes avain
able to evety mwner af amot-wat all-wate or legalar broadeast ratio tifically-vorregt antenna instiflatlom are overcmone the two fauls common to any antenna miform recentiun over the shart wate bromleast range-(2) keverity of loral nolse inferference produced at aninliances. power lines, street ciars, etc. This.s.sstmm embadles two sep
 let twne a twisted-nair lend
a speelal coupling unsfmmer. ively to opmosite ends of the shorttiden and crass-mmented to proponing ircumencios sirnate at all interby the antennil are transterred ta the 2y the antemal are transtered to the are not "ticted-up" br the trinumis an line itselt vini-a intwifalule as redured to a nealigible value or antrely elmamited. $13 y$ means of the at may ise concorted for the imerstandard hroadeant humd cise th the e) and the the (5the fin 50 anatel
anno


Contents of Kit ${ }^{2-45}{ }^{\text {Whare }}$ ' coils Antenna 1- $10^{\circ}$ coil Transmission Line
-Receiver Coupling Trans former with wave Length
Change Switch

- Strain Insulators
-Cross-over Insluators
- Nail-K nobs
?-Pieces Cambric Tubing
- Tubie Insulator
-Cleat
I-Ground Clamp
Installation Instructions
and Certificate
$3 E 8528$ -
List Price, $\$ 7.00$ PRICE.
NOUR PR


## G.E Auto Set

1-Nationally Advertised
2-All Electric, Single
2 Unit Construction
3-Compact Designs
Easy to Install


## G. E. Model 40-B <br> 4EIOI52-Complete with Tuise

 List l'rices \$39.$\$ 2,370$ YOUR PRICE

One of the most widely atvertised auto sets on the market, the GE-RCA Afodel 40-13 uffers youl an optwortunity forash in on its tremendous munatarity. The Ingle unit case houses chaswis and speaker. Futl autunatic volume control, tone contiol. key lock with solume comtrol. and illuminated remote control are features whleh help to inake this set outstanding in prevturmance. Size


# It's Easy to Figure Delivery Charges on Your Order 



Send your orders on our conventent Purchase order forms. or in any other munner cont venient to sous. Be sure to swocify fitock
Xumber and lrice of each item. print your Name aml Nikiress plafinly

We will ship C.O.D. Most of our customers prefer to send cash with order to arold extra chandise to lie shipued to distant polnts should e accompanied by a $25 \%$ denusit.

## Wholesale Only

We solicit orders only from those aclirely and commercially engaged in the radio melustry. Radio bealers, Radlo Servicemen-Imbustrial and Institutsonal Laboratorles. I'ublic Utilitics. schowhs. Conloges, Engineers and those recosnizerd as engaged in dereloning the Art of Radlo. We will also acent orders from the Inted states Govermment, Federal Institutions, Hate. Pounty, Munictpal and other governthentill bodies and institutions.

## Payment Terms

Our terms are cash with order or C.O.D Catalog irises are det-F.U.B. Charago or fac deducted. White we do not fmpose mindumul deducted. While we do not impose minimunh profit youl so make ust at least $\$ 5.00$ firders to avold addilional exchange charges. We will be obliced to nass on to you the exchange charge, made loy the Banks, on all personal cherks for ess than $\$ 5.00$. ©.D. orders trom new cus-

## To Include Postage

Where orders are to be shinped by Parcel Post be sure to nelude al suificlen amoun or rover postage not Incluted we will ship c.o.i. for (ransportation charges, 1 out can wolat the additional expense of .o. l'arcel post charges will be uromptly refunded

Table of Approximate Rates
Per 100 Ibs. for Express and Frelght


|  |  | $\text { From }{ }_{\text {to }}^{\text {Chicago }}$ |
| :---: | :---: | :---: |
| \$3 75 | \$2 40 | Nebra |
| 7.30 | 412 | Nevada |
| 3.59 | 1.60 | N. Hampshire. |
| 10.05 | 4.75 | New Jersey |
| 6.15 | 3.65 | New Mexico |
| 3.85 | 1.49 | New York |
| 3.70 | 142 | No. Carolina |
| 5.05 | 2.20 | No. Dakota |
| 3.50 | 2.32 | Ohio |
| 7.90 | 4.50 | Oklahoma |
| 1.85 | . 75 | Oregon |
| 1.65 | 70 | Pennsylvania. |
| 2.57 | 98 | Rhode Island. |
| 3.80 | 2.04 | So. Carolin |
| 2.20 | 98 | South Dako |
| 4.20 | 2.06 | Tennessee |
| 4.50 | 149 | Texas |
| 3.45 | 1.25 | Utah |
| 4.00 | 1.49 | Vermont |
| 3.95 | 1.09 | Virginia |
| 3.60 | 1.49 | Washington |
| 3.75 | 180 | West Virginia |
| 262 | 135 | Wisconsin |
| 535 | 375 | Wyoming |

## Parcel Post Rates

Revised Rates Effective since October 1, 1932.
Table for Packages Weighing $1 / 2$ pound to 20 pounds

|  | zones 182 | Zone 3 | Zune 4 | Zone 5 | Zone 6 | Zone 7 | Zone 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Welght | Unto | 150 to | 300 10 | 60010 | 1,000 to | 1,400 161 | Over |
| 1 ln | 150 | 300 |  | 1.000 milles | 1.400 | 1.500 miles | lis(1)0 |
| Pounds | miles | miles | miles | ciles | $\underset{\substack{\text { miles } \\ \text { from }}}{ }$ | miles Pront chen | milles |
|  | $\begin{aligned} & \text { from } \\ & \text { Chicago } \end{aligned}$ | $\mathrm{ch}_{\text {fromi }}^{\text {frago }}$ | ${ }^{\text {Promit }}$ | ${ }^{\text {from }}$ | chicano | Chlimago | chicago |
|  |  | \$0.09 | \$0.10 | \$0.11 | \$0.12 | \$0.14 | \$0.15 |
| 2 | \$0.08 | So.09 | So. .14 | . 17 | 19 .29 .19 | . 23 | . 26 |
| 3 4 | -11 | .13 | .17 | . 227 | . 26 | . 32 | . 378 |
| 4 | .12 | .15 | . 24 | .33 | . 40 | . 50 | . 59 |
|  |  |  |  | . 38 |  |  |  |
| 7 | .14 | .21 | .31 | . 43 | . 54 | . 68 | .81 |
| 8 | -16 | . 23 | . 35 | . 49 | .61 | . 77 | 1.92 |
| $1{ }^{9}$ | .178 | .25 | . 38 | . 54 | . 68 | .86 | 1.14 |
|  |  |  |  |  |  |  |  |
| 11 | . 21 | .29 | . 45 | . 64 | .82 | 1.04 | 1.25 |
| 13 | . 22 | . 33 | . 52 | . 75 | . 96 | 1.22 | 1.47 |
| 14 | . 23 | .35 | . 56 | . 80 | 1.03 | 1.31 | 1.58 |
| 15 | . 24 | . 37 | . 59 | . 86 | 1.10 | 1.40 | 1.69 |
|  |  | . 39 | . 63 | .91 | 1.17 | 1.49 | 1.80 |
| 17 | . 26 | .41 | . 68 | . 96 | 1.24 | 1.58 | 1.91 |
| 18 | $\cdot 27$ | . 43 | . 70 | 1.02 | 1.38 | 1.67 | 2.13 |
| 20 | . 28 | . 47 | .77 | 1.12 | 1.45 | 1.85 | 2.24 |


 Iv in the 3 ro zone, 3.or exir.i if yon sth zone, 7e extra if fon th the 8thanome.


Patazes weightng over 1 lb, and less than 2 lbs take the 2 lh. rate Alwaya use the next hlgher pound ritu for inounds and fractlonal poums FOREXAMPLE:


## How to Figure Express Charges

(1) Total weights of items ordered, as shown on Order Blank. (2) Refer to table above for approximate Express Rates per hundred ounds to your state. (3) Then refer to left hand column of table below and find weight which corresponds with weight of goods you are ordering. (4) Follow to the right, line opposite the weight of goods on your order, through the columns to the column headed by are ordering. (4) Follow to the right, line opposite the weight of goods on your order, throughes charges on your goods.

Table of Express Charges Based Upon Rate per 100 Pounds


\title{

Guaranteed Rad of Repair Dealers'fcientific funge erinue <br> You Fix Ordinary Trouble

We Repair Sets Requiring Special Test Equipment Any Trouble - Any Condition Any Make

## - -

Radio Dealers-Radto Servieemen: Thls is
Wholesale Super Renalr Department for you onty: Whologale Super Reparat Department for you onty:
We do no retall repairing. We do no retall repairing. This depariment
Colely for the purpo or assisting Radio En-

 When you are un against a renalr. mif the use of equipment that repair job requirno that repair jall to Raclolek We whil do the job) for you, quickly and accurately with the fine $t$
$\mathrm{I}_{\mathrm{t}}$ truments avallable Whatents arallable. Your cost 1 far below
What would have to spend to do $a$ similar job.

Laboratory Service Fees
YOUR ${ }^{\text {Yisen }}$
YOUR
PRICE
PRICE
$\$ 3.00$
( $\$ 1.00$ discount if you bring the elhassis in and
call for it within 5 days. 10 c per day torage call for it withinn 5 days. 10 c per day storage
charge is made agter 5 days.) charge is made after 5 days.)
Atior first hour, service per YOUR price

## $\$ 2.00$

Our experience has been that rarely more than an hour is required to repair sets in which the original eireuit is intact, and only in most unusual cases is as much as two hours required. Parts tor repairs supplied at your repular whole-
sale catalog orlees. Parts selected winl bo eoual sale catalog prices. Parts selected will bo equal
to or better In ouality than the orgina

Estimates Furnished
Preliminary inspection and test wrI1 be made for
11. Ii/ which amount thut acrembany your ortler An eallmate of the toit of repalr will then be

 repur. If you do not wh the sce repalred. wir
will return the ingtrument as rectred with brict nthtation of what we belleve is is ine eause of trouble.
ithers Where our estimate of the cost of repair eeceed3
present ralue of the recelver. (usually about 20 a of tit list price) wo request your permission to make repairs Upice Uon request we will permote you to estimate subject to a $50 \%$ discount to enable you to secure your customer's consent without disclos-

## Special "Tune-Up" Service

 For Rasio Receivers which are working but notoiving complete satisfaction. We test earh ingiving complete satisfaction. We test cach in-
illnitual part and allen ail trimmers correctys. illitiual part and allen all trimmers correctily
Ordinary production permita $20 \%$ tolerance in sil alues of reathors or cendensers in a recelverrre enrrect this to whithn 5 . Dlus or minus the
correct value for each part. Tone. selectivity, correct ralue for each part. Tone. selectivity,
volume, and distance Yolume, and distance oetting abllity
Improved by this serviee.
Special
YOUR COST PER JOB
$\$ 5.00$
To this price must be added transportation costs
and the cost of farts (at catalor price) whle mas
 remarkably low cost. Tubes. Chassis, and Spcaker thwuld be sent in for thls service.

## Radolek's Certified Test

A Certified Test Tag, griving the results of our complete analyals of the receliver will be refurned
to silu with the pet as part of our Special cTuns. UU ${ }^{\text {in }}$ Serviee. You tmy tive this to your customer
is a record of what hat beers dome to his recelver it you may keep it for your records. Included in thls report 18 the power consumption of the re--
celver in watts, fromu which the cot of nperating it cetver in watiso from which the cont of nerrating it
maty be calculated nicterdthe tin sour customer's cost
 in mlerovolts with a General Radlo Slanal Gen-
erator. Nefote
 audio quality 18 cherked whith a Cathode-Ray 0 sellograpn and wise rawh is Improved.



MAKING THE CERTIFIED TEST INVOLIES THE USE OF OVER $\$ 3,000$ WORTH OF LABORATORY EQUIPMENT. Quotations furnithed on request
apparatua.

\section*{Enhance Your Professional kieputation:

## Enhance Your Professional kieputation: Seek the "Haro-to-5" $x$ " Radio Sets

If your Equipment is inadcquate for the
iob, Send the recciver to D.dlek's Finest Radio
The
boratory

Any Radio Pecelver Can Be Pi M Dificult Pri ben
Can Guaranteneiver Can Be Rr, I Hir. Competant Enginearims , Familar Superlor to That whleh Might Be Expected rom ar ma. Dir cult :ubly y il a Factory Service Station.


## Exclusively For Dealers And Radio Servicemen

Dealer
Can You Afford A Full Time First Class Servicetoan in Can You invest Several fundred Doliars in liquilmant For His Tie? IF NOT-Enjoy depend largely upon the service you can glve sour cultomeri. Let this bla laboratory insure your frm's reputation for scod eerrice.

## Servicemen:

Do you pass by those unuzual jobs on complicated gets, Just berause you lack the crnensire cquidment that must be ured to secure satisfactory results? Do you lack the correct selertion of part to make reblacemen:s? These are the 'Bis Money' Organizations Can't Hanille Them. Your curtomOrganizations Can't Hanille Them. Your customors will appreclate your interest in their pet if you tell
Selentific Super Service
Saboratory in in Chicago where it can be giren a complete and thorough exatuinition.

> Transportation Charges Must Be PREPAID On All Shipments To Us. All Reesivers Will Bo Returned Charges And Exaress Collect.

## Shipping Instructions

FOR FASTEST SERVICE AND CAREFUL HANDLING, SHIP VIA PREPAID EXPRESS, ruck the chassis carefully. Includa tubes and any ansoclate apparatus whlch might be the cause of trouble, (sipeakers, retiole control efl.) Do not sond cabinets arcuoyln more than 12 thilit fort of apace. Inclose with the lixpres tilthen your
frm name and addess with riur inllit thing and firm name and address with sinur inltulting and your euthrar't cyraplaint. State elparly if you desire: The most economical repair of the il fuctive part onls: A modium elase repair inviline bert, equal in quality to the qriwinal lind a fant fully
in inducligs if what in rhruline sad replarement of way ir divory part Fith ther quality Dave; er the Radolek Special "Tune-Up" Service.
Alwas iote if suu who defert tve tulies replaced All defective parts will be returned. Upon request \&) will fommunicito $\operatorname{dith}$ you about the recelver
 day sarvice where carren minde nor to remper 2 to 5

It's Easy to Figure Delivery Charges on Your Order


## How to Order

Send your orders on our convenient Purchase Order forms, or in any other manner ronventent to you. be sure to sperify stock
Number and friee of each fiem. print your Number and driee of eath

We will ship C.O.D. Most of our castomers preter 10 send cash with order to avold extra collection eosis 111 orders for heasy merchandise to be shipped to distant points should be atcompanted by a $250^{\circ} \mathrm{C}$ deposit.

## Wholesale Only

We solicit orders only from those acticely and commercially engaged in the radio industry, ant Intitutiona! Latroratorics, J'ublic Utilities, Sulpmis, Colleges, Engineers and those recognized as engaged in developing the Art of Ratho. We whll also accept orders from the L'nited States (fovernment, Federal Institutions, siate. County, Municipal and other movern mental bodics and institutions,

## Payment Terms

Our terms are cash with order or C.0.D Catalog prices are Net-O.13. Chictago or fac dery. All Trade and cash Discounts have bect order restrictions on our old custonters, It will protit. you to make un at least $\$ 5.00$ ortlers 10 groid addifional exchange charges. We will be obliged to pass on to you the exchange eharge, mute by the lanks, om all wersomat cherks for less than $\$ 5.180$. C. (0.1). nders fiom thew cus. tomers shoutd be accompanied hy a 25 k demosit.
orders are to be shipped by Parcel o corer postage with sour remittance. Where postage is not
 ing sufficient bostage. dny rxeess amomin that you send for P'arcel l'ost charges will be promptly refunded.

Table of Approximate Rates
Per 100 Ibs. for Express and Frelght

| From Chicago <br> to |  |  | From Chicago |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | \$3.75 | \$2.40 |  | \$3.90 | \$2.25 |
| Ari | 7.30 | 4.12 | Nevada | 9.10 | 4.75 |
| Ar | 3.59 | 1.60 | N. Hampshi | 4.00 | 1.49 |
| Californ | 10.05 | 4.75 | New Jersey | 3.75 | 1.43 |
| Colorado | 6.15 | 3.65 | New Mexico | 5.60 | 3.35 |
| Connectic | 3.85 | 1.49 | New York | 3.35 | 1. 18 |
| Delawa | 3.70 | 1.42 | No. Carolina | 3.75 | 250 |
| Florida | 5.05 | 2.20 | No. Dakota. | 4.50 | 2.60 |
| Georgia | 3.50 | 2.32 | Ohio | 2.15 | . 80 |
| Idaho. | 7.90 | 4.50 | Oklahom | 3.85 | 2.14 |
| Illinois | 1.85 | . 75 | Oregon | 9.75 | 510 |
| Indiana | 1.65 | 70 | Pennsylvania | 3.75 | 1.40 |
| Iows | 2.57 | . 98 | Rhode Island | 4.00 | 149 |
| Kan | 3.80 | 2.04 | So. Carolina | 4.10 | 2.29 |
| Kentucky | 2.20 | 98 | South Dakota | 4.35 | 2.65 |
| Louisiana | 4.20 | 2.06 | Tennesse | 3.30 | 1.75 |
| Maine | 4.50 | 1.49 | Texas | 7.15 | 2.37 |
| Maryland. | 3.45 | 1.25 | Utah | 6.90 | 4.13 |
| Massachusetts. | 4.00 | 1.49 | Vermont. | 3.95 | 160 |
| Michigan | 3.95 | 1.09 | Virginia | 360 | 139 |
| Minnesota | 360 | 1.49 | Washingt on | 945 | 510 |
| Mississipp | 3.75 | 1.80 | West Virginia | 295 | 103 |
| Missouri. . | 262 | 1.35 | Wisconsin | 265 | 60 |
| Montana | 5.35 | 3.75 | Wyoming | 550 | 350 |

Parcel Post Rates
Revised Rates Effective since October 1, 1932. Table for Packages Weighing $1 / 2$ pound to 20 pounds

|  | Cones | Zone 3 | Zone 4 | Zone ${ }^{5}$ | Zome f | Zone 7 | Zone 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Weight } \\ & \text { in } \\ & \text { Pounds } \end{aligned}$ |  | $\begin{aligned} & 150 \text { to } \\ & 300 \\ & \text { miles } \\ & \text { from } \\ & \text { Chicag. } \end{aligned}$ | $\begin{gathered} 300 \mathrm{LO} \\ \text { 600 } \\ \text { mlles } \\ \text { from } \\ \text { Chicatigo } \end{gathered}$ | $\begin{gathered} 600 \text { to } \\ 1.000 \\ \text { miles } \\ \text { from } \\ \text { Chic:igo } \end{gathered}$ | $\begin{gathered} 1.0(0) \text { to } \\ 1,400 \\ \text { milles } \\ \text { fromn } \\ \text { Chicalgo } \end{gathered}$ | $\begin{aligned} & 1.400 \mathrm{ta} \\ & 1.800 \\ & \text { miles } \\ & \text { from } \\ & \text { chicrago } \end{aligned}$ | $\begin{aligned} & \text { Over } \\ & \text { l.800 } \\ & \text { thiles } \\ & \text { from } \\ & \text { c'hiciago } \end{aligned}$ |
| $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \\ & 5 \end{aligned}$ | $\begin{array}{r} \$ 0.08 \\ 110 \\ 11 \\ 12 \\ .13 \end{array}$ | $\begin{array}{r} \$ 0.09 \\ 11 \\ .13 \\ .15 \end{array}$ | $\begin{array}{r} \text { so. } 10 \\ .14 \\ .17 \\ .24 \end{array}$ | $\begin{array}{r} \$ 0.11 \\ .22 \\ .27 \\ .33 \end{array}$ | $\begin{array}{r} \$ 0.12 \\ 19 \\ .26 \\ .30 \\ .40 \end{array}$ | $\begin{array}{r} \$ 0.14 \\ .23 \\ .32 \\ .41 \\ .50 \end{array}$ | $\begin{array}{r} \$ 0.15 \\ .26 \\ .37 \\ .59 \end{array}$ |
| $\begin{array}{r} 6 \\ 7 \\ 8 \\ 9 \\ 10 \end{array}$ | .14 .15 .17 .18 | .19 .21 .23 .25 .27 | .28 .31 .35 .38 .42 | $\begin{array}{r} .38 \\ .43 \\ .49 \\ .59 \end{array}$ | $\begin{aligned} & .47 \\ & .64 \\ & .61 \\ & .75 \end{aligned}$ | .59 .68 .87 .95 | $\begin{array}{r} .70 \\ .81 \\ .92 \\ 1.03 \\ 1.14 \end{array}$ |
| $\begin{aligned} & 11 \\ & 12 \\ & 13 \\ & 14 \\ & 15 \end{aligned}$ | $\begin{aligned} & 19 \\ & .21 \\ & .23 \\ & .24 \end{aligned}$ | .29 .31 .33 .35 .37 | .45 .49 .52 .59 | .64 .70 .85 .86 | $\begin{array}{r} .82 \\ .89 \\ .96 \\ 1.93 \\ 1.10 \end{array}$ | 1.04 1.13 1.22 1.31 1.40 | 1.25 1.36 1.47 1.69 |
| $\begin{aligned} & 16 \\ & 17 \\ & 18 \\ & 19 \\ & 20 \end{aligned}$ | .25 .26 .28 .29 | .39 .41 .43 .47 | .63 .66 .70 .77 | $\begin{array}{r} .91 \\ .96 \\ 1.02 \\ 1.07 \\ 1.12 \end{array}$ | 1.17 1.24 1.31 1.38 | 1.49 1.58 1.67 1.85 | $\begin{aligned} & 1.80 \\ & 1.91 \\ & 2.02 \\ & 2.13 \\ & 2.24 \end{aligned}$ |

If the weidht of your watkame excends 20 pouncis, add 1.10 for each additional


 NOTE:
packages whighing over 1 lh. and less than 2 lhs take the 2 th. rate AlwayA use the novt, higher wound rate for poumas and frartlous bounds. FOREXAMPLE:

How to Figure Express Charges
(1) Total weights of items ordered, as shown on Order Blank. (2) Refer to table above for approximate Express Rates per hundred pounds to your state. (3) Then refer to left hand column of table below and find weight which corresponds with weight of goods you are ordering. (4) Follow to the right. line opposite the weight of goods on your order, through the columns to the column headed by the rate per 100 lbs. to your state. The amount in this Column will be the approximate Express charges on your goods.

Table of Express Charges Based Upon Rate per 100 Pounds

| 14 Rate per 100 Pounds is | \$1.25 | \$1.45 | \$2.15 | \$2.65 | \$2.95 | \$3.45 | \$3.75 | \$4.00 | \$4.25 | \$4.50 | \$5.00 | \$6.90 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Package not over |  |  |  |  |  |  | 5.38 | 5.39 | 5.39 | \$ .39 | 5.40 | 5.42 |
| $\frac{1}{2}$ Pounds | \$.37 | +.37 | +.39 |  | + .48 .40 | $\bigcirc .41$ | +. 42 | . 42 | . 43 | . 43 | . 45 | . 48 |
| 3 Pounds | . 38 | . 38 | . 40 | .42 | .43 | .43 | . 45 | . 46 | . 47 | . 47 | . 50 | . 51 |
| ${ }^{4}$ Pounds | . 38 | . 39 | .42 | .44 | . 48 | . 47 | . 49 | . 50 | . 518 | . 56 | . 61 | . 68 |
| 5 Pounds | . 39 | . 40 | . 44 | . 46 | . 48 | . 50 |  |  |  |  |  |  |
| 10 Pounds | . 44 | . 46 | .53 | . 58 | . 61 | . 61 | . 69 | . 71 | .74 .93 | . 76 | 1.86 1.12 | 1.00 1.33 |
| 15 Pounds | . 48 | . 51 | . 62 | . 69 | . 74 | . 81 | .86 1.03 | 1.08 | .93 1.13 | 1.18 | 1.38 | 1.66 |
| 25 Pounds | . 57 | . 62 | . 80 | . 92 | 1.00 | 1.12 | 1.20 | 1.26 | 1.32 | 1.39 | 1.64 | 1.99 |
| 30 Pounds | . 62 | . 68 | . 89 | 1.04 | 1.13 | 1.28 | 1.37 | 1.44 | 1.52 | 1.59 | 1.89 2.15 | 2.33 |
| 35 Pounds | . 66 | . 73 | . 98 | 1.15 | 1.26 | 1.43 | 1.54 | 1.63 | 1.71 | 1.80 | 2.15 | 2.64 |
| 40 Pounds | . 71 | . 79 | 1.07 | 1.27 | 1.39 | 1.59 | 1.71 | 1.81 | 1.91 | 2.01 | 2.41 | 2.97 |
| 45 Pounds | . 75 | . 84 | 1.16 | 1.38 | 1.52 | 1.74 | 1.88 2.05 | 1.99 2.17 | 1.10 $\mathbf{2} 30$ | 2.22 2.42 | 2.57 $\mathbf{2 . 9 2}$ | 3.311 3.6 |
| 50 Pounds | . 80 | . 90 | 1.25 | 1.50 | 1.65 | 1.90 | 2.05 | 2.17 | 2.30 | 2.42 | 2.92 | 3.62 |

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## FOREWORD

THIS Company is unique in the Radio Field to-day, inasmuch as it is the only one in existence specializing exclusively in small parts, raw materials and everything in fact, that goes into the making of standard modern radio apparatus.
A glance through our catalogue, which is unusual in many respects, will readily confirin this.
It is the only cataloguc containing a great assortment of radio vacuum tube hook-ups, which are printed in the back of the book. This feature alone is quite important and will be the cause to keep this catalogue in your pocket at all times. The diagrams are the 75 most important vacuum tube hook-ups in use today. They will prove very handy and instructive at all times.

Note that this company has factories in Brooklyn, N. Y., and Elkridge, Md., and that most of the material shown liere, on account of our own mantufacture, can be sold cheaper and better than most other houses offer.

If in rare cases our prices are higher, remember that our materials must be better, besides we prepay all postage, or express on the great majority of all goods. You will find that by dealing with us, in the long run, you will not only save money, but annoyance as well, for our material is absolutely the best that money can buy.
When ordering, always be sure to give catalogue number. Goods by mail and parcel post are at your risk. In 99 cases out of 100 the goods will arrive without fail. If you wish to be absolutely sure, enclose a small fee for insured parcel post, 3c for $\$ 10.00$ insurance, $5 c$ for $\$ 25.00$ insurance. We carry the
most complete stock of its kind in New York City, and ship invariably the same day the order is received. Just try us once.
We pride oursclves justly on our Service. The reputation of this house has been built upon Service. You will be amazed to find how fast we ship. We can only disappoint you once. Remember that most of our orders are small and that consequently the profit for us is very small. Only by continuous reorders and by satisfied customers can we thrive and that means, Service, careful Service, courtcous Service, prompt Service.

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mark

96-98 PARK PLACE



NEW YORK CITY

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# RASCO 5-TUBE TUNED RADIO FREQUENCY RECEIVER 



No. 9216A

In laying out the wonderful receiver we are offering you, we decided to incorporate within this Radio Kit all of the best features to be found on commercially built Radio sets, selling for as high as even $\$ 200.00$. But the following natural obstacies, all purely electrical, had to be first considered:

The lower the wave length to be received. the greater will be the tendency for the radio frequency tubes to fall into oscillations, commonly termed "whistles" and "squeals."

If this tendency is curbed, then it severely impairs the efficiency of reception on the higher wave lengths, especially when distance reception is desired. And, vice versa, if you allow the higher wave lengths to come in near the point of oscillation, and set your adjustment there, with respect to the suppression of these osciHations, then, as you ko lower down the wave length band, these oscillations become more and more severe, finally preventing you from evon hearing the broadcasting station behind those oscillations.

Too short an aerial will promote extreme selectivity, that is, enable you to tune in dis.tance stations while "locals" are broadcasting, but at the same time, those self-same oscillaitions will become violent on the average selfneutralized type of Radio kit or factory assembled sct. To eliminate this condition, you must on those sets lengthen your aerial, but this will impair your selectivity, making your tuning "brotul." working to a decided disadvantage in big cities where two to fifteen stations are broadcasting at one time.

Where a long aerial and lead-in is employed, through necessity, true, a fixed condenser, say, measuring .00025 to .001 mfd . may be inserted in the antenna lead, but this will produce the same effect as experienced with too short an antenna.

Our engineers, realizing these funclamental obstacles are ever present, decided to design a set that would embrace a universal circuit. in which the Radio set could be immediately suited to the correct conditions for your particular lengt antenna. and at the same time adjusting
the receiver for maximum efficiency at every wave length. Summing up, distance stations on 500 meters wave length can he tuned in with as much volume and clarity as thosestations operating around 225 meters.

And strange to say, the operation of this most unusual Radio set we are offering you is no more difficult than other 5-tube receivers-there are but three tuning dials, which can be logged for future reference, and this one additional dial, which permits of all this wonderful reception. It is simply adjusted to a point at which the station will be received in a flood of volume, yet never with any sacrifice of clarity.

And remember, this is not a small set thrown tokether with questionable parts-refer to our list of parts, and notice the nationally advertised items used. The average concern would, and does, sell sets of this type ( 5 tulves) on a 7 by 18 -inch panel in a 7 -inch deep cabinet. We use a $7 \times 24$-inch panel. The crowding torether of instruments always results in unwanted feed backs, uncontrollable howls, etc., which are completely overcome in our engineered product, And there is no other concern in this country who can compete with us offering the self-same value -our tremendous volume of business has made this low price possible, in the same way that tremendous volume of business made the Ford car what it is to-day.
Note that the panel comes to you alreaty drilled and engraved, which means that a ten-year-old child can assemble this receiver. Our blue print and detailed instructions furnished will show you how to first assemble and wire the panel, independent of the baseboard, then to assemble and wire the baseboard independent of the panel, finally attaching the panel to the baseboard, and completing the assembly in a few minutes.

## Build Your Own Receiver-

## It's Easy The "No-Sod-er" Way

 Rentiationay Improvement in Assambling Ractio Sas
## BIGGEST VALUE IN AMERICA

No solder-No bare wires-No poor connections-No dissatisfaction.

No tools needed except a common screw-driver and common pliers.
All connections are made by the use of our flexible, insulated eyeletted connecting wire in place of bus bar or wire, and solder.

And in a fraction of the time usually required when using the old fashioned way. And when the job is done it is neat and your connections are tight.

## We Fwroish a Special Blueprint Free With Each Kit <br> Connections Always Perfect

The binding posts are numbered in pairs. two markel No. 1, two marked No. 2, etc. All you have to do to make your conncctions is to take one of our flexible wires of the broper length. which we furnish. to run from one of the posts numbered 1 to the other post bearing the same mumber: another between the two posts marked No. 2. and so on. You place the eyelet at the end of onr wire over the post, and with your plices screw the can down tight. and yon have made a perfect conticetion complete in only a fraction of flic fime it would take you to cut and hend a bu- wire and heat the now useless soldering iron.

## No Expense for Soldering Tools

In aldititon to the sathig of 11 nue and loother. you save the expense of a soldering nuthit. Thit is only ono of the many hatheftes you fafin in deallitg with us.

## No Skill or Knowledge Required

When sou consider the fact that it is arery difti calt for most people to do a neat job of solidering and that no matter who you atre von conld attach a connecting wire by our method without any pre vions knowledge or practice whatsoever and with out any skill in ridlio, yoll will realize what a rem endous improvement this is over the old way.

Had you seen, as we have seen. hundreds of wired sets looking as though they had just been through a cyclone, you would see that a neat job of assembling by a nowice or one not expert is the rave exception

## Cannot Break

Our whe is stranded, and covered tirst whin rubber insulation and then fine worell wrbhing and may be bent and twisted without danger of breaking. The cyeles cannot come off, so you have a connection that is firm, safe. durable. permanent, and yoll kniw that in merely moving or shaking your se there is ne fear of shaking a connection loose.

## No Short-Circuits

As our wires anw ibsulated. wou will never have the danger of a short circuit and the lourning out of your tubes from these conncetions throukh accidentally bringing them nowther and tureting eath othor or lropping orer them a bare wire or at tan! at its usin: the old-style solder and bare ulte conncetion.

OUR Balanced Interflex Set is alse equipped with "No-Sod-er" Cosnectors.

- NOTICE
To Experimenters
You can change your "No-Sod-er" Connectors from one hook-up to anather as often as you please. No danger of dimasing or destroying a connector or iustumment, such as jacks, switches, ete., as in learing oft tidat, soldered bue-bar.

SPECIAL FEATURES:
Tasimum etticlency on all wate dencthe.
Any lenpill aerial an le used uith this set.
Lndur atrial may le etuploged.
lendically 1 mproved mant of as: sembly.
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l'rousion for pouter amplitication in last stathe "ith iucomb panying " (e" batteny rhanes.
Employs a purfect whatue onfrol

Trant, drilled and engraved, Bakelite ibilero "" $\times 24^{\prime \prime}$
Raseboard, laminated

Filot Variable Conden-er fon:us
S.L.

Morlifled
Condensers fon:is
-•••
: " Vlot latkelle Dials.

16 ohm I'llot IBlienstat.
1400 nhm I'ntentioneter 1'lot
5) Kockets, Pilot Jakellte low loss

Sack double ciscuit improved.
lack single cireuit filament control inmoved Suitch, Pilot
Fixed Grid Condenser and Mountings, I'ilot.
ED.3:


## Parts included in this Receiver



Fism condensars rilot unt 69


 Lhe Print and lnaruction Sheet.
$\$ 33.01$
Our Price, Calalogue No, 9216
$\$ 22.95$
9216 A Same as above. but without cabinet 9216 A. but with Pacent I.X. Suckets
$\$ 19.45$ No. 9372 Superaudioformers . . . . . . 824.55

Make Big Money by assembling these Kits into sets and selling them complete to friends and business houses who need a First Class Radio. Many of our customers sell these completed sets from $\$ 30.00$ upwards.

# $\$ 23.95$ POSTPAID 




No. 8888

For the past few years we have been selling our No. 9.416 5-tube tuned radio freauency receirer kit to our customers in every quarter of this winld. The unsolicited testimonials all ucknowledged the suberiority of that receiver to commercially assembled tuodels of other makes selling for many times its modest cost-about ib nut of every 10 such testimonials retuested us to post thein inmediately upon our offering of a one dial receiver Incorporating the self-same circuit. And, thus, for the past two years we have been experimenting to pelfect this receiver of apparent miversal appeat. We are indeed proud to offer it in its now completed and perfected form-We have been entirely successful in accomplishing the goal of every serious radio fan and experimenter. . . A perfect one-dial controlled 5-tube receiver. To accomplish this, we long since realized the absolute necessity of standard ctuality parts-our Ilst appended below will certainly testify to our selection thereof. Then, after parefully weighing the natter from its erery ungle, we decided to so construct this receivet, that in a moment, without lifting the cabinet corer or re-callbratling the tuning instruments, you could avail yourself of the unquestionable superiority of the conventional 3 diats for extreme long distance reception. Thas is very simply accomplished: You will note on either side of the irigle gang condenser, a small 7 -plate midget condenser, each of which is shunted to the center and front sections of the maln condenser, and are controlled by very small knohs on the panel with engraved white arrows thereon. The center vernier dial is rotated to the desired wave length setting, and ther these midget condensers are used to complete the perfect tuning of that wave length, taking but a moment's time. To revert bacte to true one dial operation. these small knobs are set with the arrow immediately heneath a predetermined pencil marli on the panel. The radio frequency inductances are oi the solenoid type, dir spaced wound and

3 inches in diameter: the rhee of them are very caretuily matched. as are the 3 sectlons of the triple condenser, Insuring a ware length range of 200 to 550 meters. The sockets will accommodate any standird $\mathbf{U} \mathbf{X}$ base tube, and for this reason, this receiver can be successfully used with eitber dry cell or storage battery tubes. The osclliations in the R.IF. stages are very easily comfrolled with a potentiometer, and by virtue of this method, truly remarkable long distance reception with surpising volume is at all times within the range of this recelver-ineidentally, tbis control is also used to subduc the enornous volume, in any degree you may desire. In our latest models, these kits are furnished whin one single tilament control jack. eliminating the necessity of a separate battery switch (remoning the bone or speaker plug from the jack automatically dis('onnecting the batteries frotn the receiver) and simplify $=$ ing the constructloti and assembly for your every heneft. In appearance, this receicer will most certainly grace ans toom in which it is plamed-perfect symmetry of design and conventence of the few simple controls are very evident. The pianel is handsomely engraved Babilite, and is scored around its edges with an attractive and pleasing horder. The 10 ohm rheostat affects the brillianey of the $2 \mathrm{~J} . \mathrm{F}$. bulh faments, greatly assisting in elimi. nation of interference the to nearby local stations, and preventing over-loading of the detector tube, which always causes distortion. In fact, the final design of this receiver represents the incorporation of all the improve. ments that we have found out in our own laboratory efforts, and suggested to us by our many friends. And we cialm that every it must perlorm as we have herelin set forth, or it is subject to immediate return to us. Furthermore, any 10 -year-old youngster can assemble this receiver in a few hours. Ior the mode of assembly we have adopted insures this. Included with each kit, we supply a detafled picture diagram blue print, and each
part used has a letter designation, which, when referred to on the blue print, tells you what this instrument is, and what it does. The base board layuut is full size, therefore, you could not possibly go wrong at this stage of the assembly-you mereiy lay the blue print on the haschoard and mark the center holes where every screw will hold down any particular item, removing the blue print, as soon as you are ready for this assembly. As the panel is drilled, there certainly will develop no trouble at that stage, either. No soldering of wires is at all necessary-we furnish various lengths of wires with lugs soldered thereto. and which you simply slip over serew, tightening the bolt thereon-a moment's task! The wiring instructions tell you to run a 6-inch whe from such and such a point, to such and such a point. How could you go wrong? Why you do not even have to know why you must make that connectionsimply do it-we have done all the thinking for you! Furthermore. the instruments on the panel are wired before the panel is attached to the base board, for your mechanical convenlence-and the same is true of the wiring on the baseboard. Completing the latter, you attach the panel to the baseboard, and complete the few remaining connections between the instruments on the panel, and on the baseboard. Should you wish to use a Power stage of audio frequency amplification, the direc. tions clearly cover this point. "C" battery connections on the A.F. transformers are provided. Separate R.F. "B" battery binding post is also provided. A trouble shooter list will quickly determino any snag sou may run into, and at once assist you in tho climination thereof. As the wires furnished are appropriately insulated, you need never fear the possibility of burnt out tubes, incidental to bare, or poorly insulated wires, short circuiting. Once you have screved or bolted the lugs of tho NO-SOD-ER wires to their respective terminals, you need never worry of any troubles arising, incidental to nolsy contacts. loosening connections, etr. The system of wir. ing we have employed is as foal-proof as possible-all leads are as short as possible every electrical law of Inductance, capacity and resistance has been complied with-remember, we did not just "happen" Into this circuit-it is no treak, nor a novelty, and it recognizes ne alibis! Kindly bear in mind that only the very best of accessories must be used in conjunction with this ex. ceptional quality receiver-and be particularly eareful of your choice of a very efficient and powerful leud speaker to dellver uecessfully the enormous volume afforded by this receiver, and render its reproduction thereof with $100 \%$ pleasing elarity.

## Parts Included in This Receiver

1 Fanel 7 by 18 inches drilled and ongraved Bakelite
1 Baseboard. $7 \%$ by 17 inches laminated (nonwarping)
3 Coils, 9 -Inch dianeter Solenoids $\Rightarrow$ air space Nound
5.00

1 U.S.L. Triple . 00035 Varlable Condenser...... 5.75
1 1'ilot Kilugrad Vernier Dial.................... . . . . . . 00
7-plate Midget Condensers.
r-plate Midget Conlensers.
1.50

Fingraved Miniature Knobs,............................ $\quad .50$
I'acent Shiclded Audio Transiomers......... 7.50
10 Ohm Pilot Rheostat
.46
400 Ohm Phot Potentiometer .81
Carter Fixed Fllament Resistances. ................ . . . . . 75
5 Pilot Fit-ull Sorkets
1.40

1 Pilot Slngle Circuit Filament Control Jack..... $\quad .50$
l'ilot Grid Leak Condenser and 2 Megolim Leals .85
1 Pilot . 002 Fixed Condenser. . . . . . . . . . . . . . . . .
1 Pilot . 005 Fixed Condenser.
Binding Post Strip Complete ${ }^{\text {Bith }}$ Posts $\quad .50$ Angles, etc.
NO-SOI-ER connecting wires-complete set...
Necessary hardware, screws, angles, etc........ . . 25
Blue Print and Detailed instrurtion Sheet.
1.00

| No. 8888 Our Very Special Price |
| :---: |
| PREPAID ........................... |
| 155 |

No. 8889 Above Kit, with $7 \times 18$
Walnut Cabinet, 8 inches deep. $\$ 28.95$ (Cabinet is shipped via Express Collect.)


## Silver Marshall Single Control No. 620 Silver Cockaday Kit

## $\$ 59.25$ <br> POSTPATD

Next to the 5 -tube 3dial tuned Radio freIueney circult, the most widely one used Is the Roberts typeone that employs a stage of tuned Hadio


## No. 9967

regencrative detector and the usuat stages of audio frequency amplification. Appreciating this fact, the Silver Marshall engincers havo introduced their version of this circuit. making several valuable improvements thereto. Note that this kit is a one dial control job. By virtue of the plug-in coils, the wave length range is variable at will from 50 to 2500 meters. The regenerative detector employs a fixed regenerative coil, controlled by a C.R.L. varlable resistance on the panel. U.X. sockets permit the use of any type of tubes-including a power tube in the 2nd audio stage. Wiring is extremely simple-Belden cable harness belng furnished-all wires are cut to exact length. The enormous rolume produced by this exceptional receiver is due to the use of the new super-Thordarson transformers, and the quality and clarity are perfect. The panel and sub-panel furnished are beautifully drilled and engraved Bakelite. By reason of the carefully engineered layout, the assembly of this remarkable receiver can be accomplished in surprisingly rapid time, by even the layman who has never assembled a receiver before. The orerall dimensions of the kit, when assembled, are 7 inches high, 18 inches long and $61 / 2$ inches deep. Licensed under Armsirong TV. \&. Begeneration 1Patent No. 1,113,149.

Parts Supplied in the Silver Cockaday
2 No. 316 Silrer-Marsha!! . 000 is Condensers.
2 No. 515 Slyer-Marshall Coll Sockets.
1 No. 110 A SM Coll.
No. 114 A SM Coll.
No. 510 NM Tube Sockets.
Vemier Dial.
No. 113 P Midget Contenser.
Pair Mounting Mrackets.
S-C Thordarson l'ower Transformers No. 200.
Yaxley 6 Ohm IRhcostat.
No. 1 Yaxley Open Circuit Tarts.
No. 2A Yaxley Two Chreuit Jack. Yaxley llattery Switch.
Centralab 1Resistance, 25,000 0 hm .
Belden Wiring Harness.
Polymet . 00015 Condenser with Leak Clips. Polymet . 002 Condenser. Polymet .005 Condenser. Polymet 2 Megohm Leak. $7 \times 18$ Drilled and Processed Front Panel. Drilled Sub-pancl.
1 Wiring instruction and Color Chart.



## Balanced Interflex Four-A Four Tubes A Revolutionary Improvement!

## The Single-Dial One-Control Receiver the World Has Been Waiting For !

The Discovery and Devolopment of Hngo Cornsback, Editor of RADIO NEWS



INCILUDES CABINET No. $933 \%$

An Ianovation-Ahead of All Other Sels
The Balaseed Tuned Intelfies Four-A coniprises one stage of thnel radlo fromuency, erystal detector and thres stages of audio freauency amplisiation, of which the two lagt stages are transformer coupled.

This is the first rad single control tuned radiof efucncy set. Only one dial or emtrol-no compenation of w. kla!. Its wolume is not only kreat, IJut tremendous. It lenes not nowl or squest. and brlags in the stations by turning ons lone knols. This feature makes it greatly to be de thecl by the old folks and others who do not wish to lother with gevenal centrds. Stations can be logged with it siugle row of figures. The most silsily tuned receiver in existence. Ant your whl be surnrised at the high selectivity

## Automatic - No Swltcher

When throukls recelving with the balanced Interfies Four-A sou bull nut the loud speaker (or phone) plug. which autoustically diseonnects all the racum tubes

## Only ONE DIAL—Only ONE CONTROL <br> This circui' is the rezult of a determination which Mr

 Huso Gomsbuck has had for a long time to originate the ideal receiver. Such a receiser as he had in mind in have these cilstinctively gooul qualitics:1. Single entrol-just one knob and nothing else:
2. Should toot oscillate-should not howl and stridek at any mont betwen 200 and got meters:
should Hing in stations without any disturbing noises.

The Balaned Interflex Four-A here deseribed docs all of these thitnes and quite a frod mans mure besides.

No two sets work alike because there nre differences of fubes, differences of condensers, differences in colls and many ohler differences which are apt to throw the se: Out of balaner. The inventor discovered a method of overcoming all these differences or defects in a way. so far as known, entirely oricinal. Ry means of this. the Balanced Interflex Four-A may be adjansed to whateret the local conditions Haty be.

If the tickler colls, of which two are used, are correct ly adjusteal when sou begin usink this receiver, hats set does a most surprtstig thing. The therlets can he adjusted He the lownes available wave. say 200 meters. so that the circuit is on the point of oscillation. If correce!s adjusted. impossible as this sounls. The same condition will prevail threugh the entire broadcast range up to 600 me . ters. and you will never need to adjust them again!

Jis ohat wonls, stations of whe meters up to 515 meter will cime in with the same intensits, with the ytations in between as wel!.

## THEORY OF THIS SET

In all quned sartio fremuency, eireuits. If the set howls and squeals on regeneration, it is necessary to provith. losses. There are schoral methods of obtaining suph losses. but the one mont customary now is to place the inductances in the magnetic tield of the condenser in such a was that theere are certain alisontion losser. Wut it \& apparent that whis is a sery crute wat of accomphations these losses. Tn the first blace. moring the colls eren $1 / 61$ of an inch closer to or further from the condensers will make a tremendons difference in signat strengit. Furthermore, the losees atre not aluays fully realized, and in spite of seme constructors' elaims, the majorliy of the sets thus made squeal and how most amovingly
The coils could, of coulse. be made adjustabile so that they could be moved toward or from the condenser. This nowecer. would neressitate a number of extra controls which are not ranted.
In the Bamaned Inteffes Four-A the batancing principle prorides the necessary losses efficiently will firy little or no loss of signal volune. Oner set, the bilancing eolls keen the receiver just below the oxelliation noint at all wavelengths whin the hroadeast rance and it is then tuned by theans of onls one dial. which merates the eandensers. It is, therefore a real one-dial-control receifer combining steatest simplicity of opequlion with mexlmum efficiener.

## RESULTS OBTAINABLE

In New York. in midsummer. thls set. on a 60 -font aerlat, brought in KDKa. East Pittsburs. Pa., at a dial setting of 5 . and the volume was tremendous-stronger than maty of the locals. The locals, of course, came in with great volume. regardess of the wave-length. Distant stations that hare come in on a single crening are listed on next paze. This should not be considered a ree. ord or the best this set can do, because recejring condithons here are poor. The log remresents the results on a sultry August bight when transmitting conditions were notorlously noor and there was so much statle it was impossible to get the calls of many more stations whose nrograms were heard and otherwise could have been logred.

## BALANCED INTERELEX RECORDS

 soutl; of Tomeka, reports having reccived with the Bal anced Interflex Four-A Circult on loud speaker 20 sta-tions in these citles in one hour, between 8:10 and $9: 25$ p. Im. , one hour and fifteen minuter: Cedar Itapils. Council Blufis and Shenandoah, Iowa; Hastings and Lincoln, Nebr. : two in Kansas (ilty, Mo.: Hristow. Okla.; Figin. Il1.; and five in Chicago; Minneapolis. Minn. ; Denver, Coló : Dallas, Texas: Detrolt. Mich.: Cincinnati. Ohio: and New Orleans, La, Ife used is batteries which had been used six months, 75 volts. He says he is more than satisfled.

I just want to outlino my successful results with the Halanced Intertlex, I bullt according to the description and, believe mis. It is the best and simplest outfit yet. and for purity of tone unexcelled. Eitremely low tones and also extrenely high tones perfect and without the least distortion. selective heyond even my fondost hone, us I can wet KDKA easily without any interfurence from our loral WSAI, only fourteen miles Alstant. My youngest daush tcr, only 6 years of age. tunes with the skill of a professional, as to all the rest of my older children, and wife. I certainly am very proud and am showing and demonstrating to all my friends and acpuaintances this wonderfial lnterfiex. and when I say I certainly am an intertlex booster, I am putting it mildly. My log to date is as follows
WSBC (Hicaro, WTlio Chicago, WIIIBJ Fort Wayne,
 Clarinda, Iowa. WHFO Lansing, Mich.. WVEN Chicago, KOA Denver, WSOE MIIwatke, KMA Shenandoah. H8B Nashwille. WCSO Minneapolis, WHT beertield. KJlaC Houston, W'SMK Dryton. Ohio, KF:IZ Fort Worth, WJAX Jacksonville. Fla, KTNT Muscalise. Jowa. Wibz Springfleld, Mass. KOíI, Council IIUff: Ifua, WiJAZ Mount Prospect, WGES onk Park, KFXF゙ shenamboh. KFAB Lincoln. Neb., WWNR (Hicano, WMisis Chicago, WDAF Kansas Clty, WEisfI Chleago. WCN Chicago, WGY Schenectady, WES Crete, WIS Harrison, KDK.I Eist Schenectady, WLA Crete, WISH IIarriso
Pittshurgh, KFKX Ifastings, Neh. WCISD Zton, Ill. WOC. Darenport, W(2) Chicago, WSAI Mason, WTAM Clerelani. WWJ Detrolt, WilAD Mtharukee.
L. H. WEASEL, 611 Clark Street

Middletown. Ohin

We have constructed two machines with the Baianced Interflex circuit. The performance of thic circuit is wonderful.

GUY SHITTFR, 6:1] I'ark Avenme. Piqua, $O$

I ain glad to say that, with the Bal. anced Intertiex made recently. I have been able to log the following stations:

WNXC, WEAF, WJZ. Now York,
WJY New York, WOlk Newark, WYCA New York, WAilg Itchmond IIII, WHN New York. WAAM and WGCP Newark, WIBHR Rossville, N. I., Wriss New York, WiP Phtladelphia, W(iIsis Freenort, N. Y.. WLITT Phlladelphia, WRNY New Yors, WOLD Chicago, WMisF Miaml Beach. W'GBU Mami leach, WOC bavenport WHAZ Troy. N. Y., WGN Chicago, WDAF Kansas Dits.

WTAM Cleveland, WAAI Mason, Ohio, WOO Philadelphia, WHAP Brooklyn. KI)KA East Pittsburgh, KIW Chlearo, W'I' Atlantic dity. WRA: Washington, WERJ New York. W'isif New York, W'CCO Minneapolis, Minn., WGT schettectady, WLW (incinnati.
J. sCHMLTZ, $9 R$ Parkville Arenue, Brooklyn, N. Y.

Thic article of the single.Control Interfiex read so well that I decided to build one; and 1 wish to say the results were most kratifsing. After balancing 1 was able to log 25 stations in one evening, with equal solume to my five-tute set, and with more clearness and stability.
H. C. WATTERS, Ir., 1111 Fighth Streat. Huntlagton, w. Va.

## ALL ON LOUD SPEATE

This is what tho isalanced Interfiex Four-A brougtis in in the loud spoaker in one evening for Mr. Ruke Gernsliack, Eilitor of RADIO NHWN, No metorference when two stations were within three polnts of eata other.
WTP Philadelphia. WRC: Wastington, WiZ Nee Forls. WQJ Chicago, Wbish Chicago, W'GN Chicago, wHN New York, Wi:lsD Zion, III. WPMCA New York, WYY Schenectaily, wor Newark, Wsal Mason. O., WGik IBuf-
 KIDKA, List Pitthurg, la., wTAS Elgln, Ili., Wi'g Atlantlc City, WCat Philajelphis, WMAK Jeckport. N. Y. W,DAZ Chicaro, WINS, New York, WGCP, Newark, WiNi Newark. WOKO New York, WODA Paterwon, N. J. W Whis (thicago.

The Balanced Intorfiox Four-A takes in the ontire broadeast range.

A BEAUTIFUL LOOKING RECEIVER


## PARTS INCLUDRD IN KTT

## Set Not Assembled

(List)
Cabinet. mahowany finish, $7 \times 21 \times 8$
$\$ 1.18$
panel. drified und engrasmt. ixal. Bakelite.

3.75

Coupler Fiohs 9 st 18 c (spe, 2 at
 .1002\%5, I!. 太. Lab. or (inpacikrad. . . . . . . . . . . . . . . .
Fixed Condensers, .005, Hilco, 2 at 7ise...........
Diat. Vernier. specially tookl, no backlash, Mar-Co or Pacent
Transformers, audio frequency, $31 / 2$ to 1. Paeent. 2 at $\$ 5.00$
Rucostats. automatic, Amperite, 3 at $\$ 1.10$
Rheostat. one Filkostat
Fixed Crystal Detector and Mounting. Carborun. dum
Sockets, low inss, bakelite. Pilot, 4 at 40 c
.60
Jack, single, filament control, Jones Improved
Jack, double, flament control, Jones improved
lininding Posts, moulded, Aristoerat, 7 at 7 c.
Binding Post Strip, engraped

## GAMY HOP CRHNDMOTHBE

The old folks do not set the same "kirk" out of playing with a half dozen or sce dials that gome of us do. They want simplicity. directness. ease of tuning. This is why they will be thankful for the chance to use this, the only single-dhal and real single-control receiver.
"No.Sod-er" flerible, Insulated, eyeletted con- necting wires ..... 1.25
Necessary IIardware (screws, angles, etc.). outfit. ..... 1.00
Blue-print and Instruction sheetKit. total, regular price. . . . . . . . . . . . . $\$ 49.13$Our special price. tranmportation $\mathbf{S}^{\mathbf{1}}$, 14phaid
Catalog No. ..... 9336
ACCESSORIES
Vacuum Tubes, UV-901A type, 4 at $\$ 1.25$. ..... 35.00
Storage A Battery, 6-volt. 100 a. h. ..... 9.50
4.60
R Ratterles, 4:i-volt, large, 2 at $\$ 2.30$ ..... 4.60
4.50
Headphenes, : 000 -ohm
75
Phone I'lug ..... 4.50
Accessories, total, regular price ..... \$88.85
Our price. postpaid* ..... $\$ 27.40$
Catalos No ..... 9321batteries.

## Bruno 5－Tube Diamond of the Air Kit

，Hemsed under Amstion！Regeneratire Patent No．1，113，119


## $\$ 45.85$

Hadio reseivers emsloying matij stage radio fregurncy amplitiration，are only truly effective，if they are datora－ toty designed and checked when completed by Terbuicians Well tersed in the science．In fuct a poorly desimed 5－tube recejver is often not even as good as an arerage 3 －tube model．For all keneral purposes，a reveitel，con－ sisting of one ladith Fremuency stage，with its temadency to osrillate either mermanently hembalbzed，or slightly thriahle（rely effective in the lands of an expeldeared Radio fant．and one ARMSTRONG KFGFNERAT？V゙た Wetertor stage，followed by the usual stames of allatia fie－ quents amplification is proven to satisfy the wants． expectations，ami recciving conditions of thany brondrast Histeners．Nevt to the 5 －tuhe Tuned R．F．ssistem of reception，this tywe of rereiver is most universally Hiset， being in principle very similar to the Roberts，Broming Drake，etc．＇The It． $\mathbf{r}$＇．stage enploged in this Hadlo set laas an amplitication power of at least in－amb thus it can be readily seen that not only all the virtues of the ime tried and accented legenerative leceiver are re－ talned in this Diamond of the Ait Kit，but also furrher improved upon．by the virtues of the K．F．stage urst mentioned．You are assured extreme sensitivity on all distance receptiont，as welt as selectipity which will mot
＂cut sime bants＂in its mission of thetter tuning，for that wrodures distotion．The Audio frequeney system em－ bloyed consists of one tudio trinsformer，coupled in the ustal manter，followed by two Resistanee coupled stages． A handsome drilled and tastefully decorated Bakelite panel in conjunction with Jruno brackets and sub－base panel assures a very simple rectiver to buld．Detalled wiring instructions and general information included with each kit Note the extrume higls quality component parts we fur－ mish with this oultit．Bear in mind this apparatus is not of questionable quality，nor，of any infringement on any patents－no maive shift＂sehemes＂are employed to evade the Arinstiong Patents．

Parts For The Improved Diamond Of The Air Kit
Bruno No．！）！12．M゙，Coll（a $\$ 3.00$
 5.50

2 No． 101.0005 S．L．F．Bruno Condensers （id）\＄1． 40
IBruno l＇ilot Light suith．．．．．．．．．．．．．．．．．．．．．．．．．．． 85
Bruno lbakelite Yamier Dials＠$\$ 2.01$
1．Amp．Anperites（mounted）（ii $\$ 1.10 \ldots 3.30$ 1／2 Amm．Amperite（monnted）（a）$\$ 1.10 \ldots .$. $31 / 2$－ 1 litum＇Tratone Bodel i）＇ryansfomer．．． 4.00
1 megohm resistors
General Resistors
.5 megohm leak
Bretuoud Variable（irid Leal

single Cirruit Jiuk（u）．30 ．．．．．．．．．．．．．．．．．．．．．$\quad .80$
Centurs $7 \times 24$ Drilled and Engraved lanel
（i）$\$ 5.00$
5.00

Parent I．X Spring somkets in ． 10 ．．．．．．．． 2.50
Century Drilled sioket strit © $\left.\$ 1.25 . . .{ }^{( }\right)$.
Pair Bruno Brackets
2．5 Mit．Aerovox 1u－f＇ass（ondensers（a ． $70 \ldots 1.40$
5 Strand lle Laxe multi－rolored lattery cable．． 75
I＇ush I＇ull lattery switch．．．．．．．．．．．．．．．．．．．．．． 50
00025 Mfl．Aerowox F＇ixed Condenser
1 Bruno Binding posts（ $($ ） 0 E
.40
5 IBattery（＇able Markers（iz ． 15 set．
$\because$ Flexible Leads for C Bittery ©． 10

.15
.80

TOTAT，COST
$\$ 51.90$
YOUR SPECIAL PRICE
$\$ 45.85$

Bruno Basic Diamond of the Air Kit

## $\$ 20.45$ POSTPAID



You may wish to huild this wondelful elreult emplosing certain parts which sion may have on hand．and which will serve the purpose．To you，we offer this basic kit， consistlag of
consisting of：Tunims Cuil．
1 l3runo No， $9 y \mathrm{Jr}$ ． R．F．coil．
2 Bruno 101 Bake－ lite Shaft $心 . \mathbf{p}^{\prime}$ Condensers
3 Butno Vernier Dials．
1 13runo Light Nwiteh．
Or，you may ordes this essential kit，and wish to make up your
 oun choice of the rest of the parts re－ quiret，referring to the tarious pages of this catalogue． Fery neatly boxed and furnished with an explanatory BLDE PKINT．
No． 9051
$\$ 20.45$

## Our Leader Console With Built-in Loud Speaker



The extremely low price that we name for this handsome console cabinet and built-in loud speaker is no reflection on the quality or appearance of same-in fact, it represents more value for your money than such similar combinations offered elsewhere for $\$ 10.00$ to $\$ 20.00$ additional cost! We believe in a large volume of sales, with small profits-your generous support substantiates our business principles. The batteries and chargers, or " $A$ " and " $B$ " battery eliminators can be housed within the spacious shelf room available for this purpose. The back of the battery compartment is removed for immediate access to the batteries, and proper ventilation thereof. The panel space is 7 inches high by 18 inches long, and has been especially designed to accommodate any of our receivers and kits built upon a 7 by 18 -inch panel. Included with eve $1^{\circ}$ console, is a $\$ 9.00$ Utah Halanced Armature Type Loud Speaker Unit, attached to the metal throat of a correctly designed wooden horn loud speaker, capable of enormous volume and perfect clarity. Handsome scrolled grili covers the speaker. Console is tastefully designed arrl finished in two-tone effect mahogany. The wool used is Genuine Mahogany Plywood edge banded top. Overall size, 31 inches long, 37 inches high and $13^{1 / 2}$ inches deep. Shipped Express Collect. No. 9041 Console, with Speaker
and Utah Unit-No Receiver.. $\$ 29.85$

## Notice

For your convenience we herevith list your cost prire of the above console and Utah unit, with any of the following receivers, the price of the regular cabinet regularly furnished therewith having been deducted:

Your
TOTAL COST
8940
6-tube TROPADYNE, and \$60.70
8941 5-tubeRasco EX PLORER, and No. 9041 Combination
8942 5-tube Rasco LEADER, and No. 9041 Combination
$\$ 58.80$

8943 s-tube 1 Dial Control Kit, and No. 9041 Combination
$\$ 52.80$
$\$ 53.80$
8944 5-tube 2-Dial Control Receiver, and No. 9041 Combination
$\$ 60.70$
8945 5-tube MELODEE Receiver, and No. 9041 Combination $\$ 50.80$


## Note

By inclurling with sour order the list of sexessories described in cletail under No. 9071 (note that leceiver chassis No. B940 reauires 6 tubes instrad of 5) sour Radio Reeiver w- 11 be complote. and will represent The greate t possible value for every penny you have invested with us for a thoroughly deoendasle Radio Receiver-your every satisfaction guaranted.

## Crosley One Tube "Pı" Receiver



## $\$ 9.63$

A complete one tubs resenerative reveating set ompletely as ansbled and eady for immed ate tise for this very low prive of $\$ 9.63$ ! It is hard to beliepr that ueh ralue coulid be porsible. * Fen with Amerivan nrethods of mass production-but. the Crosiey nameplate and a)solute guaraniee thereon is everv assurance of the interrity of th. 100 o perFormance pussible with this minialure radto: With a Well constructed antema, ONE SORY ('ELLL, ithe dry cell tube. ONF $2 \underset{2}{1 / 2}$ siu.ll "B" 3.1 TTTERY, and a pair of head phones, it is anssible to recelve broadcastimg stations even as far awity as $50: 1$ to 1000 mlles. Laier on. sou can add our 2-Eage Ita.co amplifier kit No. 3966, for loud speaker operation. Drerall dimensians 7 incties by 6 Inches by 5 inches. Only two rery : Imple dials to operate-ran be lustalled in few minure. Jacensed under $A$ rmsirong $T^{\prime}$. … Pat, nt No. 1,113.149.
No. 9800 Crosley Set, Without Tube TO. 83
or Batteries, etc......................


Thes whberbing basic princlples that have been must rigidly allhered to by thas country's 10 leading Radio enginfers are the principal causes for the ultra efficiency of this most marvellous receiver. True, due eredit should be given to the unusually high standard of fuality apparatus used throughout this fet, but the total stage shielding and nutomatic variable roupling between the primary and secondaries of the 3 1R.F. colls have made this receiver the exchusive dhaice of thos who know sufficient athout the art of Kadio to logically determine that this liadio kit will perform in a manner that has long since been their fondest hopes. The chreuft ltself is composed of two stakes of tuned radio frequency amplitleation, fully neutralized (or left slightly within the oscillating conlitum tor extreme efficienry un very long distance, controllable in this stite by the R. F. Hheostit on the right of the patell-one distortlonless nonregenerative detector stage and two stages of extremely uowerful audio frequency taplification. Iby using at clever fathdem rondenser on the ent IR.F. and detector stages. the oferatim of this receiver reverts to only 2 vernier dials. The total shielding used to house and com. pietely enclose the 2nd $R$. F, and detector stages ac. counts for the remarkable selectivity possible in this sensational recelver, for it prevents outside interferences fncarby local atations, static, rallating recelvers, elecirical disturbances, ctc.) from affecting the tuning characteristics of these stages, and prevents the ever ruinous inter-stage coupling which throws radio frequency circuits into terrific oscillation, sometimes maly controlled with attendant losges. Last, but not least, the almost uncanny sensitivity of this modern recelver is mainly due to the autamatic coupling, effected by the adjustments of the condenser shafts, raising and lowering the primary coit in the field of the secondary coil, in correct unison with the settings of the condenser. or, In other words, the coupling is automatically correct for any wave length being received. Any old-timer will attest to the superionits uf thres-tube receisers if lo $x$ years ago, over most of the present vintage of tive-tulse rereivers. Why? lbefablee the varioroumbers in those dings were used ins thedr very mane implies: The secondaries of those colls were always adjusted to the wave length heing recetved, anh? this aljustment was so critical, that its most neressurs good influence in the receiser was disearded in favor of the "very ineffeient "simplified controls," used to entlue "new-comess" into purehasing receivers. In the olil days, a recelver of the Hammarlunid-Roberts Hilt tym would necessarily have to resort to it maditional coupling dials, each very ritical in thelr setting. But. on this masterpiece of the Hammarlund-Roberts engineers, the valuable virtues of coupling are yours with ot one additional dial to adjust, nor even a thought to we given to it. Stations heretofore regarded as extreme distance pour in with thrilling volume and clarity-stations never
hoard before, are yours at your very finger tips. Alid,
the volume and llatity an all reception is typical of the high stundards set for this recelver-it cannot be possibly Improved upon. Wired for power anplitication in zod stage. The instructions that arcolumay each kit are so explleft, and the mechanical layout so well engineered that thia most marvellous receiver ran be completely assembled by you in one evening. The following parts are ineluded in the standaril kit
3-17-plate . 00035 Mtd. Hammathund Midline Condensers (a) $\$ 4.7 \%$
$\$ 14.25$
1 set of 3 . .uto-Couple cotis.............................. 10.00
1-4-plate 32 -monfd. Hantharlund Ni, Condenser
.at
1.80

2H. W. $\lambda^{3}(3-1$ 1atio) samsum Audio
Transformers (e) $\$ 5.00 \ldots \ldots \ldots . . . .$.
M Mar-mo Vernter Ilals. No. 192 à $\$ 2.50 . . . \quad 5.00$
2 No, 1 A Amperltes (o) $\$ 1.10 . . .$.
1 No. 112 Aınperite................................ 1.10

2 Benjamin suckefs without bases, Xo. sodit (ङ) $\$ 10.50$

10 Faby Engrared IShithay Eusis (ou \$1.1:..... 1.50

1.001 Mfd . Sangamo Fixml Condenser. . . . . . dt . 50

1 pr. Sangamo roricl Leak (Thps. ..............at . 10
1 No. 10 M \& tarter combined Midget Hheostat and Filament siwteh, 10 ohm. . . . . . .at 1.00
1 No. 1 Carter Short . litk. .............. at
1 No. 12 Garter "tmy" Acrial switch....... . . 4 . 70
1 Hammarlumd- I? oberts IH-(l) Foundation ['nit.at 10.50
Complete parts (without cabinet). . . . . .,. $\$ 63.05$
No. 9815 Your price, with ahove list of parts (ship model and cone speaker not included)
$\$ 57.35$
Shlphed Express Eolicet.


## Hammarhund-Roberts HI-Q Foundation Unit

## $\$ 8.38$ <br> POSTPAID

Although the ronterts of this kit are printarily intended for use in our No. 9815 kit . they can be adapted to your own special reguirements. Consists of handsomely Irilled and Fingraved Bakelite l'anel, drilled bakelite suh-janel. two complete abuminam shiehls, extension shaft, equalizers, fixed resistance, wire, screws, ete.

No. 9817
$\$ 8.38$
How to Build the Hammarlund 5 Tube HI-Q Receiver

## c'omplste instrutulons for as-

 sembling, wiring and operating the Ilammarland-Roberts Hi-Q receiter. Prepared under the divertion of the latmmarlundRuberts Board of Engimeers.No. 9814.
\$0.25

## Daven Bass Note Circuit 6-Tube Kit



Hullt around the famous Dawen Bass Note coils elnowhere described in this catalogue, and the Daven resiatance coupled amplifiers, this 6-tube circuit offers possibllitiea of tonsl reproduction and long distanee reception that makes the performance of this kit, whon assembled, equal to any commercially bullt kadio usually selling for $\$ 300.00$. The very best parts are only included in this kit, and a handmmely enklavid diblled Haliellte panei 7 fnches by 28 inches whll fincllitate your asceinbly thereof. Full detailed directions, blue prints, etc., arrompany each kit. Your complete sufisfartion is unreservedly guaranteed. The complete kit monshts of the Daven Bass note kit of colls-3 wry high quailty variable condensers, rheostats, Jacks, sockets, complete parts for resistance (roupled amplitier (i3 stages), IBakelite tuning dials, binding poet bridge. drilled and engraved Bakelite panel, basebsard, inlscellanetus hartware, grid comienser and leak, rubber rovered hook-up wire, blite print and

## Wring instructions. <br> No. 9854 Complete "Unassembled TE Without Cabinet......... 25 Kit, Wis

## Pilot

Radio Frequency Essential Kit


## $\$ 6.15$

l'lease do mot cunfuse the ruallity of these parts with that ordinarily oftered in surh kits-t the very fact that we use the very same materials in our Nis. 92165 -tube kit is proof of its exceptional mertt. Consists of 3 if -plate
 type, 3 spechal coil mounts mitie of inakelite. and three Freshman type No. $2+328$ IR.F. colls.. Iising these parts, and that material whifh jou may have on hamd from an nli set, you can bullel a vers cefticient 5 -iulue rereiver. In addition to ahove, you need rheostats, panel sorkets, gullo transformers, ett. If you wish to build at receiver of the noth-iwrilhating type. You simply reverse the plate coll leats to that side on whim suifi oscillations are not present. Huwever, the nure efficient receiver will allow for pumasaly inmodaced osifllations, controllable by either a potentiometer ( 100 ohms) across the " $A$ " battery, with the return filament leads of the antennat and and stage IR.F. transformers comnerted to the mowable blatle or arm thoreof or, controllable by a variable resistance iclarostat-i. If. I. products, etc.) In the R. F. "ll" battery rircuit. We call supply you with a spectal drilled and engrabed bakelite pinel, $7 \mathrm{x} 2 \pm$ Inches, for this cirruit. for 83.50, Hfuc Print and Baselpart layout for \$0.ion and wiring instructions (No-sonl-Et method) for \$0.50.
No. 9623 Set of 3 R.F. Coils- 3
Mounts-3 Condensers

## Daven DRF Bass Note R.F. Coils

## $\$ 7.15$ P08TPA1D

Althuagh erpectally designed for use in the famed Daven Hass Note circult, there colls are so effictent that they can reulace any existing type of It. F. coll, and produce unexcelled results. Sclentifically designed to give greatess selectivity with nerfect balance. Very small
 fields. no self-oscillation, no feed back. Degree of counling between primary aml secondary has been perfected. Smallest R.F. colls made: Wound on bakelite tuhes $1 \frac{1}{2}$ inches in diameter by 3 inches tong. Connections can le twleted under cap nuts, nickel plated. Complote Instruttons for bullding the Daven Bass Note cixalt fornishet.
No. 9748.
$\$ 7.15$

## Hammarlund Auto Couple

 Tuned Radio Frequency Unit
## $\$ 7.78$ POSTPAID

Combrises the Ham matluml N.L.F. Midline . 00 viso variable rathdenser with spwait! sear extensfon shaft, ubun whith is mounted a ram. When condenser shaft is rotated. this cam bears against a movable member of the primary of the coil, the priatisy being mounted on a suevial track is thero fore able to be moved in and ont of the secondary coll, thus barying the coupling thereof. Automaticalls. the compling is set at the correet dis:ance with respect to the semontary and the wate loanth being received. This primelfle has beat kiowo for inany yars by experts and laboratories to be the very esinne of at perfect tuned radtu frestiency rircuit-anel it touk the Ifammarlund engineers 10 apply thils arvented theory and arthally make it bussible for the lavilam, marehandeally, fo enjoy this


 AKI, WHIVE 1.FNGTHN IHRENPDCTIVE OF ANY I.FN(,TH AEIIIN. ISEIXG I'sEI). ('ondenser plates are non-cotrosise bass. soldered to both of their respectire franes. Itelnforced ribhed stamdards-one hole mounting, with additional anchorinst srew if desired-bronze spring pig tall-friction band braie-design of plates assures no crowding of satations on any wave length.
No. 9816 Complete Unit, Coil and
Condenser ........................ 8



Conslets of three MATCPFED units. Antenna coupter lisis variable primary, assuring maximum efficiency under all adverse ronditions. I'acked with 8 -page color circult livout and instruction sheet for building the famed sulper-sensitive 5-tube Aero-Dyne. For .00035 or 17 . plate capacity condensers. The unusually high electrical efflidency of these colls permit their use in many varieties of rircuits. .if space wound-minimum of insulation in hneit fielit.

No. 9603
-

## The New Bremer Tully Counterphase Power Six Kit $\$ 78.15$



Emplosing three stages of ultra
sensitive tuned radio frequency. in which interstage coupling effects have been reduced to a minimum and in which the external pick -up is practically nil, this latest product of the Isrener Tully laboratories is daily making extreme long distance reception records. The shortest possible aerials will produce results on this new receirer kit not even possible on other receivers using long aerials, proving its sensitivity. There are only two major tuning dials, two tandeu condensers being einployed. Wired for poucr stage amplitication, assuring maximum volume aud tonal reproduction second to no other recelver. Is very simple to assemble due to unidue color coded wiring harmess. Note the sery high cuality parts furnished in this kit-its performance warrants if:

PARTS REQUIRED
Ietall Value
1 TA Torostyle Transformer
4.00

3 TC Torostyle Transformers (ă $4.00 \ldots . .$.
2 LI) -17 Condensers (©) $\$ 9.50 \ldots . . .$.
$3 \mathrm{~B}-\mathrm{T}$ Mmf. Condensers @ $\$ 1.00$
3.00
3.00

3 13-T R.F. chokes @ 90c.
2.70

1 15-T 500.000 Omm Resistance
2.00

5 I500 Ohm Resistances @ 50c.
1.50

1 sel color diarts and diagrams
1 Panel, $7 \times 4$, drilled and engraved
6.00

1 Wond Baseboard, $98 / 4 x 231 / 2$
1.25

1 B-T Euphonic Audio Transformer; 2.2 to 1
5.00

1 B-T Euphonic Audio Transformer; 4.7 to 1.
5.75

2 ह-T Tuning Controls @ $\$ 2.50 \ldots . . .{ }^{(1) . . . .} 5.00$
1.001 Dffi. Fixed Condenser.
.40
1.00025 Mifd. Fixed Condenser .40
3.006 Mfd. Fised Condensets (a) 75 c
2.25

21 Mifd. Fixed Condensers a 9 c .
2.25

5 B-T Tyne UL or T*XA Sockets@ $\$ 1.00 . . .$.
12 Meg. Grid Leak
1 B-T UL "Silent" or " T " X Detector socket...... .50
. .25
1 Double Clrcuit Jack No. 101 .70
1 Single Circuit Jack No. 101. .70
1 Filament Switch
1.00

13 Ohm Rheostat
1.00

1 Single Pole, Double Throw lack surtch.
.90
Binding Fost and Mounting Strip.
.40
4.50
1 Jones B.M. Multi-plug Set
2 C Hatteries $-4 \% / 2$ rolts $\left(60^{\circ} \mathrm{c}\right.$.
1.20

Lugs, Screws, Hoop=up Wire. .................. 1.00
Total Retall Value.
.591 .05

shipped Fapress Collect.

## The Famous 5-Tube SuperSensitive Aero Dyne Receiver



## $\$ 59.45$ <br> PDSTPAID

This extraordinary recelver, employing the Aero Done No. 1603 Tuned Ridio Frequencs Kit, represents the very finest Radio set that can be made, whether it be custom built or even a factory assembled Radio receiver costing several times the price of this kit
It is the receiver you have long wished for, as it combines extreme selectivits and its attendant resultdistance reception. perfect clarity, ample rolume, foolproof, trouble-proof and rery simple to assemble. An 8. page instruction sheet in color wiring, with actual size panel and haseboard lay outs, and comprehensive directions and wiring instructions. is furnished with tlis kit.

## List of parts furnished with this Kit:

9 Blnding Posts
1.00025 Grid Condenser and Cllos

15 Megohm Grid Leak
11 Mfd. Hy-I'ass Coudenser
1.001 Fixed Condenser

1 Open Circult Jack
1 Closed Circuit Jaek
1 Net of No. 9603 Aero Colls (TRF-120)
1 Verichromed dero Dyne I'anel, drilled and engraved. 7 inches by 28 inches
1 Drilled Sub Panel
3 Sub I'anel Brackets
120 Olim Pilot Rlicostat
110 Ohm Filot Theostat
5 Pacent U.X. Sockets (cushioned)
3 finch Dials
1 C.R.I. 0 to 200,000 Variable Resistance
2 Facent No. 2811 Transformers
$11 / 2$ Ampere Anperite Audio Tube Rosistance
3 Paeent S.L.F. Condensers
I Reel of Hook-up Wire No. 4426 or Bus Bar Wire ! Dixle Assortment Screws and Lugs.
Total List Value.
571.80
 "National" Tuning Units for Browning Drake Circuit



B D.2B $\$ 9.95$ PDSTPAID
The Browning Drake circuit is one of huge possibilities, but for most efficient results the laboratory designed instrumetits should be used, for logical reasons. The coils must not only he of a certain inductive value but the Indiridual turns must have a certain inductive relation to each other, and the orer all distributed capacity must be of a known ralue. Then again. the proper coupling must be ricidly determined, on the one hand, and he properly rariable. on the other. The Nationat Colls are
wound with enameled wire on very thin bakelite forms. and are precision space wound. Lowest dielectrip losses. with greatest possible transfer of energy. Both colls are attached to nickel plated brass angle strips, and are set at a predetermined electrically correct distance from the rear plate of the concienser. The coupling coll in the type 13 D-2Is unit is controlled by a shaft which is supported in a bearing on the front end of the condenser, to insure stability in its rotation, A small tapered bakelite knob is furnished for the adjustments of this rotor on the panel. The National Equicycle condensers furnished are unique in that they rotate in an are of $270^{\circ}$ instead of the consentional $180^{\circ}$, the additlonal sweep further adding to the S.L.F. characteristies. especially at the lower and higher band of warelengths. The IS i) -II unit emploss a .0005 rariable condenser. whereas the $\boldsymbol{n}$ D-2If unit employs a .00025 variable condenser. A National type B Vernier dial (described in detail under our No. 9648 ) is furnished with each condenser.
No. 9626 Type B D-1B. . . . . . . . . . . . . . . . . . . 39.95
No. 8998 Type B 7.2B

## Karas Equamatic 5-Tube Receiver Kit



## $\$ 88.50$ <br> POSTPAID

The sensational results possible with this new receiver are solely attibuted to the very heart of the circuitthe Karas Equamatic coils, ftlly described under our No. 9009 . The quality of receptlon places this radio set in a class by ilself. Due to variable counling feasture, it is even superior to Radios selling for $\$ 400.00-$ and proves it, too. Automatic oscillation control. Drilled and enstaved front and sub panels assure a very simple mode of assembly. Dircetions and wiring instructions cover every possible detail. Note the very high quality list of parts that are furnished with this receiver-the exceptlonal results obtainable with this recelver certainly justities its seemingly higher cost price. The quest of every ludio fan is SELECTIVITY, BENSITIVITY, CLARITY AND VOLTM M, with ease of operation. THE KARAS EQUAMATIC IKBCEIVKK WHLL DFLIVEK A $100 \%$ SHARN OF ALL THINR GUA1.1TIEK. It is truly an investment, not a cost

## List of Parts

3 Karas Erruamatic H.F. Transfolmers.
3 Karas Orthometric 00037 Extemded shaft Condensers. a Karas Mictometric Vernier Dials.
2 Karas Jarmonik Audio Transformers.
2 Karas Equamatic ISetard Coils.
3 Karas Nuh Panel B1ackets, Set.
1 7x28 Bakelite I'anel, Drilied and Engraved.
1 Formica Drilled sub Panel.
1 Carter 10 -ohns Rheostat with Knob.
1 Carter 20 -ohm Theostat with Knob.
1 Carter Double Cincuit Jack.
I Carter Imp. Filament switeh.
1 Sarter ©mpamo. 00025 Grid Condenser whth Clips.
1 Carter Open Circult Jack.
Amsco 2 nieg. Grid Gate.
2 No. 1-A Amperites.
1 43/2-volt "C" Battery
Jones Multiplug with Mounting and $8-\mathrm{ft}$. Cable.
5 Benjamin UX Cushion Sockets.
Binding Posts, Sicrews, Bus Wire, Soldering Lugs, Spaghetti.
No. 9010 -Complete Kit of Parts. ©88.
YOUR COST ..................

## Pilot 2-Dial 5-Tube Kit $\$ 6.60$

The conventional form of 5 or 6 -fube Tuned Radio Frequency recelvers is always equipned with three 17-rplate bariable condensers, and therefore needs : tuning dials. Siould you offer any objection to the necessity of having so many dials to manipulate, yet wish to bulld a receiser using this ever popular and most efficient circuit, this problem is very satisfactorily solved by employing this 2-DIAL TUNED IKADIO FHEQUENCY ESNENTIAL KIIT. You wlll note in the illustration that one of the rondensers is composed of two 17 -plate sections, with common rotary plates, but with electrically independent stator plates. Thus the und R.F. and the Detector stages are simultaneously tuned WITH ONIs DIAIA The other condenser tunes the antentia R.F. stage. To compensate for any electricai differences that would, and do exist between the two stages tuned by this tandem condenser, a 7 -plate Midget condenser is shunted acrols either the


2nd K.F5, section of the condenser, or, the vetector section thereuf-whereas this aldjustment can lie deternsined in a few moments, and left at that setting, it would be more preferable to place this midget condenser directly on the panel, using sume for rernier adjustments on extreme distance recention. The coils furnished with this kit are the HABY compact basket weare type, and have special fibre mounts attiched thercto. Tuning range: 200 to 550 meters. (Quality apparatus thronghout-the cireult involved demands it. The kit inclucles one 17-plate S.I.F. condenser, one Tandem 17-plate condenser, one Pilot 7 -plate Mídget condenser, 3 Baby Basket wreare colls, 3 sperlal coll mountings.
No. 9624
$\$ 6.60$

## Single Dial Control 5-Tube Receiver Essential Kit


$\$ 6.85$
POSTPAID

The ever popular 5 or 6 -tube tuned radio frequencs receicer is now easily controlled by one vernter dial with the use of this essential kit. The 3 condensers ordinarily emplosed in a consentional tuned radio frequency receiver are combined into one iriple condenser, the rotors of which are electricalls and mechunicaily attached to a common shaft. To compensate for any difforences between the three radio irequency stages, two 7 -plate Mictget condensets are included in this kit-they can chther he mounted uithin the recelver, being permanently adjusted, or attached to the panel, for vernier adjustments thereto Hhen tuning extrente distant stations. There is a wonderful thrill atsaiting you, as you slowly rotate the one control vernier dial, stations from all over the country snapping in and out with hair line selectlvity. from the lowest to the highest broadcast ware lengths. The 3 colls furnisbed are very carefully matched, and will cover the full broadrast band of 200 to $\mathbf{5 5 0}$ meters in conjunction with the $1 \%$-plate .00035 Mfd. condensers included in this Kit. Mounting supports for the colls proside for mounting thereof either to a sub-panel or base board.

No. 9625 As Illustrated
\$6.85


## ENORMOUS VOLUME

AND PERFECT TONE QUALITY



OPEN VIEW

## OUR SENSATIONAL BID FOR YOUR PATRONAGE

We cannot properly describe this consois to sons with atl its inherent beauty and extreme usefulmess-but the must consincing statenent we call make is that this Console exceeds all of our wrevious eftonts to offer our many frlends the very best values at the lownst possible prices - no other matl order eoncern. ther in fitt vour lowal dealer, could afford to sell the ahove illustrated cabimet and set at the very low price that we natul-for we depend on large sales with very small profits. Therefore, If we admit that this is mol greateat barailin in a Hadio Console and rereiver rombination, it must be a most unusual opportunity-and just as much an odportunity for us, as it is for yous, for, ats rustomer purchasing this merchandise, will be the heaths of semulimg for us additional businesi-his further qe-orders, and the orders that result directly from pleased recommendations of our customers to their many friends.

## The Console Cabinet

The first impression that the De Luxe Console will make on $\mathbf{y o u}$, is that it is a most beantiful piece of furniturefor it is most tastefulty designed, with a hand-rubhed plano finish in two-tone mahogany, The lutd speaker

Chamber Is s.remen with a gold-silk-rovered, artisticatly serobled srli't in harmonhous contrast to the general alecoratise efec's of the Bonsole. The two front legs are gracefully formed, Jet of rery sturdy construction. The tus is edre bamded, and the edges of the Console are attractireis scored. The drop leaf, which conceals the Ihadlo receiver when samo is not in use, is large enough to le used as a writing desk-it alsn afforils a most (o) wenfent arra rest while tuning in stations and recording them is rour log. The battery compartment is radily arcessible on the front of the cabinet, having a hinging door for this purpose, an exctusive feature only found on cansales selling for doable aur price. It is commonions equaly to house all your batteries, chargers or eliminating lesures, measuring 21 inches long, $13 / 2$ ineles lewp foehthd the chosed doors) and $10 \frac{1 / 2}{}$ inches high. Iny rectrer whuse patiel does not exceed 8 inches by dy irgle: con be placed in the spatee arailable for this purpose. The back of this cabluct is remorable, for arcess to the receiver itself, the loud speaker unit (for any idjustnicits thereto) and to tho batteries. It is therefore plaial to perceive that this De Luxe Radio Console sill not only enhabce the beauty of any living roont, tulle mum, parlor, etc., but, it is extremely useful, and wath be adipted to jour particular requirements.

The Built-In Loud Speaker
We rualize that everybods judges the guanty of any Radio receivar by' what they ritually "heas" -- |hat is.

## Rasco Melodee 5-Tube Assembled Receiver



COSED VIEw
Lies: judgazent is solely depenfont on the limitetions of the bud sywaker. And so, we decided to iucorporato In this conscile the very finest. acoustleally perfect leud speaber. The unit is attachel to a unirersul ferruie locetod in the battery compartisent section of the cabiret, and then thero is a scientificale designed tajering thrmat that extends: practically to the top of the cathinet. whero it sumblis out into a wooden tooe chamber ef ample pro-cortions-is it any wonder then that every purchaser of thls conscie is so enthusiastis over the sonorous and tieautiful matural tones, only possible because we have spared no expense in our offorts to offer you the most nossible value for your money?

## Loud Speaker Unir

Arprectatires the fact that sou mas have sian particular -hwice of a loud speaker unit, we do not include one when i. Luply the console is ordered-howerar, the unlt that we to frimish with the receiver ombinatlon si very powerrul, and of the adjustable type. for maximus rolume and - larity.

## The Receiver Furnished (a This Combiration

You will find this recelver dezerlbed in de-ail under sur Vn. 9657 . When jou remove the De Luxe Console ftorn its +rate sou simply have to ship the cha sis lito the poned space cut to the oxact size ind perfer:tly contered. urise in e few screws lnto holes alreads started for sout and sttach the batterles-a few minutes' w.rts. D.taled instructions included. shipplng woight, about 100 nounds. shipped express collect.
No. 9656 De Luxe Console, wilh No. 9E5it 5 -
tube Tuned Radio Frequ ncy Receir:t, and
Adjustshlo Loud Speaker Lnit ...............
No, g037 De Luxe Console, whithout recatver or


## Notize

Any of our asscrubled receivers, one dial controlBaianced interflex-and Na 9216 5-tube kits can be set into this Console. IF you Intend 10 purcha e this Cansole for a No. 9216 kit , we Lall Inclute special instructions for the issembly of that kit on a 7 Inches by 21 inches panel instcad of the 7 Inches by 24 pantel, as furnished or you can build aty circuit di your own choice thereln, ordering either of the follawing panels:
Ne. 89278 inches by 21 inches by $3 / 3$ t. Inch Dilertayte Panel
$\$ 2.59$
No. 892 k 8 Inches by 21 inches by $3 /: 1$ inch
Bakelite P'anel

## \$23.45

No. 9657
POSTPAID
Determined to offer our many Frlends 5 -tube Assembled Liadio itecelver at the lowe:t possitile price, tre instructed our Radio Einginears to submit ta us 6 receivers In which would be combined, not orly the very latest and up-to-date improvements of this urront geason, but also their own now suggestions and dieas of both a merchanical and electrical nature. From these recoivers we condensed all these features and improvements, Incorporating them Into the Rasco Melades 5. Tube funed Radio Frequency Assembled Receiver Bocause of the large volume of sales we enjog we are able to sell sou a high quallts recelver, completely assmmbied, for a price even lower than several unasstmbled kuts. The only difference between this receiver, and Tre Fiasco Sonata is the cabinet-which does not contain a built-In speakerald the panel (size 7 inches biy 18 in hes) - which is set on a slight angle to aftord 300 better fiew of the dial readings. The orerall size of the cablnut is 19 Inches long by $81 / 2$ Inches wide by $\mathbb{E} 1 / 2$ inches deep. The finish is mahogany on well solected and siasaned gum wood. A very pleasant surprise awalis you on yo.jf first audition of this receiver and you will be very much impressed by its appearance and duratile mectianical construction. Every recelver is very carefally tested on aetual radio reception. A $100 \%$ binding guarant:e of your complete satisfaction forms the veritable cortsldmration of your purchase of this high quality Radio Rocciver.
No. 9657 5-Tuhe Receiver Jith Cabinet.
$\$ 23.45$
No. 9659 Without Cablnet-Chassis Ony ${ }^{\prime}$.
$\$ 20.95$

## Walbert Penetrola



## $\$ 29.48$ <br> POSTPA1D

This instriment will gise you sexectivity wish a vengeance Any I'enetrols demonstration wall show you results that certainly carr atiest for all that Is claimed for it. The wanted station is immensely intenslfied-the unwanted stations and ather interferonce are overwhelmed. IBistance reception is even possible with a short nerial liecausu of the F'enetrola action. te-radiation from your recsiver is suppressed. Your dial readings will remain substantia.ly tho same. The Penctrola represents theory sat into jrracice with $100 \%$ success. It takes but a ferb minutes on attach to any Radio receiver, Furnished in Blact, metal crystalite cabinet.

No. 9673.
$\$ 29.48$
 set is the exquisitely-grained bakelite panel, faithfully conveying the

Both of
These Sets Receive

Broadcasts from
OVER 2000
TO 31000
MILES impression of the finest walnut. Bakelite manufacturers say it is the handsomest panel they have seen in ang radio set. Kurz-Kasch Dials and Knobs used throughout to enhance the beauty. The limitations of production do not permit us even to approximately represent the beauties of the set.
Bakelite panel walnut finish-etch-ogravare and gold decorationsbakelite sulhbase-universal sockets. adapted to either $U V$ or UX types of tuhes-Kurz-Kasch bakelite wainut pointers. gold-filled to match-Kurz-Kasch bakelite gold-filled rheostat hoobs-straight line frevuency condensers-splecial coils, double silk enameled. primary and secondaryShore audio transformers-distinctive Caswell- Runyan walnut-fnish cab. inet. $7 \times 18$ ins.-superior design and workmanship. Easily tuned-no oncillations or squeals-no potentiometer-no resistances -self-cqualizerl-low-loss materials used throughout.


Both these sets are noted for clearness of tone. Programs of distant stations come in as clear as a bell. The refinement of tone is a revela. tion to all who hear these well-nigh perfect receivers.

Same specifirations as for the Yropadyne 6 , the chief difference being that this set uses only five tubes and the distance and volume of reception are a little less.

No. 90:55 Chassis Only, Set Minus Cabinet....
$\$ 28.85$

## Pacent Triple 17-Plate Condenser

 can be attached to either the negative or positive filament return circuit, not possible in any other tandem condenser, because the rotary plates thereon are atways
efectrically connected to the same shaft. Furthermore, the rotary plates of any of the condenser sections may be shifted to the right or the feft and then permanently set, to compensate for any electrical differences between these varlous sections, oliminating the necessity of omploying compensating or midget condensers for this purpose. A hatiened steel set screw in this bushing grips this shaft, with no lost motion being offected. The shafts of euch of the condensers revolve in beartings attuched to the 3 reinforced cast metal standards which are screwed to the metal base plate. In which there are two mounting holes for anchoring the condenser to the base buard. From the center of the shaft uhich passes through the panel, and to which is attached is vernier dial to the under surface of the base plate. It measures $31 / 4$ inches. The basepiate measures 2 Inches wide by $71 / 4$ incties long. Overall dimensions of the condenser with the plates unmeshed is $44 / 6$ inches wide. 6 inchos high and $7 / 4$ Inches deop from the rear of the pabel. Capacity of each sectlon .00035 mid.
No. 8931 (Two Guag)
No. 8990 ( Condenser

$\$ 5.95$ postpalo

Precision matie by the famous Amsco laborntories. (irounded rotor. Curve-Porfocs stralght line froguency curve obt-lined by selentificaliy dealgnated r-lates will separate stations equally at 10 kllocscles per divislon. beartngs-Combined ball and cone, which automatlcally take up the wear. as: uring perfect sllgnment at all iimos. Insulation-Speclal grade of rallon, exactly prodortloned to prevent warping in any direction and to cut down losses to a minimum. Frante - Heavy rugred aluminum constiuctlon, using hexacon suphorting posts. Rotor-Extra

hard heary gaured aluninum plates, with swedged fnd brace, assuring permanent, perfpet alignment. Sta-tor-Extra hard heavy gauged aluminum plates. braced and swedged at three points, assuring rifidity and permanent allonment Capacity Low minimum with unlform maximum capacities. Used in the Superior Balanced Interflex Receiver.
 43/4 high.
slize closed $3^{3}{ }^{2}$ " long, $41 ;{ }^{\prime \prime}$ whe, 2" higl.
No. 9513 . 0045 mfd. . . . . $\$ 5.95$

## Pacent True Straight-

Line Frequency
Condenser

## Pilot Midget Con- <br> 

Small in size and the price is small. Low loss. One hole mounting. Can be used as a vernier condenser. liullders of suber-heterodsne sets find it most destrable. Well-made. It wIIl surely please you.
No. 9468 ( $\%$-plate) . No. 8802 (13-plate)
.30 .97
Stations cort be equi-spmeed according to frequencles. Ciroundod rotor in continuous connectior with metal end-plate-meats all reauirements of low loss design. Perfect Insulation. Isolantite properly placed. Sperlal hrass plates. Riveted and soldeled. Rigid channel frame construction. Pernianent plato allgnment. Extra tie bars. Orersizo, dust proof unt-bearing. Positive enclos. ed stop. Optional one-hole mounting. Design provides for uni-controt tandein inounting. 17 plates recommended for neturodyne and all tuned radio frewuency elrcults . 00035 Mifd. Max. 23 plates for super-heterodyne circuits. 0005 Mfd. Max.
Size open 3 為" Iong; 1 有" wide. 4 " high.
size closed $34 / 4$ long. $18 / 8{ }^{\prime \prime}$ wide. $2^{\prime \prime}$ high.


| No. 4432 | 17-plate | .... |
| :--- | :--- | :--- |
| No. 4433 | 23 -plate | .... |
| 2.95 |  |  |

## Neutralizing



For use where capacits balance is desired. The Balcon neutralizing condenser consists of two ntckel-plated electrodes enclosed in a $1 / 4$ Inch glass


Has been on the markot several years and is increasingly popular. Used as a reriler. In Ereat demand in superheterodyne clrcults. Low logs design. One-hole mounting. Brass plates. farlable.
No. 9174 9-plate
No. 9512 13-plate
\$1.17
.$\$ 1.34$

## Condenser

tube. Around tho outside a piece of nickel-finished split brass tuhing is fitted so that it may be mosed from one end to the other, thus forming a condenser of very low capacity, the glass tube being the dielectric. The base is Radion. Maximum capacity is obtained when center of brass tubo colnciden with center of space between electrodes.
No. 9377 .
40.29

## Pilot Capacigrad Straight Line Modified Condensers



## $\$ 1.30$ <br> POSTPAID

Necessity is the Mother of Invention, and henre was responsible for the manufacture of the above type of condenser In the earlier dass of Itadio, the conventlonal variable condenser lad rotary plates and stationary plates both shaped in the fashion of a half moon. It Was noted that this type secminsly "jammed" all the lower wave lengths over a vers small portion of the dial controlling that instrument, whereas the highest wave lengths generally terminated at $\because / \$$ of the are, rendering the remaining $1 ; 3$ of the contenser useless. Thus, hetween 60 to 70 degrees on the dials, ware lengths from 200 to 550 neters were rrowded in an unesen fashion. The first inmprovement resulted in the lower wave length section of the rotor being slighty shaped of from the circular form, allowing sligntly better rellef on the lower ware lengths, but not of muth ronseduene. Then came the first radical improvement: Our I'ilot s.I.F*. combensers, as deswribed under Nos. 3580 tu $358 \%$. Although the fixed plates were not altered in shape, the rotary plates were, their form being allered from that of a half moon to that peculiar shape as illus. trated under No. 3580. Furthermore, the shaft was so placed that the rotars plates described an ecrentric arc, while being meshed into the stationary plates. The result: The lower wave lengths were spread over a much wider portion of the dial, greatly assisting in the tuning and selectivity thereof, and the highest waves cante in very near the complete mesing of the rotary plates into the statlonary plates, or, between 95 and 100 on the dial. But liere asain two obstacles presented themselves, necessitating the above illustrated departure from the heretofore aecepted s.I. F. type--1lrst. mechanically the S.I. F. type ocrupied ronsiderably more space than previous types, due of rourse to the eccentrie arbit the rotary plates rut. while being completely ummeshed: secondly: electricaliy, so murh attention was paid to the more gradual distribution of the lower waves by slaping the rotary plates above referred to that the higher wave lengths were attually becoming huddled together. as was the rase with the lower wave lengths in the original models. It was then apparent that a happy medium must be sought, a condenser that would allocate evenly over its $180^{\circ}$ cycle the lower wave lengths as well as the higher wave lengths. In the modified condenser, the rotary plates are shaped in a half moon fashion on its circumference, but a considerable portion of the body has been removed, as the illustration clearly denotes, In a like inanner, the stationary plates have been slaped; thus accounting for the happy medium of wave length distribution long sought for. The shaft is placed in the exact eenter of the instrument, therefore, the rotary plates deseribe an are within the outer edges of the conclenser, accounting for vers small overall length on
your panel of $3 \frac{3 / 8}{}$ inches compared to $45 / 6$ inches with the rotary plates completely unmeshed of the S.L.F model. The 17 -plate condenser, the most popular sizc, measures $13 / 16$ Inches high and $11 / 2$ inches deep from back of the panel. End plates composed of bright ituminum, with solid brass rotary and stationary plates -minimum bakelite insulation-screv terminals. Note that this type condenser should be used in conjunction with a No. 9915 2 Gang S, L. Modified condenser, and the S. L. F. Model No. 3581 must bo used with the No. 3590 -gang condenser, so as to retain the same dial settings.

No. 9912. 13-plate . 000 : Capacigrad s. L. Modi-

No. $9913 \quad 17$-plate . 00038 Capacigrad S . L. Madi
fied Condenser . . . . . . . . . . . . . . . . . . . . .
.$\$ 1.70$
No. 9914 :3-plate. 0005 Cupacigrad s. L. Modir
thel C'undenser
. $\$ 1,80$
Two Gang Capacigrad S. L. Modified Condenser
No. 9915 17-plate . 00038 Capacigrad S. L. Modi-
fied Condenser
\$3.20
("omposed of two electrically uniform 17 -plate cundensers hasing the same features as the single condenstrs above uferted to.

## Remler $360^{\circ}$ Variable Condenser Twin Rotor Type $\$ 4.47$ POSTPAID

This ruost anidue condenser has two rotors which mesh into each other. both mowing at the same time, actuated by a set of bikedits gears to which they are rigidly fastened - and thesc gears are in turn in mesh not only with each other, but also with a very small diameter gear whiclt is at tached to the operating
 shaft and dial. This duces a rery realistic vernier effert. Jibe Itiab noves in a $360^{\circ}$ arre, but the rotors only move in a $90^{\circ}$ arc. All electrical connections are fureign to the metal shaft, and operating diat, insuring no trace of body capacity effects. The plates are "pebbled" brass, for rigidity, and are soldered to their shaft and at their tops with a common strip. A spectal 4 -inch aluminum front $360^{\circ}$. etched dial is included, together with a paper dise, which is removahle at will, and unon which the station call letters may be writen. The dial is locked to the $1 / 4$ inch shaft with a split bushing and bolt, and the bakelite knob is threaded so that it may be sorewed on and oft the dial plate. Stop and marlier ineluded.
No. $9667 \quad .000$;5s raparity 17 -plate
$\$ 4.47$
No. 9668 . 0005 caparity $2: 3=$ plate
54.47


Pilot Lug Jack

The speeial connceting lugs, while designed to abolish soldering (counections being made thereto with a nut and screw) inay be usell for solder connections. The sturdy frame helps support sub-panel. Fasily attached with screws through loles provided for the purpose. The lug-jack illustrated is No. 9897, the flament-control double jack.
No. 9894 Single circuit open. . . . . . . . . . . . . . . . . $\$ 0.32$
No. 9895 Single rircult rlosed. . . . . . . . . . . . . . . . . $\$ 0.36$
No. 9896 Fllament conirnl, single Jack. ........ $\$ 0.4$
No. 9897 Filanent control, louble Jack......... $\$ 0.45$
"RASCO" SHIPS WITHIN 24 , HOURS


Here are the condensers with the "relret leel." A TRUE straightline frequency condenser with solid brass plates. Hult like a watch, it is the pinnacle of preclaion. Special bushings pive that "relvet feel," free from chatter and noise. These condensers cost no more than ordinary condensers, for the siomple reason that they are produced by the world's largest radio parts manufac. turer. A minimum of insulation gises rise to a minimum of losses.
lit is not neressary to dwell upon the advantages of using straightlite frefuenry condensers teday. They will separate the lower wave stations and will hive you better results all the way through. These condensers are all equipped with 3 screws: and plates are salid hrass. Friction bearings, adjustable end plate bearing to adjust temsion. etc., the himhest class job in Ameriea, not only for those who build their own. but for sct manufacturers as well. Where in high elass pondenser is a necessily.

DUE TO THE EXPRAOR1NEARILY (LONF NPAC 1NG OF THFNE ILATFS, THIS 'ONDENSEK TAKKA ACTUALLELEAS ROOM THAN THE OLD STRAIEIET' LINE: WAYE TYPE. Dimensions of .00017 type, closed, $4^{\text {er }}$ long, 1 5/8" hlgh; open $4^{\prime \prime}$ long and $438^{\prime \prime}$ high,

The larger types are of the same dimensiona except that they are somewhat wider due to the additional plates. No. 8902 8-plate, 00017 Capacigrad Con-
denser
$\$ 1.30$
No. 3580 13-plate, 00025 Capacigrad Con-
denser $\because$ - 17 -plate. . . 00038 Capacigrad Con-

No. 3582 23-plate. . 0005 Capacigrad Con.
denser
$\$ 1.80$

## Two Gang Capacigrad Pilot Condenser

This is the same type condenser as deserlbed under wur No.'s 3580,3581 and 3582 , and is made especially

for tuned radio frequency, neutrodyne, and super heterodyne receivers. The important thing to remember about gang condensers is that the capacity of the two unit must be absolutely uniform. Iloth of these condensers are whin 2 per cent. accurate in their. capacities, so it is a very simple matter to balance the set. Although of large capaclty, the size of this condenser is remarkahly small, measuring only $i^{\prime \prime}$ long and $1{ }^{6} /{ }^{\prime \prime}$ " high when closed. and $41 / s^{\prime \prime}$ high when fully opened. The total width from panel to rear bearing is only $31 /{ }^{\prime \prime}$. Carried only in on $\theta$ size, namely, 17 -plate, .00038 mirds. Rugged in design, with pigtalls and stout end plates, you will find this condenser to be the acme of perfectinn, No. 3590 Two Gang, 17 -plate,
.00038 Capacigrad condenger

## U. S. L. 3-Gang 17-Plate 00035 Condenser

 S. L.' Corrected Frequency

## $\$ 5.45$

## POSTPAID

## Extreme compact.

 ness and perfect cficiency is a rare combination in three - gang tandem condensers! But we have sureveded in attaming this goaltoffering you at triple condenser in a high qulality prerision instrument for less than half the urice of a larger, and less efficient type. "The three sections are EXACTLI ALIKE, and as the condenser is very strongly built, it will NEVER vary, The metal parts are all aluminum, with the result that there is 3 times LFSS WEIGHT on the panel than with other types-thus you do not have to support the rear end of the condenser on the base board. The common rotor shaft, upon which the rotor Hlates are most rigidly attached, is $1 / 2$ inch In diameter, terminating, at the panel end, in the conventional $1 / 4$ inch diameter. For extreme durability the rotor plates are strapped together, as the illustration wlll suggest. Minimum of Radion insulation. Connections to the rarious stators and the rominon rotor are possible on elther the right or left side of the condenser, When the plates are fully ummeshed, the overall dimenslons of this mechanical iriumph are $31 / 2$ inehes wide, $31 / 8$ inches high, and ONL $Y 5$ inches from rear of panel. Choice of one hole mounting, or 2 anchoring holes. Furnished only

No. 8932 .
$\$ 5.45$

## Silver Marshall Interlocking Condenser

## $\$ 5.75$ POSTPAID

This condenser is unique in that it can be used slngly, or, due to the special mechanical arrangement provided therewith, a similar condenser can be interlocked by inserting the shaft of the next condenser for even the shaft of a variable coupling primary coll) into the special hole
 in the rear portion of the condenser
preceeding it. After beling adjusted for final electrical unfformity, they are firmly interlocked, and the tuning is thus confined to one dial. In this manner, any number of condensers can be employed, for multi R.F. stage assemhly, Double bearings, fully adjustable, proride for smooth operation. Rigid die cast frame. Plates are lacquered brass. Provided with single or double hole mounting, and two-hole base mounting. Capacity. 00035 -17 plates.
No. 9971.
\$5.75

## Inductances <br> $\$ 2.72$

Brino Compact Tuning

Where space is at a premium, but a $100 \%$ FEFFICIENT coll is to be used, the Bruno No. 99 will admirably serve thls purpose. The diameter of this coll is only $21 / 2$ inches. It is 3 inches long. The wire is very attractively wound iu two colors of orange and green, upon a low loss (Quartitle form. assuring a coil of uimost effeciency.


No. 9631 There are 12 turns in the pri-
mary, fit in the secondary and 45 mary, 54 In the secondary and 45 fill o rotaing cond for .005 vable condensers. mounting. Ends of moulded loakelite. No. 9074 3-Circuit Tuner . . . . . . . . . .


## Bruno No. 99 R. F. Coil

Hustrated-same characteristics as above coil, thechanically as well as electrically. but without a rotating inil, or tickier. Same number of turns in the windings of hoth the primary of each coil, and secondurs thereof, assures equal "logging" on the tuning dind
No. 9631 .
\$2.72

## Quartzite Winding Form

 $\$ 1.81$ POSTPAIOLaboratory tests hare conclusively proven that these winding forms will assure the least possible losses. Will lend distinction to the appearance of any set. Can be supplied in elther a 3 -inch diameter with a $24 / 2$-inch winding space, or, in a $23 / 4$-inch diameter with a 2 -inch winding space. Supporting rods made of transparent Quarizite. moulded bakelite ends.


No. 9634 Either size
$\$ 1.81$

## Karas Extended Shaft "Equamatic" Condensers $\$ 6.55$

Especialls deslgned for use in the Equamatic reculver because of its extended shaft from the rear plate of the condenser. This mroduct is symbolic of the Karas efforts to offer the Radio public the very flnest instruments that
 skilled engimeers can design, and patient craftsmen can bulid. Diathematically designed plates assure perfect S.L.E. results in tunlng. Frame is very hearity nickel plated, and substantially formed. lrates are heary lacquered brass. The shaft revolves with a retvet-like feelling. Extended shaft model only supplied in . 00037 Mfd. capacity-17 plates. No. 9011..
$\$ 6.55$

## Other Karas Condensers

| No. 8912 | 5 plate | . 0001 . . . . . . . . . . . . . . . $\$ 5.98$ |
| :---: | :---: | :---: |
| No. 8913 | 7 " | .00014 . . . . . . . . . . . . . $\$ 5.98$ |
| No. 9459 | 11 " | .00025 . . . . . . . . . . . . . . $\$ 5.98$ |
| No. 9458 | 17 - | . 00037 . . . . . . . . . . . . . . $\$ 6.29$ |
| No. 9457 | 23 * | . 0005 . . . . . . . . . . . . . . $\$ 6.55$ |

## Bruno Unitune



This combination represents the very latest improrements in ludio receiver constructioll. Consists of the Hruno IInitune No. 9685 . Wlth two No. $907 \pm$ Bruno $R$. $F$. Coils rigidly attached thereto. (Jan be used for two K . F. stages or in any variety of circults. Tuning range- 200 to 550 meters. Its appearance will enhance the appearance of uny Hadio recelver. Kefer to No. 9635 and 9072 for detalled deseriptions of coudenser and colls.

No. 9637.
$\$ 15.28$


No. 9636.-Same as No. 9637, only the right-hand condenser holds a standard three-circuit tuner. For Roberts type receivers, or $\$ 18.09$
many other similar circuits..... $\mathbf{1 8 0} 9$

## Bruno Unitune Condensers

## $\$ 9.93$ fostralo

The bruno contribution to localized controls of milti stage tuning variable condensers has met with deserving praise. As the illustration will suggest. this u n It consists of two condensers. both electrically matrhed yet
 clectrically independent of each other in dials can be tumed TOGFiTlit:R their rotors. dioth dials can then elther can be further with a one dial effect. and then either can be forther independent of the other. Mounts to the fanel by means of only two screws which also foold handsome bronze indicating plates. . 0005 Mf . stralght line frequencs. The plates are of brass and shaped for 8.L.F. tuning. The frame is of aluminum and is very durable. The drums are of noulded hakelite, and on the circumference thereof. the dial numbers are clearly engraved. The edges of the drums are knurled for tuning purposes.
19.93

## Notice

Fou ean adipt your present condensers for localized funing control, by attaching to them the Bruno Drums (2). panel plate and frame. Takes but a few minutes.

No. 8947
As Described.
\$3.45

## Gentieraen

I am getting pood results with the same candensers I ordered from you several years ago-thus am sending you anather order.

## Na-Ald Localized Control

## Tuning Units


$\$ 6.65$
POSTPAID

The Na-dld Loralized Condensers are the latest coniributhons to the art of Ikadio set building. The tumdency among all standard receivers of this season is to jorallize all the tuning controls, and at a very modest expenditure you, too, ran anall sourself of this luxury. All dials can be turned at once, or singly, independent of each other, all within range of your FIN(iFR TIIS. The dial numbers are to be found on the druns, and are handsomely set off in a frame of embossed polished bronze furnished with each condenser. Very compactly made. The drum is moulded of genuine liakelite, reinforced with cleverly fornied "spokes." The circumference of these drums not only furnishes the means wherehy the condensers are rotated, but also there is attached thereon, the atrip rontalning the dial readings. As these flgures are milled belon the surface, they are not acressible to your finger lips, therefore, will not ruh off. The ilums are mulled to allow the tinger tips to grip them. The condenser plates are aluminum, and are of the rorrected freruency type. The mounting bridge is nirkel plated brass. To offret any undue tension at any point on the condenser, several mounting holes are provided, according to the tipe of condenser.
No. 9711 Double 17 -plate 000375 ......... $\$ 6.65$
No. 9710 Triple 17 -plate . 000375
$\$ 8.18$
No. 9713 Quadruple 17 -plate . 000375 .......... $\$ 13.45$
No. 9075 Jouble $000523-$ nlate................ $\$ 8.95$
No. 9712 Double .0005 23.plite with tickier
(lrumi control, for Roberts type circuits, etc.... \$8.95
Na-Ald Connectorald


## $\$ 1.39$ <br> POSTPAID

This nev [XX171 and UXI 12 storage hattery power tuhes mas he used in your present 2nd stage audio amplifier socket without having to resort to any internal changes of wiring, elther to the "C" or " 13 " battery connertions. Any additional voltares appiled feed to the pover tube only. As this adapter does not raise the tube, it may be safely used in recelvers with limited head room. Nuhstantially moulded of bakellte. Connecting wires are furnlshed with engraved tags with proper designations.

No. 9716
> $\cdots$

## \$1.39

Isolantite Adapter

## $\$ 0.32$ <br> POSTPAID

With the adrent of the small T'X type base tubes, the ITX1gy and the new nower tube-the UX 120 -and sinilar types, there are occasions when it is desirahle to use these small base tubes in STANTARD SOCKETS. This adatpter takes the small base UX tuhe, and adapts the tube to the standard socket. As it is moulded of ISOLANTJTF; a superior insulating material, It is a pure low loss instrument.
No. 9774.
\$0.32

## Bremer Tully Shock Absorber Socket

## $\$ 0.88$

Microphonie conditions in a detectar tube (und possinle in all of the tubsa) will cause a steady, monotone hum or roar in the loud speaker. This is caused by the vlbrations of the loud speaker, or teven passing vehicles, and footsteps in the room. setting the elements within the tube vibruting. To overcome this condition, the side arms of this socket not only absorh these vibrations, but also prevent them from
 starting. The base is of genuine bakelite. There is a shock absorbing material between the hase and U X socket holder. Contacts are positive, yet cause no undue strain on sorket atuds, thus necessitat. ing no undue jerks to remove the tube.
No. 9868
Howl Arrester $\$ 0.73$
The NrDorakl How! Arrester is used to eliminate any mierophonic fube hum or roar by simjuly sliding it over and on the offending tube. In principle, the weight of this derice and the gripping effect of the stretched rubber tends to stave oft any external vibrations which cause the elements of the tube to vibrate in turn, with a resulting hum. ThIs is very noticeable in console cabinets, or wherever the loud speaker is Immediately adjarent to the recelver. Particularly effective on detector tubes. Only the hest grade of rubber is useif in its construction.

No. 9627


Na-Ald Connectorald


## $\$ 1.25$ <br> PDSTPAID

This Na-ald product serves the same purpose as our No. 4716 Connectorald, only it is solely intended for using the UX120 (the UV199 power amplifier tube) in a liV199 socket. The rube is raised a minimum amount, as the lllustration will sug. gest. Additional coltages can be directly applied to this tube without disturbing the other tubes in the circuit, or clanging their battery requirements. For true reproduction of radio reception, a power tube must be employed, with additional roltages. Durably moulded of bakelite.
Na, 9714.
$\$ 1.25$

## UX120 Na-Ald Connectorald



## $\$ 1.08$ PDSTPAID

This adapter will allow sou to use a UX120 or UV199 power tube in any UV201A type of socket. The additlonal voltage required on the power tube can be applied direct to this tube, without disturbing the battery requirements of the remaining tubes. This socket does not raise the tube. Battery leads are provided with onsraved markers for safety.

No. 9036
$\$ 1.08$

## New York Midget By-Pass Condensers

For by-pass work offer a condenser of
sterling quallities that for by-pass wort is unequalled by the best mica condensers yet is arailable at greatly reduced cost made possible by the employment of 6 s pecially manufactured condenser paper. vacuum impregnated in a synthetic compound
 (no wax used) which
gives the condenser a very high capacity factor and makes it unaffected by dampness in any climate. Equal in this particular to those moulded directly into bukelite. The special strap clamps emplyyed maintain a coustant pressure and afford a most vonvenient electrical connection. For resistance coupled amplifiers and bv-pas: work it is unequalled. The price is the same tor all capacities ranging from .0n5 to . 1 MFD .
No. 9406

## Aerovox By-Pass Conidenser

For any service where low Impedance path for audio- or radio-freguency current is desired. The bypass condenser prevents the loss of jower in A or B batterles by kewing the fluctuation in the current out of the batteries. Es ential ith construction of 13 battery eliminators. Sturdy mechanical constrimthon features this item. The lugs provide for either horlzontal or vertleal mounting. Finlshed at tractively in black.


## X-L Vario Densers



MAKE POOR SETS GOOD - GOOD SETS BETTER Endorsed and Used by the Foremost Radio Engineers. ALMOST TOO GOOD TO BE TRUE
MODEI, N -Capacity fange 1.8 to 20 micro-microfarads. for balance in Roberts two tube. Rrowning-I)rake. MrMurds Silver's Knockout. Neutrodsne and tuned radio frequency circuits.

## No. 9379

$\$ 0.89$
MONEL G-Two capacits rances nomin in onnsis and .0003 to . 001 Mierofarads. for the Corkaday circuit. filter and intermediate frequency tuning in superheterodyye and fongtive grid bias in all sets.
No. 9380
$\$ 1.39$

## Hammarlund Equalizing Condenser

 $\$ 0.49$l'ossersing the distinction of boing the sinallest rariahle rondenser. this mmpartness deres not rob it of any ef-fir-lenry: in fact, it las ab wider range than condensers many times its size, the above
 the bakelite hase thensuring i $3 / 16$ inches long by 5 fincll wide. 'an be used to "xumpensate for differences between rondensers in game assemhly, or, for neutralizing osvillations by balanciug the K.F. tube caparities. Maximum capacity is 50 mirro microfarads and minitum - mikro mierofarads. Itase is Lemuine Bakelite, uses a mild dielectic and a beave phosphor bronze spring plate. Adjusting the center serew. raises or lowers the top spring plate, gasing the variation in capacits. Mounts directly to socket or variable mondenser terminals. or ean he cuspended on any conmottlon wire.

Aerovox Fixed Conso. 3 anem

Pilot Bakelite Fixed Condenser


This is without a doubt the best conden er made. It cannot short. Inlike must condensers which are bullt in Gyers, permitting solder or flux to
flow in to the combenser to short the mica mates, these condensers are moulded in one plece under 20 tons of pressure. They are made of beatutiful brown hakelite. Are 98 fer cont perfect in rapaelty. Fuch condenser individtally tested and guaranteed.

| No. 5026 | .0001 . . . . . . . . $\$ 0.32$ |
| :---: | :---: |
| No. 5027 | . 0002 . . . . . . . 0.32 |
| No. 5028 | .00025 . . . . . . . 0,32 |
| No. 5029 | . 0005 . . . . . . . . 0.32 |
| No. 5030 | .001. . . . . . . 0.36 |
| No. 5031 | . 002 . . . . . . . . 0.36 |
| No. 5032 | . 003 . . . . . . . . . 0.45 |
| No. 5033 | . $004 \ldots . . . . . . . .0 .45$ |
| No. 5034 | .005 . . . . . . . . . 0.54 |
| No. 5035 | .006.......... 0.63 |
| No. 5036 | .01 By-pass.... 0.81 |

[^3]
## Cushioned Pacent U X Socket

$\$ 0.51$


This is the last word in sorket construction- It is shock absorbing, therefore reduces bulerophonic sounds and lumsCaparity efferts redureil to a minimum. Kugged, side wiplige contarts. Hakelite Moulded. Very rompace. Fither binding post or solder ionnertions, $\$ 0.51$

## "Rasco" Vacuum Tube Shell

Only very heary brass is used. Espectally useful to the man who builds his own on account of lts four perfornted ears. To mount is simple. Drill a hole into your sub-pancl the same size of the nietal shell opening; the size of this holo being $13 /{ }^{\prime \prime \prime}$. The socket Is then mounted over the hole, while the four contact fingers which come with the shell, are mounted below the panel with serers and nuts. This slres a worlmanlike
 job. It sares you money and your set will look like the factory-made article. Complete with 4 Contapt Fingers.


## Vacuum Tube Socket Contacts

Theso contacts are used in conncetion with our No. 1747 vacuum tube shell. Nade of phosphor bronze and nickel plated. The turned-up lug fits into a small hole which you drill Into the panel. After the contact lincer has been screwed down by nut and screw it is impossibie for the finger to shift sidewise.
No. 4\%18 Dozen
\$0.15

## Rasco Vacuum Tube Socket

One of the liest sockets matle. Valte uncqualed answhere. Made entirely of heary composition and of course its use avoids the metiallic ring and howl. ing caused loy metal sockets. Four springs giving maximum pressure against pressure against
notart pins. lies
 If not pins. lhest finish. Nickel-plated binding buits. If not the best socket sou hare ever had. retura is and your money will be refunded. There may be lower-firited sockets, partifularly the porcelain kimd, hut these are usually worse than useless from loreakage and othrr troubles.
No. 6500


Carter Adapter

## $\$ 0.48$ ?OSTPAID

W'ith this adanter zou can use any modern UX type base tube in a WDIl type socket, such as UX199. WX12, UX120 and IX201A.
40.48


No. 9715.
........

$$
7---
$$



Here is a new bakellte socket or UV-201A tubes, with old style bases, as well as for the new LX tubes, both storage battery and iry rell types. Equip your set with these modern sockets and use whatever tubes you please. Lquipped with fontr hisding bests for quick and easy connections. Positive whing eombacts, a wonderful soeket which sou must sec to approciate. Genulne bakelite.
No. 6535 Pilot Universal Socket... 40.28

## Pacent Adapter $\$ 0.30$

POSTPAIO
This Adapter is made 'o place a CV-199 or ( -299 tub- in the ordinary golA or BOlA sockot. Tho Aifapter is maile of bakelite throughout and has plos: pher bronze rontact springs In the bottom of the Adaptez, which are earried th.rough the base In slots that scre ats at row loss part. Short-circulling las been eliminated entirely. Tre best alapter on the market.
No. (65\%), I'ucent
Adapter
$\$ 0.30$


Air Gep Sockets


No. 9798
\$0.56
POSTPAID


No. 9799

The inherent capacity existing between the grid and plate causes losses sirious nough, without further adding in these losses, by usiag the conrentional type of socket, for dust anc other forelgn conducting ageneles can form ath elretrical path between the gris and piate texminals, irpairing the genelal efficieney of the stage to which tha* tulse 战 coupled-hut, with the Air Gap sockets, this is imposible. for the base is sis rleverly moulled that there fib NO MATMRLAL BETWFEN THE GHU ANH I'ATE TEHMINALSTHFREFOHE: THFIRE VINNUOT BF ANY LOSSFE. Jase is of genulne moulded baxelite, with nickel plated plosphor bronze contarts. The Standard model is furnished with a nickel plated metal sliell in which the pin of the Radio tube lock, whereas the $U$. X. type base will accommodate any radio tule. the prongs of the tube being pushed into the boles prastded for them.
No. 9798 Nrandard Tsine LBise.
No. 9799 I: $\times 1$ Base
$\qquad$


## Bruno Compact 3-Circuit Tuner



## \$3.15 <br> POSTPAID

Although extreme compactness has been successfully atcoumplished in the design of this three-circuit tumer, the Bruno efficiency has not been sacrificed. Measuring only $23 / 4$ lnches long by y's inches in diameter truly be called a baby coll. Therc are 60 turns in the secondary, 12 turns in the primary and 34 turns in the rotating coll. Designed for . $0005 \quad 23$ plate varlable condensers. Wound on genuine Bakelite tuling-all metal partis are nlekel plated brass,

No. 9632 One hole mounting.
\$3.15

## Rasco Leader Baby Low Wave Coil 3-Circuit Tuner $\$ 1.79$

Your first descent into those seemingly mysterious wa ₹e lengths below 200 meters will thrill you and well repay sou for your labor spent in con. structing a SHOHT WAVE 2 or 3 -tube receiver. The BABY short ware 3 -cireult tuner is ideally suited for receivers of this type, corering a wave length band of 37 to 150 meters, when used with a 23 -plate, 0005 variable condenser. Its very compactness of size, measuring only $215 / 16$ inches long by $23 / 8$ inches in diameter does not detract from its electrical efticlency. The primary and secondary windings are bare wire wound, prccision spaced. Wound on the least possible amoint of insulation, and between machined slots. Fibre tubing used. There are 4 turns of wire in the primary, 14 turns in the secondary and $1 \pm$ in the rotary coil. Iig talled connections on rotary coil. Binding post connections. One hole mounting. Nickel plated brass harduare.
No. 88.30
$\$ 1.79$

## Bruno Baby R.F. Coil

## $\$ 1.88$ <br> POSTPAID

This small, but rely ef ticient, tuning inductance is a sister coil to the No. 9632 3-circuit tuner; in fact, it is the same size amal of the same dimensions.
 only it has no rotating coil cmbodied within. It may also be used in any tuned radio frequency circuits, where the arailable space is at a premiun. Measures $2 \frac{1}{4}$ inches long and is $21 / 8$ inches in diameter. There are 12 turns in the primary and 60 turns in the secondary. For . 0005 variable condenser. Bibling post conneetions. Wound on genuine bakelite.

No. 9633 .
\$1.88

## Compact Air Wound R.F. Coils

## $\$ 0.73$ <br> POSTPAID

The superiority of the solenoid eoil over any other type is ronceded. And. being air space wound with no insulation in its fleld, it is truly a low loss product. Another outstanding feature of this

efficient coll is its extreme compactness, measuring only $21 / 4$ inches in diameter and 2 inches long. This small size lessens the interstage roupling effects, and greatly redices external pick up. The primary is enclused withIn the fllament end of the secondary. The ends of the wire are colled, and are long enough to be run direct to their proper terminals. Precision wound, thus each coll is electrically matched with cvery other one. Ideal for use in shielded stages or wherever space is at a premium. Green silk corered wire. Can bc used as an antenna inductance, or intermediate R.F. stage transformer. Can be screwed to base board through tho heavy cellulold strip permanently attaclied to the coll. There are 12 turns in the primary, and 73 turns in the secondary-for 17plate .00035 varlable condensers-with which it will cover 200 to 550 meters.

No. 9836 Each Coil
\$0.73

## $180^{\circ}$ Vario Coupler



This is one of the best couplers on the market. ("an be used for panel and table mounting. Tlie bracket is in aluminum casting, as is the bolder which sccures the secondary to the counler. Tubes are natural colored bakelitc. Diameter of primary. 4"; height, $2^{\prime \prime}$ Diameter of secondary, $31 /{ }^{\prime \prime}$; heicht, $13 /{ }^{\prime \prime}$. $1 / 4 "$ shaft used. Thoo sjring binding posts are provided for the secondary winding connections. Dy means of this. the instrument can be connected as a varioreter. Primary has 13 taps. Wave length range, 180 to 550 meters.
No. 3150
\$2.00

## Bremer-Tully Tuner



The Bremer-Tully Tuner is justly celebrated because of its great merit its popularity is increasing. Varlable secondary and fixed ab. sorpition coll. Varlation is permitted by adjustable. untuned primary. Wound on skeleton forms. Equipped with pigtalls. Can be used in any 3 -circult tuner. Full instructions.
No. $950 \%$
\$4.39

## Low-Loss Quartzite Tuner



The well-known Bruno low loss guartaite tuner Range 175 to 550 meters. Tickler rotor makes possible tuning without how Is. Primary and sec ondary wound on quartzite glass and insures low losses. Substantially built. Silk wire wound. Pig-talled. No. 2693
$\$ 4.64$

[^4]
## Pacent Duo-Lateral Honeycomb Inductance Coils $\$ 1.12$ postpaio



These very popalar low-priced machine-wound Inductance colls satisfy the needs of the anateur exuriminenter for coricentrated inductances, at a very low cost and high efficlency. Compact and easily manipulated. They corer the entire wive length without the dead-end losses which exist when a tapped coll is used. Have low high fro. quency reslstance and low distributed capacity losses. F'nequalled. Successive turns of conductor are wound at an angig to preceding turns and siaced therefrom. which glres the coll the cellular structure from which it derives its name. These air cells and the angular dis. position of the turns reduce the lossuss In the coll to a marked degree. With the proper condensers these colls will cover the entire range of wave-lengths used in radio. Two leads are broughi out from each colt. All radio. Tho jeads are broughibout trom each colt. Ais cizes are carried in stock as below. The range given is In meters when varled with a . 001 Variable (ondensor. high grade I'acent brand.


## Cockaday Circuit Coils

For all Cockadis eireults or similar clrcuits using same combination. Three wind. ings. two of the circults being wound side by slde and a tapperl winding wound on a separate tube mounted at right angles in the large tube. Wound with erest care and is properis calculated to rive superlor results. Ttabe especiall
 results. cardboard, highly impregnated to do apas with all losses. Not affected by temperature or weather conditions. Wound with No, 18 double cotton covered magnet wire. Tapred coil has seven taps. Two brass brackets for panel or base mounting.
No. 9750
$\$ 1.89$

## Triple Honey Comb Coil Mount $\$ 4.85$



Iniverrally used bs many ship tindid reveivers $\longrightarrow$ because of its never failing accuracy und sability. Eanter mount (secondary) remains risid, athd the two end mounts are tutated uver a wlile are by two knurled knobs. Fiextble leads are brought out to thu rear fur connertions. Mindated of Gentine IBakelite. Ideal for Hiss whye frnigh reremthon, un tat
$\$ 4.85$

## Baby Radio Frequency Inductance Coils



## $\$ 0.47$

 the availabie space for the inductances is rery limited lbaskit wease construction assures maximum efticiency. Marmon cotton covered enameled wire used. Thu primary winding is at one emd of the coll. Frurnislied with a thare mounting insert. for attaching tho coil to the rear frame of a condenser, or, to a baseboard, sub-panel, etc. (ompletely air spaced sound. NO DOI'E Liski) TO HOLS TIIS COIL. TOMFTILFR, a waxed cord upon which it is wound, taklige care of thls, assuring low loss charicterlstles. For 000 :5 Mil. 17 -plate condensers-



No. 8929 Filt'll COJL
$\$ 0.47$

$\$ 1.20$


## Gontlemen:

Thanks for your very nice settlement. I must tay that the Radio specialty $C 0$. is absolutely the squarest firm that I ever did business with, aad If I ean ever do your house a favor in any way I wiff eertaialy be giad to do so.
O. STEVENS, Drake. N. D䩗

## Silver Marshall Plug-In Coils

 $\$ 2.43$No matter what cireuit sou may wish to bulld, or one that jou may wish to redesign, the silver Marshall llug-in Colls can be used, with superior results. Theil aunities of low losses, re duced to a minimum, electrieal unlformits, meehanical perfection, extreme compate ness, less pick up possibilits least interstage coupling, ac cessible connections on base, have made these instrumonts famons all over the World. Tlubll shiall diameter makes
 Thell small diamoter makes in shichded stages, monsidering that at least $11 / 2$ to 2 inches of spate nutst fintervene hetween the walls of the shielis and the ontside of the coil. To ehange from one coil to another, for difterent band of wase lemgths, or to another rireuit, the coils are simply remored, and another sthostiluted. A keys section moulded In the coll form must tit into the sperial slot provided on the imse, preventing shonts, wrong connections, etc. Small adjustable rotors, sinn= morted on brass springs, and easily adiusted for vatious ombitions, circuts, etc., form a part of caery will. The form and hase is genuine bakelite. Doce to the ibbed effect on the winding form, the whe metcly fouthes the form at these rbbs. Connections to base may be twisted ander cap nuts. Can be supplied in flly of these 4 ranges
1 Runge 140 to 550 meter:s ( lainge 30 to 75 meters if Kamge 70 to 20 m meters I) liange fot to 1500 meters with a 1 - plate .000... condenser.
No, 9972 Type 110, stator ensits of twa crpal winclings, with an adjustable rotor, $A$. 13 or $C$
range. kinelly state whith ramge jou wish.....
$\$ 2.43$

winding. with coneenerated primary in slot, and
vijustable rolur. $A$, 14 or forane
$\$ 2.43$
(1) Kan日r. Type 111
$\$ 3.19$

## The Rasco Leader All-Circuit Tuning Inductances

$\$ 0.99$
POSTPAID

N. 8933

No. $23: 14$
Where space iv at a bromlum and the monoment parts mast of neeresity lie iers small, it is ald Impmartant that suar selection thereof be for instruments of froven merit. iorrectly desfaned and mechanioalls dumble. The l:Alsy
 in emjunctlon with the 13.NIP 3 eircult thener, or, with a number of their own tstbe, for belutrodyne, tuned vidio frequency circults, eft: It ean also he bised is on antenta indurfince for super heteradynes. ete. There are 10 tums of wire in the mimary and 5 s turn-
 variable condensers, with whleh it will eower the broadfast wave lengths from 200 to 550 meters. 'f"he rotary -oll in the three-ciretit funer has 1 i furns thereon, wound on a $1 \not / 4$-jneh di:ameter tulbe. The funimarius whd secondaries of both coils are wound between slots, in the latest low loss fashion, with the least possible insulation beneath the windings. I'lg tail connevion fill rotary eoll in 3-clrcuit tuner. Bibding 1"ost connections. One hole mounting on 3 -circuit tuner-all metal parts nidk plated brass. The dimensions of the fibre fubes ate $23 / 18$ incles in diancter by a $15 / 16$ inclees lons. No. 8933 BABY R.F. ('Oll. ................... $\$ 0.99$


## R.F. Stage Shields

## $\$ 2.00$ <br> POSTPAID

Ilthough primarily elesigned for use with Silver Mar-- latll apparatus (as used in their new chielded six) these
 tota) shiclding moxes may be adanted io your ostu specitie redufrements. Niage shtelding prevents interstace coupling, and also combletely elliminates "culside pirkup." greatly" assisting in the final suleetling of sour recelver. Made of alusintum. Note bhat the coser and side walls are demobable. Measures $7 / 2$ inches long. 5 inches high and $\because{ }^{3}$ is inebes wide.
No. 9969 (Shield Only)
$\$ 2.00$

## Collapsible Total Shielding Boxes

The sides and "ulfs of this fletaly designed shated are lenkered ind promes, thms wan loc slipmed in and ont of lluit mosilfons, for immediate arress to any part of the If, stage, tor remairs or mimur udjustments thereto without the walls of the shicld in your way. All the ifintit and output wires are leal through the base section Whilb has sub-pressed holes prosthed for this purposeyou merely have to push these holes wherever they are most convenient to your requirements. Jiy bolting a plece of (comuer hus bat wire to the buhtotn sertion, a hole also being provided for this purpose, all negative filament and krunitd leads can be snlclered thereto. Multl stages of radio frequency amplification are only posslble with these shields-ldeal alsen for oscllaturs in super heterodynes wane trays, etl. Sade of :alumfum-measures 8 \% Inches long, to 16 Inches wide aut it ${ }^{1 / 2}$ inches himh. will thus contain a compecte $\mathbf{R}$. H. stage consisting of coil. variable condenser, soket, neutrallzing or by-pass condenser, etc. Dial aud eten rlusutal ean be mounted on front section, eliminating a bikelite panel, and cabinet if so desired. Total stage shielding is now used in al commercial receivers-keep abreast of the times, and iamblelely shichi yonr recelver.

## No. 9970 One Complete Stage Shicld © $2 \mathbf{8} \mathbf{8}$

Stelnite Interference minminator
 $\$ 0.85$ POSTPAID
Where the seleetivity in sour liadio recelver is not all it should be, elither through atwerse condlitions. such is (ow flose proximity to local broadeasting stations, 10 ng aerials, etc. or, due to a homal tuming lep lver, the instriton of this wave tras latwern the dertat limating posi and the aerial lead-In wine will greatly lmpuse the selectivity, by adjusting the wall knok in the center theroof. No atterations in the blling of shar reveitel ale nevessars, nor dres this in-


No. 9927
$\$ 0.85$
Sterling Microdenser

$\$ 0.89$
The rariations in tandem rundensers can he compensated for "ith these very effirient midget contensers. In fuct they are to be used whereve th batameing condenser is saggested. ldeal for newtralizing. They are so compate measuring 1 ineh hy $1^{11}$ inches. that they can be wired directly to the desired connections. Mica insulation used. Adjusts by sonew in renter. fin only be varied by a serew drivermiluhtment remains constant. Maximum capacity approxlmately \% miserg-njerofarads. Nature of construction


## Karas Equamatic Coils

 Set of Three $\$ 10.88$Long the dream and hore of every serious ltatio engineer, at last it is possible TO MAINTAIN A CONNTANT EQI..U. TRANSFBK OF EX: ERGI between the primary and secondary inductances No M.ITTEF: WHAT W'AVE LENGTHS ARE BEING TENELI. The conventional radio tienumey roil lats a fixed coupler, limiting its effective transfer of energy, through the rigid coupling employed, to a narrow band of ware lengths-anm all wave lengths above or below this bathd pronortionately recelve less of this desired transfer of energy. The primary coll is woumd on a sperial form with, a metal sleeve varlably attached thereto, which is slipped over the extended shift of the Karas variable condenser No. 9011 , and therefore describes an are in accordance with any adjustments made to the condenser shaft. The secondary coil is mounted to the suls-fanel, and is also variable, in angalar position, with respect to this arc described by the primary making possithle further coubling efferts. This edual transfer of eneray assures a strong, clear and wonterfulls pure signal. on any station being recelved. and also tends to eliminate overlanping of electrostatic and electromagnetic flelds. The primary is wound on a 2 -inch bakelite tube. with 14 tirns of wire. The secondary consists of 60 turns of wire on a $2 \frac{1 / 2-i n c h}{}$ hakelite form. Complete with mounting serews. flevible leads. etc., and directions for building Karas 5 -tube $\mathbf{F}$,
No. 9009 Set of Three Coils..... \$10.88

## Karas Retard Coils

Essential in the grid eircuit of IR.F. stages in a Karas receiver, these shielded, conmact coils per mit the tube to operate higher on their characterist fo eurie. without producing osefllations.
No. 8910 Set of 2 Retard Coils \& 1.88
Karad Equamatic Sub' Panel Brackets Essentlal in Karas Equamatle recelver, to insure inechanical accuracy of mounting of parts. greatly afferting electrical efficiency
No. 8911 Set of 3 Brackets..... \$0.88

## Benjamin "Lekeless" Transformers $\$ 3.15$ POSTPAID



This is the most fleal coil (1) use in any Katio fre. quency circuit, for it has uniformly high inductanere, low distributed capacity and dow resistanco. It is "Leke-
less." : for 1 ts ftgute $8^{*}$ shape astudes $a$ ivers close field. preventing the ever ruinous feedbacks ind power leakase. Veutra-ization is very easily affected because of this. and no special angles or minimum distames between centers of colls need be employed. L'recision space-wound by special machinery assuring an elecrrical uniformity. Minimum of insulation is Hsed in the fleld of these coils. Covers entire broadcast ware lenkth band with a .00035 condenser. Aakes a very attractive appearance for the wire used is double silk green corered. Mifih more efficient than the toroidal principle, for a solenoid is conceded to be the ideal inductance. Equipped with special taiss if used as in antenna inductance for best results on various length antennas.
No. 9852 .
\$3.15

# Bremer Tully Torostyle Transformer 

## $\$ 3.59$ POSTPAID

This is the coil that has made the Bremer Tully l'ounterphase lower-sis the silceess that it is. It is a laboratory product $\rightarrow$ be result of many years of experimentation. The outstanding features are the almost entire elinimathon of inter-stake coupling ef Pects and signal piek uj, due to its closed field. The ${ }^{7}$ hinding posts on thbs instrument are reverly arranod for simplified wiring. Frame is of moulded bakelite. Can be sunplied in Type T. 1 for antennat coupler, TC for intermediate $12 . \mathrm{F}$. stages and Type A for 4 -tube sets. Kindly state which type you are ordering.
No. 9934 Each Coil
\$3.59

## Benjamin Tuned Radio Frequency Transformers $\$ 5.15$

 POSTPAIDISenjamin products are symuythous with high quality apparatus. The'se colls are unquestionalily of the most efficlent tsbe, being air spaced haskict weace wound an air-tin dope, or any $t$ ul, ing is emblosmb therein. The primats is inserted within the
 secondary, at the tilament end thereof. Can be used as ath antenna coupler, being tappecl for long and short antenna, or as a ladio frepuency transformer in any tuned $16 . \mathrm{r}^{\circ}$. circuit. If neutratiaing is reguired in the eircuit, a special tap will take care of this. Bakelite insulation. Soldering luks. Low loss design. Etinch diameter. Wound with heaty green silk rovered wire looks is gookl as it is effelent. Will cover 200 to 550 tneters with a 17 . plate .00035 mfd . condenser.
No. 9851 Set of 3 coils. . . . . . . . . . . . . . . . . . . . . $\$ 5.15$
No. 9850 Individual coil
$\$ 1.95$

## Benjamin Compact Radio

 Frequency Transformer $\$ 1.85$This coll differ's from the $3^{-}$ ind dianter mode! TVenjamin leation frequency tathsformers in its extreme comparthess. due to its rery small diameter of only $21 / 4$ inclues. and, in this type transformer, the primary and secondary coils are on the same whane, the rapacity counling being thus reduced to a minimum. Very essential where space is at a promitum, For . 000 Es5 nef. condensers -17-plate, with which it will cover from 200
 to 350 meters.
No. 9846 Indirldual coil .$\$ 1.85$
No. 9847 Set of 2 colls............... . . . . . . . . . $\$ 4.99$

Pilot Short Wave Plug-in Coils


R E L-R.F. Choke Coil

## \$1.04

POSTPAIO


As soon as you reach \%ijlit on wour present variahle condenser dials, sull reserse them, for "there is nothing hesond that." but were sou ti really lithow the "new worlds" that are yours to explore and delve in belons the 200 meter wase lemeth band allowated to amateurs and ammerous high nowered bruathastilng stations all wer the world, sou would immediately redesign your recejver, tin inworporate within it the almave blag-in coils. And belng lnstantly dhangeable, you van work sour way frob as low as $1: 3$ meters 1 ight buck into the regulirr browalrast band of 200 in 600 tneters. It is no unemmanon occurrence to bick un Fouromean stations-and it is now thrilling to listen to tho amateurs connersing arross the sontinent-thes are all gond fellows, tous. for they wans you to "洛ten in" and write them, with sume rejort as to their reception in sour town. Merbinically and elemtically these phug-in colts have no superiar. The mounts are solid bakeliter, with the plugs and receptacles (tip jacks) thoulded within. The colls are air space wound, 3 inches in diameter, and practically self-supporting. The primary roil is adjustable for corrict coupliag adsantages. The secondary and tiokler are on the same Interdhangeable piene. Overall lenktion base 7 th indies. The same primary coll is nsed no matter what wave length bathd you may be tunitu-the serondary (with thekter attached) is the one that is removed, and the next higher or lower wave lengiln range coil substituted. Must be tuned whit in $s$-plate varlable condenser, as, for
 plate 8903 . Wither of thesp robsensers will not only cover the lower wares, but will suver the $200-600$ moter bands, whth. uf eourse, the promer roil. The fixed tickler coil must be tuned with a 11 -plate condenser, to control regeneration, whth the capact!s feed havk brinesple. Xote that we can subpis space wound moils :" theloes in diameter
 tuns to the inth. Hnd another coil wound with number is S.C.C. wire. $1 ;$ turns per inch. Net buflders find them extremels useful in makling their own piug-in coils, in in fact, any form of solenoid coil for any purbose.
1 Coll used as the primaty, incfultng malm hase-
1 Coil Linge 19 io 58 meters. incluiting plug.
1 Coil Range 38 to 105 theters. includisig plug 1 (Yoil Jange 86 to 200 meters, including Pilut sions Wave Kit emsists of:

## No. 9838 Complete

No. 9842 Range 200 to 600 Meters Base as Supplied with Primary, Coil in No. 9838
48.23
$\$ 2.23$

## Aero Short Wave Tuner Kit $\$ 10.62$ <br> PDSTPAIO

Completely Interchangeable
constructed with strict arordane with low losses. Inductances are space wound on sperial forms and bases whth provision for lmmediate 1 mmosal to change orer io another wave lensth fand. This kit co meters.
No. 9604
(Set of 3 Coils)
\$10.62

The ratrently designed mohe roil. nimble dayer wound with No. it II. ©. U. paraftined wire on a neatly flilished blacti bakielite tube. Comentions in sorew of soldering lugs Monme in any ronrenient fanithon bug means of screns. Will sufely carry land millamberes, lnductance .?
 Tu Thenrs. as ith he iong, 3 insh diameter:
No. 9818
\$1.04

## Bremer Tully Short Wave Outfit

 $\$ 7.63$Short wave reaption demends entirely on the quality of apparatus used-the Bremer Tully engincer:minulful of this fact, hase :nodured this kit, which is "ithut rusestion ome of the
 moxi efficient short wave
outhls. Consists of a batiathe rofs wound on a bakclite
 bakelite forms, with the leitst possible amount of insula. tism within the thelds thatwif-liee turns are prectsion space wound. The roils coner the following rankes of wase lengtis: 121025 meters, 2.5 to 30 meters. 50 to 100 meters and 100 to 200 meters. Designed for a No. 9853 As Described and llus-
irated As Described and Illus-.............................. 97.63
Silver Marshall Short Wave Kit

(Consiats of 1 coils which will enabie you to tume in all stations broadeastling on wave lengets ftom 18 to 150 meters, the plug-In feature of these mils making this - Molre of various wave lemgith hand, a moment's work. Kit also comprises two .00011 \$fel., Sllver Marshall Type :317 variable sondensers and one antenna coupling condenser . $0000 \pm 5$ Nfd., silver Marshall No. 310. and one suecial 6 terminal |rase, with a slot allowing the flugs in colls to be inserteal in only the correct tanner. A harmonious assortment of well designed and engineered produets, made to work with $1000 \%$ efteieney In coujunction with each other, Contensels ate most ruggedly made and are mounted upon a frame for hase board or panel mounting. lelate; are lanmered brass. Adjustable for tension on both front and tert beariags. Coil forms are solid takelite. ('umplete alicetions accombany each kit. I.leensed unter Armstrung Regeneratige patents No. 1.11:1.14


## $\$ 2.49$ postralo

Emcotran Transformer


Windings ere No. 40 wire-care fully layer wound highly insulated, redueinj tundency to open elreult. Facuum imnresnated (1) fasureagatnst
short circuits and changes in maracteristic due to moisture. Laminations in the cole of very thin rolled silicon steel so destgned and assembled to insure even distribution of thux through entire magnetic circuit ant low core losses. (onnections plainly matked umen each transform--1 engosite the terminals.

Earch transformer lndividually testsd before the Enen guaralles tag ran be ittached. footls have al surplus current carrying capacity-ample tor any rerelving tube. Insulation has been carried nut to the last de-kree-not only between colls. but also hetween colls and all inetal parts.

I'niform roltage amplifteration throughout the entire range of musien! frequencies. The flatness of the Emcotran amplitication curves throughout this range guarantees distortionless perforimance. Very compart. Prosided with consentent holes In the hase for mounting in any fosition.
No. 9503 Ratio 3 to 1 . . . $\$ 2.49$
Ne. 9568 Ratió 5 to 1... $\$ 2.59$

Rasco Transformer $\$ 1.50$ postralio


This is made for us by the makers of the Emectran deseribed above and is of the same gencral character of construction. Very effelent and very low in price. Ginarantced by the manufacturer und us to be satisfactory.
No. 9502 Ratio 3 to 1. ., $\$ 1.50$ No. 9.5.: Ratio 5 to 1.... $\$ 1.60$

Pacent Super-Audioformer


## A 4-inch Miniature Power Plant

The groming reuntrement for tiner mosical values in bradcas reception. causing a tendency for darger transformers, las resulted in the development of this giant brother of the Pacent Audiofmmer.
The ratio is 3 to 1 -high poough for energy amplifieation of 500 to 1 per audio step (using 201 A fube or egulvalent) and sef low chough that higher frequencies are not distorted ITniform araplification dosn to 100 rycles and up to 2000 craces. Esperially designed with power amplification requirements in mind, with insulation to stand plite potentials up to 500 volts.
No. 9372 Input Superaudioformer.
No. 9361 I'nohielided Type
$\$ 6,05$
$\$ 4.80$

Pacent Audioformer


The imnroved Audioformer, ati atrin: whal unlque appearance, sives an exceptionally hifh degree of amplification over entire band of sound ficmurmetes. Itatio of $31 / 5$ to 1 permits use in either first or semond stage of audio frequency amplification without diatortion and reaction. Case grounded to base. Jfinding bnsts located at bottrm thus keoping wiring close to bace below leval of sockets. Slze $21 / 2^{\prime \prime}$ high. 21/2"wide
No. 2R11, Monnterl

## Pacent Output Transformer

For the and fathiful tepratuction of memptina, an output trath-former is used with whagets of $1: 35$ and over on the last audio stage. In fatt, its use is imperative, for
 monts out of the loud sweaker wimbligs. Gan be attached mutside of cabblact in at frw minutes. stands 1 inches buth, athl has the same physital thatraterivitios as our No. 4379 Input superaudioformer.
No. 9600
 No. $9361 . . . . . . .$.
$\$ 4.80$

## Modern Push Pull Transformers





 portamt part they jlas lo the autio filulía Thu two tramsformers rentesent me stage of atmplilication falsays




$\$ 7.28$
No. 9146 Per Pair (2 transformers)

## F M C.Double Impedance Audio Amplifier Units

## $\$ 4.89$ <br> POSTPAID

Ierain have been combined all the good features of audio frequencs amplification transformers, and of impedanec rounshed transfurmers. by s very lngenious system, requirIng nus difterent wiring than a straight audio fresuency transforiner. It guadruples the power mutput of audio tulbes, hecausic grid currents are permissible. with no magnetle ruwnling. The misume is practioally untinified, and there is no tube blow king. due to the condenser discharke
 through the inductance. The high value of inductances causes all frequencie's to the faithfulls reproduced. The quality is perfect-a straight amplitidition curse being nossible. Any nuniber of stages may be used without howling. Finclosed in black. crystallized metal cases, all terminals rlearly flesignited on bakelite insulation stribs.
No. 9881 One Complete staze..... $\$ 4.89$ Polymet 3-Stage Resistor Kit $\$ 3.49$
This extremely low prise is no reflection upon the cuality if these instruments inrluded in this resistance coupled amplitiol

kit-the quality of reprolurtion and the vulume is thuty comparable to that of kits seiling for consliderably mare money. It offers the convenience of rompact assembly in a meshanically more desirable manier. Correct renistances and blocking condensers included, together whith detailed instrumtions. Connertions to terminals mas be soldered to sperial lugs provided. or twisted under the nut and bolt. Resistor bases are gemine bakelite, all nictal parts nickel plated. Itesistors and combensers are of 1 'olymet manufacture, amd are thus fulty dependable. Represents splendid value.
No. 9674 3-stage Resistance-Coujled Amplliter.
Complete
\$3.49
No. 9675
4-stage Resistance-counled Amplitier
Complete
$\$ 4.79$

## Na-Ald Truphonic Amplifier <br> $\$ 17.97$ <br> "rhis radieally differ ent and better ampli. tier employs a new ystem of coupling which balances the fosintial coupling ele-  fistorthall iv l!umwihth and inrfert reproduction is as   Mironlurtion, thereni. It is nut to le confused with any whor sustem of furtin of amplifiration, (an be attached (1) 3onr wrectit reseiver in a few minutes by means of a andial ribll" furnished for the ". $\mathbf{I}^{\prime \prime}$ and " $13^{\prime \prime}$ battery , 1 bertions, bilss one simple additional connection to  Iowdon fibin, The aldition of this amplifier to your set小sfann it lntu one that would sell for over one hun. I doflats. for the fothal qualities will be the finest  $\because$ " wide of that eablinet, set ropspact wough to even be fi vallod within. The casing is of latroured steel. The whin tulses tit into a gemuine highly pollshed bakelite anokn strip, on whiteh is also mounted a rheostat und whate tip juclis for the output. Size $12 \%$ inches long. 21/2 Inches wide and :1 $1 / 4$ laches high. <br> 

## Remler lnfradyne

## $\$ 21.29$

The heart of the Ehemler Infradyue Kicelver. An entirely new principle Kadio frevuersy anolitler.
 Unlike Super Ifeterodynes, it protits by all the advantages to be ohtalned bi amplitication of multi-tube Shart wave stages. ('ompliof within itself-consists of leanler sockets, Hemler colls, special sernier condensers and tixed mica condebsers. assembled in a highly polished laciuered rmpper, shielded rasing. Can be wired Into the eabinet of a set you will hulle, or can be set outside.

No. 9669.
\$21.29
De Jur Resistance Coupled Amplifier-Assembled


## $\$ 5.95$ <br> POSTPAID

## Bottom View

A threc-stage non-indtetive tesistance coupled amplifter, reprotucing tutal athalities second only to your actual presunce at the bruateast studlo. Fintirely moulded of Gienulne Bakelite. [l.X. surkets are adaptable to old $1]$ V type and new iV type. Comreetions (see Lllustration) are not soldered- an screws-nor no bolts; all connections are metal lHVETED) STRII'S. assuring tolkeless aperation. Fool-proof. Broductlve of good volume with no distortion. Ill romnections lead to patent bindind posts, plainly inarked. Hook-up book ineluded. Non

## "Rasca" Radio Frequency Transformer

R.F. Amplifying Transformers are coming Into use more and more every day, as with the use of them distances can be covered not possible to do without their use. When compared to audio frequency amplitication, radio frequency does not give as much amplification, for the simple reason that the purnose of a ratio frequency amplifier is not to boant up the sound, but to increase the sensitivity of the autfit tremendously, thereby enabling the owner of the recelver to pick up distant stations that could never be heard with audio frequency ampliffers alone. Remember this motto: "Radio for Range-Audio for Audibility."
Our Radio Frequency Amplifying Transformer. which has been developed and designed for us by Mr. Robert E. Lacault, former Associate Editor of RAD 10 NEWS. is the latest word in this style of Transformer. Air core tspe.
Wh1 give good resuits with any racuum tubes now on the market, but it is recommended that "hard" tubes be used. It should be remembered the efficiency is greater than that of any Iron core tspe on the broadcast band of wave-lengths.
The secondaries and primaries lie side by side in five grooves. reducing the eapacity between windings. The diagrams Nos. $46,49,51$ (in rear of catalogue). show how to connect our transformers to form a one. two or three stage radio frequency amplifier. The dotted lines mark the point where the circuit of an ordinary receiver should be cut to insert the radlo frequency amplifter.

When an outside aerini is used, one or two stages of radio frequency are sufficient. For long distance recention with a loop. three stages should be used although withtn 10 or 20 miles from a broadeasting station, one or two stares are crough even with a loop. In connecting the amplifier, nuake all connections as short as possible and solder all contacts.
Our illustration is full size. The transformer has a central screw with an insulating bushing. as shown, so that it can be mounted on a panel or base, using but a single serew for attaching. Nold on a money back guarantee, if it is not all that we claim for it.
No. $2800 \quad 250-600$ meters size, $17 / s^{\prime \prime} \times 21 /$ g $^{\prime \prime}$. . $\$ 1.10$


There has breen a growing tendency jecently to employ two or more tuned R.F. stages with an untuned detector stane instead of the eonventional tuned detector stage. Thus, one condenser is eliminated, as weli as one control. As the narue implies, this transformer can also bs used In a K -flex circub,

No. 9368

Resistance Coupled Transformer


Ne. 1127
$\$ 0.85$ POSTPAID
The latest in resistance coupled amplification, Complete information furnished. Sold complete with condensers and resistances or mounting alone.

No. 1125-Double resistance coupled mounting only
No. 1126-Single monnt-
ing only for condenser
and resistance
$\$ 0.38$
No. 1127-Complete resistance coupled amplifier. double mounting. IUbilier condenser, with resintances required
.82 .57

## Daven Amplifier Kit

For 3 stages of amplification. Supplled (without sockets) for those who prefer self-assembly. All resistors and grid leaks included. Contains three Daven No. 42 Re-sisto-chouplers fitted with coupling condensers of proper capacity.

No. 9350
$\$ 7.60$

With but a tremendous increase in sound volume is gained. We furnish a complete set of directions. For best results two of these transformers should be used. This push-pull transformer is made in all respects as our No. 1100 transformer except that two colls are used. Full directions for assembling are furnished. We guar. antee results. The ratio is $6 \frac{1}{2}{ }^{\prime \prime}$ to $I^{\prime \prime}$. Dimensions, $21 / 2^{\prime \prime}$ I $3^{\prime \prime}$
No. 1159
$\$ 2.25$

## Gentlemen:

Sometinie ago I ordered a set of your verniers. Wish to state that we wore more than pleased with them. hut the part that pleasod us most was the prompt shipmont You no doubt have recoived guite a few orders fron Gatun that can bo traced back to that first ordor. Some of your radio and sudio transformers aro incorporated in wits here. Will you please sond a copy of your catalog. G. D. POOLE, Gatun. Canal 2 ono.

Jutt few finas to let you kiew I received the Rico Phanes O. K. and find they aro very powerful. as they slve a stoer tono. Thankiog you for the faver-wishing you success.

1AS. A. 8HERMAN, Wappingers Falls. N. Y., P.O Bex 75

## Coupling Resistor



## $\$ 0.33$

POSTPAID
The Carborundum grid leaks and resistors do not elepend on any metallie 131 m . but instead are made in the eleetrte fumace, wherein a rock like substance is ob = tained, and uscd as the actual resistance. They will never disintegrate, and thus will never change their values or produce any noises. Note the unisuc mounting clips. You may fasten ons of them directly to the grld terminal on the sorket, and the other to the tllament terminal representing the desired potarity as called for in the eircuit used. The clips can be bent at any angle to acrommodate all possible merhanical rondlitions-in fact. they can be lient so as to even allow thls leak to fit into the conventional mounting clips of srid leak emedensers. The slots in the clips are murh nore salisfactory than holes. for they perinit more arcessible mounting. The following talues in grid lealis can be supplied, and your order should state just whith ones you wish: $1 / 4,1 / 2.1 .2,3$ and 5 megohms.
No. 9077

## Resistors

No. 9078100.000 (.1 thes. I (H) 10 ms
$\$ 0.33$

No. 907950.000 (.05 meg.) Ohms.
$\$ 0.33$

## Note

The 50,000 Ohms Resistor is generally focommeruled for the plate circuit of 201 A Tyse ithes. whereits the 100.000 Ohms Resistor is favored if you are using Hi Mu Tubes in your Amplificrs.

## Bretwood Variable Grid Leak

## $\$ 1.35$ <br> POSTPAID

N-
We can heartily recommend this variable grid leak. as its merits warrint it. It has a smooth, noiseless vartation of from 0 to 10 niegohms. A cartridge type leak is never a cure all, but the Irretwood admirably solves the problem. The proper adjustment of sour grid leak will bring in the most elusive distance stations with surprising volume and clarity. One hole pancl mounting.

No. 9445
$\$ 1.35$

## Daven Leakandenser $\$ 0.89$ Postralo <br> 

Where space is at a promlum, this combined Itasen grid leak and grid condenser is essential. If ran he elther soldered to the proper terminals with the solidering lugs furnished, or, snapped Into any standard resistance mount. and connections made to the Jatter. End caps are highly polished ntckel piated brass and are threaded for a $6-32$ nut. The rartridge is enclosed in a glass tube. Condenser value .00025 -usual leak resistance furnished is 2 megohms-although we can also supply it with a 3 or 5 megolun leak.
No. 9006.
$\$ 0.89$


Mea;uring only $71 / 2$ inches long. The walls of the fioat are covered with studs which thus prevents the fioat from sticking against the sides of the hydrometer.
\$0.68

## Carborundum Stabilizing Unit $\$ 3.39$ POSTPAID <br> The stabilizing unit is an ele'trically controhled Carborundum vetector, and is adaptable to atl circuits, as the detector impedance, being adjustable by a very high resistance potentiometer and flashlight battery shunted aeross same exactls matches the particu- <br>  ar eircuit reauirements. Regula-

 tion is possible within $1 / 100$ th of it volt. There are prowiled rlips for shapping in place the hashlight battery. a built-in unica romdenser, a rearborumdum detector. Control may be effected from the panel. or unit can be nounted on a baseloard. Bakelite knob is supplied whth white engraved arrow. lsakeljte frame. Nickel plated brass. Only two ronnections recjuired-sanse as any crystal detcretor. Overall dimensions: $2 \frac{1}{2}$ inches wide, $31 / 2$ inches long. extends $2^{1 / 4}$ inches from rear of panel. No. 9639 (Without Flashlight Ikattery).......... $\$ 3.39$ No. 8979 Flashlight ('cll for Above............ $\$ 0.35$

This plug gives your boud sbeaker reception new life. Ji climinates all raspy moises and some distortion whthout rhanging a wise in the receiver itself.
No. 9676 .

## C. R. L. Modulator Plug



## 1224 <br> POSTPAID

Give your loud rpeaker half a rhance to prove its merits - perhaps it needs but the abore plug shunted across it s terminals to clarify the reprodurtion. Replaces your present plug-the knob, when adjusted. will mutch the tmpedance of your loud speaker to the output impedance of your Itadio recelver, and also acts as a very effective volume control. Composed of genulne bakelite basc. With bakellte knob and engraved white arrow thereon, and highest quality bakelite sleeves in the plug itself. W'ill fit any standard jack.

No. 9677.
$\$ 2.24$

## Bell Wire



## $\$ 0.34$ <br> POSTPAID

A very universally used form of wire. $A$ plentiful supply of this should always be kept on hand. It is made of No. 18 B. \& $\$$ whserer with hindole cotton covered insulation, heavily tupregnated will a coating of paraffine. Can be used for a temporary lead-in wiremas an aertal for portable suts-fir butters connections-for wiring a receiver-for wioding rertain forms of indurtance mils. etr.
No. $9746 \quad 50$-fuot Roll.
$\$ 0.34$
No. 9035 1/2 pound Itoll
$\$ 0.49$


## Adjustable Grid Leak


\$0.85 postpalo

Bimploys a unirue princlple, whleh elfminates all slding or presshng contarts. Firee from microphonic noises. $1:{ }^{3}$ in lengtlt and $4 / \omega^{\prime \prime}$ in diaturter. the hlafs fyllader, which is hernetleally sealed, contalns at smouth, heary reslstance lifuid. As the prid leak is turnem, the eleetrobes engare the liquid and it respmals instantly, siving an accurate range from t/e to 5 megohms, alljust. able to lie exact ralue for tube cirentit athe sifmal. It is rasy to oper. ate-htomits in any standard grfd feak dipes. tles our regular grid liak leak rifs. thts our regular arda lakk
mumbinrs, No. 1.ros. These brackets are included in the price, and therefore consitute a complete unit. NothIng else to buy. We are the only company villing thj qurnuble grid leak at the regular prlce, includhes the inounking.
No. 5747 . NJuntable (irid EA\&k with Monntink. complete

## Pilot Bakelite Grid Condenser <br>  <br> $\$ 0.35$ POSTPA10

Best condenser on market. Fult, moulded. No shorting. Moulded brown bakelite covers the entire re sistance. L'rices on condensers wlth. out grid leaks.
No. 5182 . 0001 Mfd...... $\$ 0.35$
No. 5183 . 00025 Mfd..... $\$ 0.35$
No. 5184 . 0005 Mfd...... $\$ 0.35$

## Lynch

## Metallized Fixed Resistors $\$ 0.43$ POSTPAID <br> 

Metal long has been recognized as the best wectriat conductor-in a grid leak a rertain unwanted celectrical charge must be led from the grid of the tume to whirs it is connected and the Letich resistor has no equal fut this purpose, as it employs a CONIDCCTIVr, mon-atcing metallyed resistance on a filass more, staled within the outer glass tube. It is warranted absolutels nobseless permanently iterurate and forever dependible. sperify resistance wanterl.
No. 9687
.$\$ 0.43$
No. 9688
$\$ 0.64$
No. 9689
$\$ 0.85$

## De Jur Grid Leaks


$\$ 0.19$
POSTPAIO
We offer you a vers dependable atid toak in the De Jur. for it will never change its eleetrioal value, Sbsolutely moisture prouf, air tight, ind noiseless. Soldered caps assure permanencs of methanieal conseruction. Istboritory tested to within $5 \%$ calibrated values. Supplied in the resistance values: $1 / 1,1 / 2,1,2$, 3 , and 5 megolhms.

No. 9645
each
$\$ 0.19$

## Carter 4 Ohm Resistance \$0.13 POSTPAID <br> Cuman

The most compact automatic rheostat on the market, and the most ithexpensire. Just as effecthe as more costly and buikier type. Wherever the flament setting is not criticat, as in audio stages, the bulbs ean be controlled by this simple resistance of 4 ohms. Eyelets at either end provide for accessible poounting alirect to terminal on socket, or a mut and bolt may be slipped on. Can be bent to any mechanically convenient anglc. Measures only 1 15/16 inches iong.
No. 9663
$\qquad$ \$0.13

## 700 Ohm Pilot Adjustograd


 serics bith the grid rikuits, to climinate any self-osch lation. The l'ilot Idjustograd is ideally suitable for thlo puriose, havjug an adjustable sllder and contact armi allowing for varluls cabareitics to produce the prope setting thereof, chlmfating all squeals and howls. setew rup terminals or soldering lags. Fibre base. Mensure:

 No. 9910 .
$\$ 0.45$
De Jur Resistor Unit \$1.38

## POSTPAIO

Do not judge the quality of this complete resistance amplifying unit by lts low price. The guality of reproduction possible in resis. tance coupled amplitlers i uhtetanthe in tult degoe with this unit. Mechandeall allil elertitally wedl designed. Moulded bakelite base l'atented phosibor bronze dips, heavils nickel phated gripping the resistors at all points of contacts. The con denser is moulded in the base, and is therefore not subject to atmospherice condithons. Complete with De Jur soldered Cap resistors. Kindly state which type you are ordering-lor 1 st stage. End stage or

No. 9641 Stage, Complete
$\$ 1.38$

## Single Resistor

 MountingMoulded of (athuine babe-

lite. I'atented nkckel plated
bhozphor bronze clips so designed that they grip the cartridge all around, Insuring ever perfect contact. (an be used as an independent grid leal: mounting, or for any other purpose involving a tubular device. Soldering luss facilitate connections.
No. 9642 Without resistor
+12.24

## $\$ 0.46$ <br> PDSTPAIO

Pilot Rheostat

Comsitsts of an oversize lesistunce wimaing on gemuine notulded bakelite support. slider is integral with special rotating bushing and rheostat knob shaft adjustable in and out for different panels. LockIng means prorided so positive that knob eannot loosen when once set. Threaded inserts
 moulded into body for panel mounting serewa. Finuipmed with genulne bakelite knol with white arrow.

| No. 13096 ohms | \$0.46 |
| :---: | :---: |
| Nis. 431510 dhmes | 0.16 |
| No. 411590 ohms |  |
| Nes. 4316 30 whms | 0.1 |

$\$ 0.46$
(1). 1310 10 thm

Nes. 431 f 30 whms

## Pilot Bakelite Potentiometer

## \$0.81

POSTPAID
Consists of a rugged high re sistance winding on mouldet spring phoswhor bronze is integral with its own bushing so that the cortect adjustment is not lost when the knob is removed. A novel clampling means is provided which permanently locky the knob to the slider when in position. Threaded fiserts are nouldod into the body for the panel minunting scress.

No. 4313 200 olmm
. 0.81
No, 4314100 ohms

## Carter Imp Potentiometer

 $\$ 1.11$This jotentiometer sister to the Carter imp IRheostat family, is uninue in that it is the most compact instrument made of its tyjue. yet it retains the same $100 \mathrm{c} / \mathrm{m}$ eftelency to be found on mucth larger ones. starne slae as the Carter lnt rheostats. Furnished in efther 900 or 400 ohms. Dlameter $13 / 8$ inclues. and wroderts only "b of an inch from back of pancl


200 ohm
so.ss
No. 9421 Potentiometer 400 olim


Fweryone know that Carter-made fiods are hich class, and this theostat is $n$ os exception. The smallest matie. IDiameter is 1 is " and it projects 3 is of un ineh back from panel. Metul parts nlokel plated. Wide contaet arin trialintains constant pressure 1 -hole mounting. Includes knob.
No. 9871 ofims . . . . . 80.89
No. 9511 ofims . ..... 0.89
0.81

One of the best devices for controlling the thament current. Has shown its abillty to give an absolutely accurate control of any tube on the market. This makes it nossithle to set the detector curront at exactly the correct joint for bo:it results. Ivith C-*01A and 201A detector this is a great adrantage, as it helps to bring in the distant starions with great clearness. Made with special resist ance clement that $i$ constant in resistance and almost indestructlble. Due to its fine current regulation. adopted exclusively by us in our "Balanced Inter flex" set. No. $99^{\circ} 1$
 0 . 1 .........

## Amsco Double Rheostats

 $\$ 1.13$This most unique rheostat serves a double purpose-it enables you to install two rheostats. of like or different reslstance. in the space ordinarily occupled by one-and, accordingly localizes the adjustment controls thereof. Varlous combinalions in resist -

ances can be adopted to your spectife equirements: for instance. yoxt may control the R. F. tuben wath one knoh. and the detector tube with the other. Occuples no more space than the ronventional form of rherstat. A quality product-durably moulded of bakelite. The knobs are knurled for convenlent gripping thererf. and embossed arrows efulde the direction of adjustment. Screw terminal robltertions.
No. 9869 Combination 6 and 20 olmm.......... $\$ 1.13$
Ne. 9870 Comblnation 6 and 30 ohm.......... $\$ 1.13$
Ne. 9871 Combination 20 and 20 ohm..........\$1.13
Ne. 9872 Combination 20 and 30 ohm.......... $\$ 1.13$
No. 9873 Combination 30 and 30 ohtm. ......... $\$ 1.13$

## Pacent Microvern



A super tuning devire, $\boldsymbol{A}$ verniter dial for extremely sharp tuning. No pears. No backlesh. Permitg permanent lokging and direct reading of stations by mame, wavelenth or frequency. 5 to 1 vernler ratio. 4发-in. dianieter and provides an and nrovides an shield. Bakelfic knob. Faslly at. tached.

No. 3066-Silver finish $\$ 1.50$ No. 3067 -Gold finish. 1.50

## Bakelite Knob

IIkhly polished bakelite-brass tushings solidly moulded within. Steel set verew's. Dlameter 2 Inches.
No. 8907 Bushing
threaded for
$8 / 32$ serew Bushing with is inch 0.13 No. 8908 Bushing with 14 inch diameter hole
. $\$ 0.13$ No. 8909 Same as 층 8908 , with rhite arrow, as illustrated.... \$0.18

## Cornell Dial



## $\$ 1.47$ <br> POSTPAID

This beautifut dial nust be seen to be fully anoreriated. It is finished in an musually attrative, sathlute gold linish, and is eteled embossed. Its vernier action. of 9 to 1 . is so positive. there is no trace of back lash, even if it is turning a heary douhle or trinte condenser, nur, will it slip. The Cornell Vernter Diai will modernize any Itadio set.
No. 9779
$\$ 1.47$

## Pilot All Bakelite Vemier Dial

Closely resembling the above cornell dial. Heference may be shown to the Pilot Art Dial due to its betng dimost completely moulked of genuine black, highly polished Bakelite. A very attractive design is beautifully embossed thereon. The shank which recelves the shaft of the condenser is highly nickel plated-a steel set screw therein locks the shaft. A full 360-degree scale is provided-upon a white background are printed the dial settings reading frotn 0 to 100 -and on a blark barkground are printed in white letters, the dial settings from 100 to 0 : therefore, the dial is adaptable to clockulse, and counter cockwise rotation. The vernier action is accomplished by a friction drive-always positivenever any back lash or milcrophonic nolses alsays incidental to gears. Diameter of lole in shank is $1 / 4$ inch. Diameter of tuning knob is 1 inch. The outer surface of the dial protudes 3/8 of an inch from the panel-mbe total depth from the knob to the panel is $1 \frac{1}{4}$ incties. Overall dimensions are $31 / 4$ inches at the widest porthon and $f$ tnches long.

No. 8850
40.95


These one-plece composition molded diais dic the latest word In design, hlyh grade throumhout. The lettering and figures are inlaid in brllliant white enamel. The metal bushings are very heavy and will always remain firm, and the entire dial will sit positively true. The tlustration shows the slight boss at the back of the dial. which makes tho dial stand off from the patmel about l/leveled edges. the rim will not grind acainst the panel. beveled edges. $3 /{ }^{\prime \prime}$ bushIngs used. Set screw included. By using our No. 8868 adapter dials will fit a $3-16^{\circ}$ shaft.
No. $3074,2^{2 \prime}$ Dial

No. 3076 f" Dial . . . . . . . . . . . . . . . . . . . . . . . . . . . . 80.30
Illuminated Vernier Dial
 $\$ 1.71$
This latest impropement over pre-existing forms of vernier dials, is not only extremely userus, but also transforms the appearance of any humebuilt recelver to that of the very latest models, and gives to it a certain urofessional-like appear ance, greatly enhancing its resale valuo-if you hulld, Radlos "un the side." It consists of a well printed swale on transiucent pellulold, the numbers of which are $1 / \frac{1}{4}$ of an inch in height, showing from behind an attractive panel window. unon which is etched a very the marker, for dial settings. Paced directly behind this "transparent" scale is a f -volt, very - mall monsumption ( $1 / 10$ th of an ampere hour) bulb, which is wired, through its socket. directly to the Wus and negative leads of your "A"" battery wlthin the rereiver. When this bulb is lit, a most uleasing anpear. ance is effected, for the light appears in a soft glow entirely without any strain on the eng possible tuning the case were the any strain on the eyes, as would be the case were the general lighting effects in the room ohjectionable. To cut out this bulb, the switch on the top of the dial is, used. The vernier artion provides for "razor sharpness" - there is no back lash. or play, for a 8 mooth friction drive is employed. Diameter of scale is $53 / 4$ Irches Hakelite knob used. All metal parts are lirass, end the switch is nickel plated. Black figures nyainst a white background.
No. 9672 Without Bulls
No. 8920 spectal Mazda $1 / 10$ oti" Anpere ibuib
for Abore . .....................................
$\$ 1.71$
$\$ 0.20$

## $\$ 2.47$ POSTPAID

National Velvet Vernier Dial

This dial truly represents the last word in vernier type construction. for it has neveral very raluable and unilue features embodied therein. The vernier action is positively noiseless, and will not produce any microphonic disturbances due to any gears, baek lash, etc. The vernier ritio is also variable by a slmple lever adjustment, located imneedlately above the operatling knob, froms ${ }^{3}$ to 1 to 20 to 1. The latter ratlo ts certalnly of great value when in the guest oi tong distance reception. Furthermore, there is provided a dual range, from 0 to 100 and from 100 to 0 to accomnodate any tuning instrument, in its manner of rotation. This dial can also be supplied reading 0 to 200 or 200 to 0 in a $360^{\circ}$ type-thls must be specified in your order. Four-inch diameter, highly pollshed black Bakelite, with thack figures rlearly legible sgainst a white baikground.



Kurz-Kasch Vernier Aristocrat Dial

## $\$ 1.79$ POSTPAID

In this newly offered dial. mo geare, chains, nor bands are employed. The shaft end of the inctru. ment which it is tuning is not vislble, but instead. a heautifully polishorl rounded Bakellte surface graces the panel front. The dial attaches to the shaft of the instrument to be tuned by the tamous Kurz Kasch Split Hush* ing methud. Friction action employed-with a
 spring ever ready to compensate for wear-vemier ratio 14 to 1. leadings are visible through a port hole in upper section of the dial. The outside of the dial is handsomely chancal in a roy decorative effect. Fowr-inch diameter.
No. 9984200 to 0
$\$ 1.79$
$\$ 1.79$

$\$ 1.79$

## Mar-co Inductance Switch

 $\$ 0.90$
## These switches can

 bied for varied purposes wher that as a vario coupler tap switch. A speclal celluloid panel mounting numhered dial plate is included. The thase is genuine Radion, and all the metal parts a re handsomely nickel plated. Requires only onehole to mount.
No. 9720
No. 9721
..........
No. 9722
point
point
point


Aly order arfived safoly and is good tine. Thanke. 124 8th Ave.. Wekesport, Pa.

## Jewell Panel Mount Meters

## $\$ 8.10$ PO8TPAID

The trade mark "Jewcll" on any current measuring device is als Immediate assurance of its superiority over any other such instrument. In the doulble sading types, the voltage mindition of both youll storage and " ${ }^{3}$ " batteries can be in.
 stantly determined on the panel. The milliammeters are usad to cletermine how much "'is'" battery is being consumed, as well as at cherk on distortion. The serious Radio fon cannot afford to be without these gauser. IBlack Japanned Cases. No. 9650 louble Reading- 0 to 7.5 volts and 0 to 150 volts. Two-inch case dlameter. With
wide flange front panel muunting. Belf-contained switch with an automatic otf position.........S8. 10

## $\$ 6.55$ <br> POSTPAID

No. 965: Namic type as No. 9850 but with narrow cun-shaped thange. with back panel mounting. The $71 / 2$-volt scale is illways in the circuit, a built-in push button on meter being used to read higher voltages. .. . \$7.80


No. 9652 -volt meter, same mount as No. $9651 . \$ 6.55$
No. 96530 to 2 :i N1lliammeter . . . . . . . . . . . . . $\$ 6.55$
No. 9654 ot 0 , silliammeter
$\$ 6.55$

## Sterling Panel Meters

## $\$ 2.97$

## POSTPAIO

To obtain gond Radio recos. tion and long life for the radio tubes, the adjustment of rate of curseltt fluw troms both the $A$ and 13 batters rollages mast bue mersmed - hot gutesed at. . In intevpenside a 1 d dependible mernis of therking this information at will, on your


Ne. 9690 Meters for this purpose. Tlueg may be left contlnuously in the eirenit, or, in some instatices, must tee swleched on and oft. either by means of a push button provided on some models of by throwing a switch intended for this purpose. Thase melets arf furnished with sllwer etched dials. The diameter of the body moper is 2 inches, and of the rim, $21 / 4$ inches. Back clamp tnounting included. No. 9690 Combinathosi 1).C. Voltmeter 0 to $71 / 2$
rolts and 0 to 150 rolts.
$\$ 4.09$ Supplied with Ruilt-in 1'ush Buton.
No. 96910 to 8 rolts . . . . . . . . . . . . . . . . . . . . . $\$ 2.97$
No. 96920 to 150 solts ............. . . . . . . . . . . $\$ 2.97$
No. 9693 10 15 Milliammeter ..................... $\$ 2.97$
No. 9694 to 50 Milliamineter $\$ 2.97$
No. 9695 o to 3 Ammeter . . . .............................. 22.97
N"umbers 9693 and 9694 with push button built in can be furnished for $\$ 0.50$ additional.

Bentlemon:
1 would llke to say you have the lowset prlees of eyy sataloges, so am onclosing my order.

FRANK HANKINSON. \%/0 A. C. L. Rery. Ce.ba.


Here is a pair of phones that you conld not duplicate in most stores for less than $\$ 5 \overline{0} 00$. let our price is only a fraction of as much. We are in the heart of the best radio market in the rinited states and buying opportunities come to us which never come to the dealers less fortunately located. This is why we can offer you such a barmain as this and the many others you will find in this catalog. Take these phones at our low price and if they do not excel other phones at hirher prices. or you are not fully satisfied, return them and we will refund your money. This applies as well to everything we offer.

Therse phones not only act the same as those more costly. Int their appearance and construetion are first class. The caps are of mouldeal composition, nicely finished. The bearband is easily adjustable and comfortable. The cord is fire feet long. In many homes several of these inexpensive phones could be used enjoyably attached to the one radio receiver.
No. 2237, 2,200 olmms.
$\$ 1.99$
No. 2238. 3.000 olims.
. . . . . . . . . . . . . . . . . . $\$ 2.23$

## Brandes Matched Tone Phones

## $\$ 3.70$ POSTPAID

No brand phones is better or more favorably knownthan Brandes. This is because Brandes phones are always uniform in quality and we are alsle to offer them at tery reasonable prices. Eassheadlands. The wind. ings are evenly matched produces even
 tones. The cord is extra long, being six feet. you are al ways safe in choosing a Brandes.
Nis. zu31, Superior model, 2,000 olims. . . $\$ 3.70$
No. 3037
Navy Type 3000 Ohms.
$\$ 4.94$
Frost Phones

## $\$ 2.40$ POSTPAID

This lorand needs no introduction. Prost is one of the oldest telephone manufacturers and
his product is good. The shells in these phones are of moulded bakelite Tho hendbands are light an d comfortable. The tome quallity is very satisfuctory to all users.
No. 93662.000
ohms, aluminum
shells ........ $\$ 2.40$


No. 3365 3.000 ohms, aluminum shelis ... 83.10 No. 936i 3,800 ohms. lrakelite shells......\$4.93

Double Phonograph Adapter $\$ 0.65$ POSTPAID

Rascophones


Remarkable for distance and clear ness, especially when you consider the small price. 2200 chnis. 5.50 to each coil. Five foot cord. Extra light headband. Feels good on the lead.
No. $0193 \ldots . . . . .43 .49$

## N \& K Phones

Distinguished by remarkahle clearness of tone and extreme comfort. Magnets of speclally selected metai wound by an entirely new methox which guarantees uniformity and long life. Extremely sensitjve diaphragms $21 / 4$ inches in diameter. This greater diaphragm area, together with the scientific design of the sound chambers. is responsible for the clear. natural tonc. Highy polished hard rubber car caps. ac. curately machine threaded to insure correct seating of diaphragm. Cas. ing of rigid brass hearily nickeled. Head bands corcred with genuine leather. Six feet of strong cord. 4000 ohms.
No. $9+12$
\$6.95

The body of this double phonograph adapter is moulded of polished hard rubber, and will adapt itself to any pair of head phones placed under the metal straps. The reception thows through the two chamnels, and issues forth at the nozzle. which will fit any standard phonograph. with or without a rubber bushing.
No. $1320 \ldots$

## Genclamen

I reesived the " $B$ ", Battery in very good condition. It is the best battery that can be bought for the priee. It is a lot better than I expected it to be. In the future you may expeot more orders from me. M . CLEMENT PACR.

131 Broad 8t. Menasha, Wis.

## Cone Speaker Units

## $\$ 2.95$

 POSTPAIDA cone speaker consists of conically-shaped diaphragm, commonly termed a cone, made of cover stock, medium weight blotting paper or any material with very little grain in it, a coupling devire, called an apex, which locks the end of the unit's stylus, recelving the ribrations thereof and in turn imparting them to the cone surface, which. when thus set in motion. reproduces the broadcast sounds whth uneanny tidel-
 ity. In addition there is the unlt proper. The unit we offier you (above illustrated) is constructed along principles recognized as theoretically and mechanicaliy perfect. In fact, it will enable you to asscmble your own cone speaker. culual in efficiency, volume, clarity, fidelity of reproduction, cte.. to the highest priced speakers-for, hercin, lics the secret of any good cone: A I'EIRFRCT UNiT. Massive tungsten steel permanent magnet. Step down leverage of placement of stylus rod assures concentrated energy, producing tremendous volume. Ohmage is 1300 -and the impedance will match the average receiver. Several tapped holes allow for various mounting positions. Armature (flipper upon which is attached the stylus) correctly adjusted between pole pieces. l'ole pieces and armature are Norway Iron. Will operate successfully at 90 volts or up to 600 volts.
No. 9783 (As illustrated)


No. 9784 Cone Apex, consisting of two conical (aps ( $30^{\circ}$ pitch)-bushing with center hole for stylus-threaded vertical hole-knurled serew for locking stylus to apex bushing-ind 8/32 hexacon nut.
$\$ 0.69$

## How To Build An Efficient Cone Type Speaker

I'repared by an expert on this subject, Its contents imparts to you, in simple language, complete detailed information for building a cone speaker you will be truly proud of. This knowledge will not only save you money on your oun cone speaker, but you will then be able to makc them for your friends, putting dollars into your nockets.
No. 9098
$\$ 0.50$

## Ultraphonic Phonograph Reproducers

## $\$ 8.35$ foripaio

Although this instrument has no connection with radio apparatus, we are listing it. for the improsement that this type of reproducer makes possible in the tone reproduction of ANY phonograph, is correlative to the trend of universal adaptation of cone speakers, for Radio reception-they both reproduce the lowest, the medium and highest registers of the full musical scale with startling fidelity. The special diaphragm used in this reproducer IS ONLY AS THICK As A HIMAN HAIF-it is a scientifically proportioned aluminum alloy. blended from Manganese, Sllicon, Iron, Copper. Zinc, Magnesfum, Nickel and Nluminum. A most pleasant surprise awaits you on your first audition thereof-takes but a moment to install.
No. 9094

## Utah Loud $\underset{\text { POSTPAID }}{9.03}$

Admirably suitable for attach. ment to either a loud speaker, or phonograph tone arm. It is capable of tremendous volume, yet clarity dominates the reception. Will respond to the lower and higher reatuencies better than any other loud speaker unit. Eniploys a corrugated metal diaphragin. larger than others. Balanced armature type. Extremely powerful electro

## Speaker Unit

 magnet insures extreme sensitlvity on distance reception. lilark crystallized cast-phone cord furnished. Diameter 3 Inches.
No. 9793 Without stand
$\$ 8.48$
No. 9792 With stand, as tilusirated
$\$ 9.03$

## $\$ 7.03$ POSTPAID

Baldwin Type "H" Unit

Baldwin's reputation for loud speaker units and other reproducing devices w a s founded on merit alonc. The type "112" above illustrated represents the culmination of many years experience.
 The approved balanced armature is emmored, actuating a specially laminated aluminum dlaphragin, whieh witl counteract any tendency to blasting, and render this unit sensitive to weak impulses. High quallty workmanshipand high quality materials. Polishod aluminum case. Durable phone cord included. Best Elue.

No. 9781 .
$\$ 7.03$

# Dulce-Tone Radio Phonograph Attaihment $\$ 8.95$ <br> POSTPAID 



The objection to attaching phonograph loud speaker unlts to the tone arm is the fact that the vibrating box holding the needle must be removed for Radio reception, and Fice versa, should you uish to use th. phonograph. But now it is possible to have immedide access to elther form of entertaimment, for, in usling the Dulce-Tone phonograph attachment. the needie of rour vibrator box is simply rested in the special recess provided on this instrument, in the manner shown. Th. vibrating reed in the unit is set in motion by th, electro magnetic response of same to the audio output of your Radio recelver, and these vibrations, imparted to the phonograph mica diaphragm. produce the most ifellow and sonorous reception possible, due to the acousifically perfect tone chamber employed within. Adjustable type of unit. l'honograph may be in any room af the house, apart from the Radio, connected therewith by an extension cord of spproprlate length. Crystallized metal casephone cord included.
No. 9893
$\$ 8.95$

## N \& K New Laud Speaker



I'he Aconstic principle is "All directlonal." Nrnds the sound out equally strong on ewery side.
TONE is exceptionally cloat, batural. peasling, with exerlent rolume.
MATERIAL lised is a scientitle material that countoracts false sombl vibritions, kepilig the ton pure. clear and natural.
FINISH ishlark "ermekle" effort with shmula. heantiful thasal decondiren. ADJUSTABLE UNIT an entlrely novel desien of $X$ A $K$ da;utable bl-polar unit. Jeirat remmancit magnets, wibh eolls and pole bieces moxinted on platform eitrient by ytuncer with ower-size bearing. insure berfect alfonment in every position. 21/1-inch diaphragms SHAPE is original, sumges:ing a scharmecumered jar with four fect. resting on at scitare, beroled hase. SIZE ls: helght. 9 lnches; base. $61 / 2$ inches square. Very cotumact. No. 938:
Model B
$\$ 8.25$

## "Rasco" Senicr

 Special Loud Speaker Unit 1027
POSTPAID

Loud speaker unit combines mellmarness of tone with manple volume. It has beet srientifically ronstrublell to modnee true tome winout rattly in ir distortion. Tone may be vared bs adjustine serow. comes with hushing for connection to phonowranh with rubber connertor. It is spectally buite of cast aluminum ami brass. Momy \$1.5.0f unils canmot fornmare with it for salume or clarits:
No. 9381
$\$ 8.97$

## Other Popular Loud

## Speaker Units

No. 9408 Amplion A-R 67
$\$ 17.10$
No, 0.409 Munie Manter A-K 35 $=7.75$
No. 9407 Tower fetenti-
fic
"Rasco" Junior Special Loud Speaker
Cannot be equalled
In tone qualit
or volume many other hish Erade speakers $\left.\cdot 5 \&^{\prime} 1\right)$ at tuice our buice. It is the samie as the "Rasco" Senfor sipectal exetry not quitu so hixt in rize. Attractive Is finishew in black stipple. Jiell diam. 9 in. Iforn helrth. 19 In. Noted for great volume. Corp plete with 5 -foot cord.
No. 1351

## \$5.95

## Cone Loud Speaker

## $\$ 12.50$

 POSTPAIOThis loud smeaker Is mater of parchment or wood fibre on the same prin. ciple as the Wrotern Electric loth suraker. Is adjustabte. Capable of tereat volume. This same quat-
 ity usually sells up to \$30.00 No. 9876
$\$ 13.50$

## Baldwin Phono-

 graph Unit
clreular magnet with the armature balinered in the center. Its lwithes and volume of tone amil its responsi to all fremuencles of high motes and low notes make it a unit to be great If appretated and desired. The pricu is much lower that formerls. The unit comes complete with cord.
No. 038:
.$\$ 4.19$

## "Rasco" Nonpareil Loud Speaker Unit

## $\$ 4.99$

 POSTPAIDWe give it to
you as a rositire
 ract thet this merit 10 those used in many lould sjeakers setailing up to $\$ 25.00$ or more. The tone quality is rich and mellow and will please sou. You atc always safe in chomsing any of our offers as wery artirle is good walue. Non. $93: 3$

## Melotone Loud

 Speaker
## \$13.80

## POSTPAID

Every receiver of two or more tubes. and some 1 -qube sets. hould be equipped with a lond sneaker, so rll the loltas mas liest and enjoy the program. We thate serlected the Melotone
 is representing more walue per dollar of price than any other speaker we know of. It is called "The I'eak of 'erfection" in tone, clarity and volume. It will give you jerfect sesvice In our "Interflev" set ot nude. The height is 21 inches, and the dianmeter of lifll is le incles. lias a beatifit peblule fintsh. Fully guarantued by manufactuter ambl us. No. 9131
.818 .80

## Adjustable

 Table Talkerlou will be surprised at the beautifut quality and rol. ume eomitur from this celebraten! 10 w priced tou: speaker compar: ed with those al higher prices. $2 \boldsymbol{z}$ inches bithe. liulty guaranted by manufucturer and ourselves. No. g?si3 Kef. Mod.


Other Popular Loud Speakers
No. 940\% Amplion $A-R$ 10
No. $\{403$ Anplion $A=1$

35.95

No. ! 10 bis
Vi, 1 ta1 Triver
No. Ifth Tower scicntific:
No. 0414 Tower Meistersinger
15.00

Baldwin Type "C" Loud Speaker Unit


Fvery one knowing anything of radio knows of the high quality of every Baldwin product, especially the most bopular of loud speaker utnits. The diaphragm is unique. boine corrngated, problucing suberlar effects in tone and volume. Sure to sntlsfy ywu.
No. 9381
$\$ 4.85$

## "RASCO" SHIPS WITHIN 24 HOURS

## Spartan Con. Loud Spzaker $\$ 11.77$

 POSTPAIDFixemptionalls pleasing in tonc, and corering the cntire musical scalo with excellent volume, thils popular priced cone speaker is heartily recommended for replacement of your present lype of horn speaker, or, as one of the accessories of any of our kits and assembled receivers. Tho bass notes, lacking in a horn speaker. are reproduced herein with surprising fidelity-and at
 all times, perfect clarity dominates the reproduction. It is unusually pleasing in appearance-the artistically formed frame facting as a sounding board, the niahogany and gold l'ITH WOOD CONE PARCHMENT and inahogany rubbed base give this speaker its distinctive appearance. Note that the actual vibrating surface of the cone is WOOD, only found on speakers selling for $\$ 35.00$. And the semi-halanced armature dise unit is a triuniph of present day improsements in reproducing units. Dimensions: Ileight $15 \frac{1}{2}$ inches, diatncter $13 \%$ inches.

No. 9998
$\$ 11.77$

## Cabinet Loud Speaker $\$ 8.57$

Free fron all netallin blasting and possessed of it sonorous, natural reproduction, this speaker is proving a boon to all its satisfled users. There is no metal used in its construction (except the unit) - the throat, chamber and cabinet heing made of specially selected Douglas Fir wood, turd supplied in the natural finish-you call stain
 and varnish it in any color-full direc-ions furnished. The square horn opening is covered with celared silk. overall dimensions are $12 \frac{1 / 2}{}$ inches long. $6^{3 / 4}$ Inches tide and $13 \frac{1 / 2}{}$ inchcs high. Very good guality lotid speaker unlt included, ready attached. shoped direct from factory in Illlnois tia cxpress collest.

## \$8.57

## No. 9813

##  <br> Utah Book Type Cone Speaker

## $\$ 17.40$

This most unigue speaker has rapidly come to the fore, and is now being solit in the same quantities as the conventional "cone" type of speak-er-for it combines not only a most attraetive appearance, but also, delivers a quality of recention second to no ofher spealier. Resembles a book, lying on a table, with its pages spreat open, slightly arched -and upon these "pages" there are most attractive colored etahings depieting wood-land scenes. Tho actuating unit is concealed beneath these "pages"-there is ne Fisible evidence of its being anything else lBUT A BOOK Can be set on a table, or stoon up on a mantelpiece. etc. Measures $17 \frac{1 / 2}{}$ ineles wife by $1: 1 / 2$ inches high-about two inches thick at the videst polnt. It will prove a revelation to you.
No. 9987.


## Laminated Wood Loud Speaker

## $\$ 11.95$

Without a doubt. this instrument represents the wery finest loud speaker that can be purchased. Irrespective of extravagant clatus made for other horn types selling for even double the price of ours. After much extensive research, conducted bs acoustical engineer: and samous directors of muste it was found that the Laminated Wiond used in the thell of thess spsaliers was conducire to the quest of every inanufacturer of 10 ou d speakers. namely: TUNF. PLT's FoLLDML: Hut they did not stop here: Not yet satisfied, they rulled the entire industry (u) select the loud speaker nnit that would best adapt itseif to the ideals and high mirasure of standards set for this speaker. There was only one choice: THE HALDW'IN CONCERT TYPF INIT! 1s it any wonder then that this speaker enjoys the reputation it has earned, solely on its morits ? Tho size of the bell is 12 inches, the height of the bell and throat is 15 inches, and the total overall holght is 21 inches. The base is made of cast metal appropriately patferned and finished. The throat is cast aluminumthe remgnizod matcrisi for this purpose. Shipped direet from factory in Wisconsin, express collect. Shipplau welght 10 pounds.
No. 9995.
\$11.95

## Saal Eccentric Cone Speaker $\$ 22.78$ POSTPAID

The eccentric construction of the cone diaphragm creates a natural reproduction of all tones, due to the highor notes vibrating to their beat aqvantage on the short radil of the parchment note that the aper is not sot in tho exact center of the cone, as is the usual procedure) and conversely, the lower base notes receive full justlee on the longer sides of the parchment. The logic of this system of cone construction can be more readily understood by reminding you of the length of harn or piano strings, with their shortest ones reserved for the highest notes and their longest strings for the liass notes. Does not produce any objectionable drum or barrel effect. Efflelent with or without a power amplifier-90 volts is even sufficient. Stands 22 inches high. Dlameter of cone is 20 inches. Beautifully decorted scrollwork medallion, and outside border in gold.
No. 9993.
$\$ 22.78$
Gentlemen
I am ordering agaln from vou because I am plaased with your bate and rapid dellveries.

LE ROY WILLIAMS.
P. O. Box 525

Mountain View, Calit.

## Windsor Cone Loud Speaker



As a Pedestal Type

It has been eonclusively proven that a cone sarchment of generous proportions and of correct pitch, vibrated by an efficlently designed cone speaker unit. Will produce both high and low frequencies with a fidelity of performance that would command its immediate purchase by lts listeners. The Windsor Cones not only approach the perfection of design and tonal qualities just referred to. but, also, offer you an instrument of such pleasing and tastefully decorated sppearance. that you will always feel proud to invitc your friends to "listen in." Note that It can be cither set on the floor, or even on a table, or mantel plece, by ineans of the hinging perlestal. or it can be hung on the wall hy the handle provided, the pedestal swinging in against the back of the speaker. The parchment is $2 \underline{0}$ inches in diameter, and its edge is very neatly bound in braid. The unit is readily adjusted in a conrenient manner, to allow you to use this speaker with 111 volts, or wen all the was up to 500 volts, as delivered by Power l'ack amplitiers. The wooden back bas the effect of a stunding board, further enhancing the beautiful tonal qualities of this cone Speaker. \$35.00 VALUE. Khipped direct from factory in Chicago, express collect.
No. 9989
\$13.45

## Spartan Cabinet Cone Speaker



## 42222 <br> POSTPAID

The best features of the most expensive rone speakers are incorporated in this in-strument-and for this reason, a most beautiful and well proportioned matched walnut eabinct is used to further reffect the exceptional quality of ithis ibeaker. The rlTII WOOD parehment. artuated by an exceptionally sensitive and powerful semi-balanced armature cone speaker unlt, whll respond to the low booming notes of the great organ or bass drums as well as to those notes high in the treble scale of the violin, with surprising fidelity and volume. In fact, your first sudition of this instrument will thrill you, for its reality truly brings the broadeasting studios into your own home. Thercfore. the reproduction possible with this speaker will win the plaudits of any musical critic-and the appearance thereot will suit the fancy of the most fastidious tastes. Overall dimensions are 14 inches high, 16 inches wide and 6 inches deep.

No. 9003. .
\$22.22

## Windsor Console and Built-in Cone Speaker



FRONT VIEW BROBES BACK VIEW
This ensemble of cone type loud speaker built into a console to house the " $A$ " and "E" batteries, ete. and upon which your present or any table type ladio recelver rests, as the illustration suggests, is so logical a combination, both from the electrical and mechanical angle, that it is a wonder it was mot thought of lung before this time, You will note that the cone speaker itself does not occubs any space within the console, allowing the cotire area within for all your batteries and other accessories. The sperker itself is the ilientical one described under our No. 9089, and is $2: 2$ fnehes in diameter. The board upon which it is attarhed, forms not only a substantial support thereof, but also aets as an effective sounding board, which can be removed, allowing immediate and comfortable access to the batteries. This console is of generons proportions, to accommodate any length receiver. The back is removed, so as to provide the proper ventitation of the batteries. Overall dimensions are 30 inches long by 17 inches wide, and stands 25 inches high fom the fioor. The battery shelf measures 26 inches long by 11 inches wide. shipped from Chiogzo, express collent. State whether you wish us in ship you the Mahogany or Wialnut finished console.
$\$ 28.85$

## Windsor Table Cone Speaker <br> \$18.85

A very original and extremely useful piece of furniture-cronibining the choice of many uses. Here we offer you the celebrated Windsor cone speaker (descrlbed in detall under our No. 9989) in a 16 -Inch diameter size, suspended to the under side of the top of this tastefully finished talle. with its conleal point facing the floor. As the top only tneasures 20 Inches long by 17 inches wide, none but any recelver whose
 panel length does not exceed 18 inches may be rested thereon. Then again, Mother may rather decide to simply throw a scarf or center piece over the top, and place thereon her favorlte photograph or statuette, vase, etc.; just lmaginc serving tea to your guests over this table, while the speaker is in operation with appropriate tea music, now a regular feature of all broadcasting stations, producing an impression upon them they will never forget. Stands $26 \%$ inches from the fioor. Shipped Express collect from Chicago. Kindly state If you desire Mahogany or Walnut finish.

No. 9044.
\$18.85

## Windsor Combination Cone Speaker-Loud Speaker Console

## $\$ 42.45$

Cone speakers are particularly well adapted for reproducing the low bass notes because of the large vibrating surface the cone parch ment provides-the analogy of this can be best expressed by calling your attention to the length of the strings in a harp or piano-the longer they are, the lower the note is produced, But,
 speaker of the conventional horn, or wooden chamber type (as in a Victrola) can eproduce the higher frequencies best. If you use either type of loud speaker to the exclusinn of the other, you will lose either side of the tone register. It logically follows that if you use IHOTI OF TIIEM AT THE NAME TIME, full justice will be given to the full musical scale-the cone sbcaker will reprodure the bass notes in its inimitable characteristic manner, whercas the loud speaker will do justice to the higher freduenries, with it rendltion that places it on a parallel of reproduction to an old violin, in the hamds of an acromplished virtuiso. The conrlusive fest that will thrill you is the first thme you listen in to a 100 -picre symphonic orchestra, with both of these speakers connected to your receiver. With a simple arrangement of a single pole double throw switch, you can ronnect either type of speaker to your output, and with the switch arm disengaged from either contart, both speakers play at the same time, their leads being in series with each other. The cone parchment prosided in this console is 18 inches in riameter but otherwise the same speaker as deseribed under No. 9089, and the loud speaker is the same type as described under Ind Speaker console No. 0992 . There is ample shelf spare to set your " $A$ " and "B" batteries, charger eliminators, etc., and the back of the console is left open, to providc for ventilation to batteries, eliminators, ete,-and to make access to same a very simple matter, The top is 30 inches long, 17 inches wide and stands 29 inclies high. The battery shelf is 26 inches by 11 inches. Finished in either Mahogany or Walnut. from factory in Chimgo, express rollect.
$\$ 42.45$

## Sonochorde Cone Speaker

 $\$ 22.85$ The secret of sonochorde superiority lies in its sound reproducing mechanism -a unit that is scientifically and basically correct. There are sixteen technical features of design exclusively Sonochorde, such as the use of four superpowered magnets capable of lifting more than ten pounds. These special magnets account for the exceptional volume. They are both scientif- ically balanced and angulariy spaced, with a minimum air gap, thus producing a rich, deep, sonorous tone, wholly new and entirely ree from distortion.
Add to the mechanical superiority of this Cone masterplece. its unique and truly heautiful design! Octagonal in outline, the Cone itself is covered with deep winecolored silk, Its folds extending radially from the silk button in the center. The supporting frame is practically unbreakable. It is handsomely finished in rich semigloss mahogany, with base to match. The base rests upon a heary feit pad, making it impossible to mar the finest surfaces. Thoroughgoing workmanship is to be noted in every detail, Height 18 inches. Width 16 inches.
No. 9098.
\$22.85

## Windsor Enclosed Loud Speaker Console $\$ 35.85$ <br> If your Radio re

 celver is one that you are very proud of, because of lts performance, then the right place for it is in the parlor of your frome; but, this you cannot do for its presence therein would clash with the general decorative effects because of the detached batteries, which would lie on the floor, and the loud spearer-which would have to bee set elsewhere. And battery connection wires would gire your parlor a "work shop" effect. The console above illustrated not oniy enables you to store within its caparious quarters all your latteries, charger and even "A" and "ls" eliminators, but it also has built in in acoustically perfect loud speaker. In addition to these features, bear in mind that it is a most beautiful piece of furniture-it will grace the decorative effect of any room. The specially shaped space under the loud speaker enables yoar knees to fit within, allowing you to tune in on your Radio for hours at a time, in absolute confort. The Console measuies 28 inches long. is inclies wide and stands 29 inches high. thus it will accommodste any receiver; should your ibadio set measure much lust than the total length protided, a very pleasing effect can be produced by setting a lamp. or a vase, or photograph on elther end of it. The reproduction prodiced in the sperially moulded loud speaker, and unit provided, will thrill sou with its marrellous fidelty. clarits and volunte. The speaker is so designed that it does not occuns any undue spare within the console. thus affording you an abundance of roon for your batteries. Can be furnished in either Mahogans or Wainut finish. shipped direct from factory in Chicago or Los Angeles, rharges collect.
No. 9992 Including Loud Speaker o.
Unit . . . . . . . . . . . . . . . . . . . . . .

## Graydeon Electrical Phonograph Reproducer

## $\$ 17.50$ POSTPAID

With the advent of the latest type phonographs which reprodure ail notes with an "uncanny" reality, either through newly
 designed tone cham-
bers and rlbrating boxes, or through electrical plos-up and tube amplification with reproduction by means of a cone speaker, thousands of people throughout the world are foolishly discarding their present phonographs for the new improved type. We again repeat-foolishlyfor by simply replasing the present tone box the mica disc which holds the needle-simply slips of goose neck arrangement) with the one illustrated on the left and connerting the socket on the right IMRWCTLY TO YOTI 1RFSENT RADIO RFCEIVER, TNING THE SASE TIBES ANL BATTERIES, the record is reproduced with that same "uncanny" reality in your loud speaker, which we presume is of the cone type. The instrument in the center of the illustration is a sperial modulator, controlling the volume, as well as the rlarity of the rereproduced music. Complete installation takes but a few minutes-and takes only a moment to allow you the use of your Radio, or phonograph at will! Detailed in:tructions accompany each Graydeon-a Ilavid Grimes, Ime. product. Imagine! For only $\$ 17.50$ you may enjuy all the luzuries of quality reproduction only possibie on elertric phonographs, the cheapest price for one on the open market being about $\$ 250.00$.
No. 9054 Complete ${ }^{\text {as }}$ Illustrated 4


## Octacone Cone Loud Speaker



## $\$ 18.98$ POSTPAID

Mechanleally, a cone poaker ls always subject to damage due (1) its nature of construction. In the Octacone, howerer. every beneflt of the best Cone Speakers is incorporated within. together with is most unlque metal shell housing it e complete speaker. You can deliberately drop this cone speaker on the floor with resulting damage. The metal diaphragin case measures $1: 3, / 4$ inches high. 43 inches deep and 11 inches wicle, and is heautifully tinished in golden buonze, blending artistically with any color silleute in sour home. No. 9670.
$\$ 18.98$


## Zeco Cone Loud Speaker

## \$16.27 <br> POSTPAID

Athough this is a free edge rone, and full floating, a very ingentous metal "drtm'" proterta it from damage. a valuable feature. The full musical register is moduced on this cone speaker with remarkable fidelity-and volume. The artuating unit is sensitive to voltages as low as 90 applied to the audio stages, or. will withstand the tremendous volume delivered by prower tube amultication. The rear of the metill drum is meshed. allowproperly distribute themselites. The metal is attractively finished it dark tan. The cone parchment is tastefully decorated. The base is covered with felt, and can thus he set on' the flnest furniture. The overall dimensions are 15 inches high, 7 inches long and $31 / 2$ inches wide. The diamater of the drum is 11 Inches. Splendid ralue. 5 -foot length of phone cord included.
No. 9099
\$16.27


Actue acoustical engineers can well be proud of their two latest contributions to the Radio art-their cone speakers above lllustrated. Thoy possess a fower of volume second to none, yot, with no sacrifice in quality of reproduction. The K-1 is a double FREE ELGE cone speaker-each rone is 14 inches in diamoter. Having an adjustuble unit, this speaker can be immediately adopted for utmost satisfaction if your "B" battery supply is only. 10 volts or even 500 volts. as delivered by "power pack" systems. The metal drum casing is finished in tan, and will harmonize with the decoratice effects of any rooth. The K -3 emploss a single free edge cone of 11 inches in diameter, and is rery similar to the K-1 In reneral desict and princlple. Can be adapted to hang on the wall with a tassel. by remosing the base. The metal case and haso are finlshed in green bronze, making this product unusualiy attractive. Capablo of enormons wolumesand retalns the same $100 \%$ perfect clarits as the K-1.
No. 9985 (K-3)
$\$ 16.95$
No. 9986
(K-1)
$\$ 22.45$

## Crosley Super-Musicone Speaker



## \$14.75 <br> POSTPAIO



The Crosley organization have made thermelves world THFO fhrough their efforts to give to the Radio fan THE MREATEST POSSIBLE VALTE FOR HIS MONEY. And, in fact. your perusal of this cataloume wit also suggest to gou that this is of thit siotaloume Too. The Crosley Musicone exemplifies their salues for it is truly ernat in performance to any cone speatior selling for much more mones selling for much more mones. A beautifully decorated fon both sides) 10 -ittch diameter parchment is used. full the high standards set by the Crosley englneers-AND ACHIFWFI ISY THFM. Orerall dimensions are 18 inclies hy 16 inches hy $53 / 4$ inches. The outer edge of this speaker is protected by a tastefully finished metul ring. Gat be detached from the cast base, and hung ution the wall as illustrated abose.
No. 9999. Crosley Cone Speaker
(No Tassel Cord).............. \$14. 75

## Single Phonodapter

Your phonosraph huw a loud speaker. The 1hono. lupter is mude to tht any phone unit. The pure soft rubher siretebes ower the phone. IBrass tuhe furn. ished, which is ingerted as shown. F'its all ["ol. umbla whonorrabh: remore the brans tube and it fits Vletor and siumota machines. In an eme:gency you can slib a horn made from bristol or cither stlff paber Into the brass at pood loud spenkin femborarily
No. 1310

## Benjamin Adjustable

 Metal BracketsAn improsement uphon our No. 9501 self-supporting brackets inastumeth as the section which fits aginlnt the front parnel is adjust able at will ts ang ingle tue tor I eser fibotlng fealure. Espe. clalls sultable for slop:
ing front bunels when it ls desiratide to mount the
 sockets, Iransformeri, etc., on a level plane. Made of rery fisld alaminum, and flnished la dull nickel. Mounting sercws furnished for panel.
No. 9791

\$1.12


Supports the front pantel. If which It is scresed and bolted, at the four corners thereof. preventing sagglng of panels in thme, due to the weight of the condensers. ete. on them. They ate die-cast of almonthum. Wa. slgred to be used with F-Inch hah panels and $\tilde{\sigma}$-incl dees rabinets. No. 9007
Pair) (Per $\ldots \ldots .$.

## Fonekushions


 fensive sponge rub. lant of great clanticity. They are light and cat be slipped on ans palt of whone's. Hiahly sanliary because thes carr on any pait of bhones. washed with soap thd watior.
No. 5050 Pair
\$0.35
5-Tube Sub-Panel
$\$ 2.60$
POSTPAID
 frequericy get $17 \times 7 \times 3 / 16$ inch black hard rubbur. 5 nickel plated socket shells secured to base with egelets. Contact springs of nekeled phosphor bronze, with turned tipa for suldering.

Nio. $\mathbf{9 4 9 0}$

## Pilot Snap Terminal Connecting Strip


$\$ 0.46$
This Jtem fills a botw felt want where aulek and positive connertions are neressary. Will take all standard phone tips, or the, special termital, Illustrated under No. 2900 Separable Com "rin, the wire heing slipped within same and quickly thontened Inathatfon is haril rubber. Metal parts handsomels nockel plated, with the chanarters en. eraved its white enamel.
No. 9898
$\$ 0.46$
Gentlemen
I reacivad tho order you sent mo in good condition. I certainly do appreciate your promptress in sonding ast orders, I have dealt with other large firms. but none of them give as much matisfaction as you do

LEONARD MAYERS.
2809 Hollybeach Ave.. WIUwood. N. 1.

## Radio Cabinets

W'e offer a variety of sizes, patterns, finlshes and qualItles to suit every customer. You will be well mieased with any cabinet you get from us. Shipped direct from factory in Wisconsin express coltect.
Style A


Imitation Mahogany-Marle substantially and of neat de. sign of goot hard wood with firme hand rubbec finish in Imitation of mahogans. lianch one is fitted w th hinged top. The front is fulls rablested io tit the parel.

## Style B



Imitation Walnut and Genuine Black Wa:nut-Fine looking, sturdily built and elegantly fintshed, and will greaty improve the appearance of the receiving set. It is a "dandy" is the way many users express themselves. The black walnut Master rabinets have contmonus plano hinges and lid holders. The imitation walnut have reg. ular hinges. three to each califinet supslled witi lid holders

## Siyle C



Genuine Black Walnut-For distinative appearance thls siyle is not easily excelled. It is most beamiful and therefore well adapted for homes of retinement. Has continuous biam hinges and lld holders. space back of bakclite panel is $8^{\prime \prime}$ or $10^{\prime \prime}$. Tojs and ends of selected figured walnut special built fire-ply stock. Cannot warp. Base built upon heary molding. Pillars on front are made of solld black walnit accurately fitted.

> Style D


This style has ample space in end compartments for Is and C batteries. The space under top is 4$\}$ :" wide 10" deep and 81/2" high. They also can be used with sets having $7 \%$ mounting, the three remainin. inches
used for dry cell space if a nortabie set is wanted Has contltuous pianor homqes and lid holders. Space hack of panel is $10^{\prime \prime}$. Top and muls are of tigured walnut shecial built five-illy stuck. tanmot wart, lase built. unon massive molding, lillars on front made of solfd black walmut aceuritely fitted.

| Panel Size | $\|$Style <br> A <br> Imi- <br> tation <br> Mah. <br> $7{ }^{\prime \prime}$ <br> Deep | Styte B <br> Imitation <br> Walnut <br> Genuine <br> Beep <br> Black <br> W" <br> Walnut <br> Deep |  |  |  | $\begin{gathered} \text { Style C } \\ \text { Genuine } \\ \text { Black } \\ \text { Walnut } \\ 8^{\prime \prime} 10^{\prime \prime} \\ \text { Deep } \end{gathered}$ |  | $\left\lvert\, \begin{gathered} \text { Style 0 } \\ \text { Genuine } \\ \text { Black } \\ \text { Walnut } \\ \text { 10" } \\ \text { Deep } \end{gathered}\right.$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $7^{\prime \prime \prime} \times 10^{\prime \prime}$ | 2.601 |  |  |  |  |  |  |  |
| $7^{\prime \prime} \times 12^{\prime \prime}$ | 3.00 |  |  |  |  |  |  |  |
| $7^{\circ} \times 14^{\prime \prime}$ | 3.35 |  |  |  |  |  |  |  |
| $7^{\prime \prime} \times 18^{\prime \prime}$ | 3.60 | 4.69 | 6.40 | 6.56 | 8.80 | 9.36 | 11.60 | 18.88 |
| $7^{\prime \prime} \times 21$ "' | 3.90 | 5.04 | 6.80 | 7.28 | 9.40 | 10.08 | 12.16 | 18.88 |
| 7"x24" | 4.40 | 5.69 | 7.20 | 8.05 | 10.05 | 10.80 | 12.80 | 20.08 |
| $7^{\prime \prime} \times 26^{\prime \prime}$ |  | 16.16 | 7.84 | 8.48 | 10.68 | 11.28 | 13.48 | 20.08 |
| $7^{\prime \prime} \times 28^{\prime \prime} \times 10$ |  | 7.09 | 8.64 | 8.90 | 11.48 | 11.76 | 14.20 | 21.28 |
| $\begin{aligned} & 7^{\prime \prime} \times 30^{\prime \prime} \\ & 8^{\prime \prime} \times 366^{\prime \prime} \end{aligned}$ |  | 7.20 | 8.96 | 9.44 | 12.24 | 12.24 | 15.04 | 21.28 |
| $8^{\prime \prime} \times 36 "$ $8 " \times 40^{\prime \prime}$ |  |  | 9.92 <br> 10.32 |  | 13.44 |  | 16.24 |  |

## Radio Dilectryte Panels <br> \$0.65 <br> POSTPAIO <br> 

These panels are meeting with approval because they are food and cheap, and which. moremer. flt our wood cab. inets listed elsewbere. These bamels are accurately cut and irce the hest on the market at mavwhere near our price. The flnish is a high pulish on both sides. Can be drilled and lapped where neressaty, by tomis which are ordinarily used by radio set builders and amatears. Wibectrste kidio fonkels are hixhly retemmended berause thes hate the following properties: (1) high delectrle strength: ( 2 ) high sufface resistivity; ( 3 ) high rolume resistivity: (t) gramed surfice: (f) nmple tensile trencth: (6) splendid 100ling properties; (7) jow cost.

No. $71007^{\prime \prime} \times 10^{\prime \prime}$
No. $71207^{\prime \prime} \times 12^{\prime \prime}$
$\$ 0.65$
No. $71407^{\prime \prime} \times 14^{\prime \prime}$ $\$ 0.79$

No. $71807^{\prime \prime} \times 18^{\prime \prime}$
$\$ 0.89$
No. $72107^{\prime \prime} \times 21^{\prime \prime}$
$\$ 1.15$
No. $72407^{\prime \prime} \times 24^{\prime \prime}$
$\$ 1.31$
No. $97867^{\prime \prime} \times 26^{\prime \prime}$. . . . . . . . . . . . . . . . . . . . . . . . 31.46
No. $97877^{\prime \prime} \times 30^{\prime \prime}$
$\$ 1.69$
$\$ 1.89$

## Bakelite Panels

## IN GLGASY BL, ICK FINISII $1 / 8$-INCII TIICK



## Standard Drilled-Engraved Panels



## \$3.57 <br> POSTPAID

The problem that alwass ronfronts the badio set builher. whelhor he is assembling his first receiver or the wrofensfonal rustom set constructor, is the drilling of the fromt panel. Inti, at its best, it is always as drab. rolorless looking affair, inviting no praiscs. JBut now, you ran luild a recelvor utiliaing aty standard riretit which will bare all the aforearances of a pommereiatly designed set, for we ran supply yoll wifh these pancls, as deserbloed by the originators of the varions circuits, dritled to their sperilicallons. ANL JI.ANDNOMELY
 partlal list of the standard panels we (an suphly is as follows: Type Tubes Size Each
 No. 9080 13remer Tully ('untler-

No. 908 Itammariund IRobuerts
No. 9082 Browning brake
No. 9083 13rowning brake
$57 \times 24$ •• 4.65
No. 9084 preshman Tunced IR.l'. $57 \times 1$ \% $\quad \$ 3.69$
No. 9085 Madison Moore Suluertiet. 8 7x:8 . 56.17
No. 9086 Victoreen superbet. \& $7 \times x^{4} \quad . \quad \$ 4.97$
No. 9087 silver Marshall 6 65:4 6 * $\$ 4.79$

## Note

We can supply stambard drilled and engraved manel for any circult not listed abowe, such as: Karas Eamamathe, Daven Jass Vote, Samsom, Aerodyme, Hammariund
 hassador. 3 ('irevit 3 -tuhe recelvers. Controbladyne, Isofarad. Nine in line super Hel. Fenway super llet. If-C Coekaday. Dantield buoxshe. Rasmoty 5 -tulse
 Raseo Tromatsine, ete". l'urther information and prices cheerfuly furnished.


## $\$ 2.03$

The knock down form of cabinct ont only offers you a $n$ appreriable saving in cost. but also enables you to finish it
In any manner you maty please, to befter harmonize wth your refulrements. The wond is heattifully samded-all the netal hardware is mirkel plated brass. All sertions. are machine rut to size and planed, therefore insurimg a perfert assembly. Borner; of mbinet rest onl ruhber taek bumpers. Cian be assembled in it few minutes. Shipped express eollect direct from fautory in Iusa
No. 9803 For 7 by 14 -inch pancl. 7 inches deeb. . $\$ 2.03$ No. 9805 For 7 by 18 -ineh benel, 7 incles dean. $\$ 2.24$ No. 9806 For 7 ly et-ineh pancl. 7 inches duer. . $\$ 2.73$ No. 9807 l'or 7 by \#f-inth panke. 7 inches derot.. $\$ 3.17$

## Carter Short Jack $\$ 0.21$



[^5]

Costrom huilt ladion sets ran be matc to harmonize with any homse surrommdings by using rate of our beautifully derurated Bakelite panels. thisised in a natural wood grain effect of Malogeny, American Walnut and Circassian WaInut. Or, Jou can select a mancl to mateh your cunsule or waninet. Only the very best grade of Bakelite insulation is used in these pancls. Kindly spectfy wheh grain tinish gou are ordering.

1/8 Inch Thick



## Notice

IVe ran also supnly the athove grained Iakelite Panels in special sizes fut to your measurements-accuracy quaranteed. Kindy state which grain effect you are ordering.

1/4 inch thick . . . . . . . . . . . . . . . . . . $\$ 0.03$ a square inch $3 / 14$
$1 / 4$ ". 0.04
0.05 0.05
(For example, you uhay wish a sperial pancl to fit a tietrola console, or it desk, Irawer, ete. if it measures 17 inches by $1: 3$ inches. multiply the length by the width, and that whll give you the somare inches. Therefore, 221 suluare inthes at $\$ 0.0$ :? a square inch would cost $\$ 16.63 .1$

## Baseboards



Made nio non-warplng material. 帠 inch thtek,

| No. 9549 | 61/2I6 | 23 |
| :---: | :---: | :---: |
| No. 9550 | 61/2x9 | 6 |
| No. 9551 | $61 / 2 \times 11$. | 0.26 |
| No. 9552 | $61 / 2 \times 13$ | 0.28 |
| No. 9553 | $61 / 2 \times 17$. | 0.29 |
| No. 9554 | $61 / 2 \times 20$ | 0.33 |
| No. 9555 | $61 / 2 \times 23$ | 0.42 |
| No, 9556 | $61 / 2 \times 25$ | 0.46 |
| No. 9557 | 61/2x27 | 0.48 |
| No. 9558 | 61/2x29 | 0.54 |
| No. 9559 | $9 \times 17$ |  |
| No. 9561 | $9 \times 20$ | 0.67 |
| No. 9562 | $9 \times 23$. | 0.78 |
| No. 9563 | $9 \times 25$ | 0.85 |
| No. 9564 | $9 \times 29$ | 3 |



Oflerzing severai reinements of design wht sivurative etfect, besides several raluable mechanical indiantages arpeal not only to thexello Console, this nowlel will ampeal not only to the Ratio fan of more fistidiolas tistes, but is especially recommended for Hadon pianels that are wider or longer than 3 frrhes by 30 inches provided in our No. 9043 . In this console, it is posalble to admpt the space to any size panel not evecexing $10 \frac{1}{2}$ lnches wide by 32 inches long, in adjustable frabel lyefing supplied to provide for any smaller alze. A bery unifue and valuable feature is the clever sliting leaf upon uhich the storage battery (or eliminator; is restect, enabling you to slide it forward, for rofilling, tusing. ecc. The
dimentions of this masterpiece Hitin Consote are 37
inches wide, 16 inches deep and 45 inches big Inches wide, 16 inches deep and 15 inches bigh. Nre Made of selected American Walnut, with flve-ply, wilmut veneer top and panel doors of matched lutt Walnut, finhshed over
all in a two-tone walnut PlANO FIN1sll. Shapred from dil in a two-tone dyalnut PlaNO FINISll. Shinred from our factory in Illmots, express collect, slibpinit weight No. 9039 (No Radio Receiver incloded)
$\$ 66.85$



Constructed by Master Cabinet Makers, of 5 -ply Walnut wellere tor. and Walnut end pan*ls with matebed butt Walnott donis- lit is truly in kreping with the best appointed bones. The panel size is asjustable up to 9 lnches by 30 iniher-ajoy of our Radio reswivers, kita or chasses will fit within. The self-enclosed fond speakuer consists of a rone clamher and metal throat truly capable of unexeellad perfretion of elarity, and volume. The top hinges to prorlde more convenient access to lle recelver. The hattery compartmens opening froin the front with two cloors, will hold
 Overall dtmeneions are 35 thehes wide. iti inehes deen and 45 inches high. Two-tne Wainut l'lANO FONSI of unustal heauty. Shipping weight 150 lbs. Shipped express rellect from our factory in lilimols.
No. 9043 (No Radio Receiver
$\$ 55.85$


Closen View


## $\$ 13.38$ POSTPAID

Tho advantages ai Limp receution ar" verywell known and conwded. The Tun-I-Loop, on the bher hand. has Itwided advantases over any wher tybe of Laml. Hy adjusting the over-slze hurb, this lonp an be tuned to the peak of the wive length range, assuring maximum pickupability on distant stations. Incldentally this tuning effect enablesyouto match sour tun*
ing dials, regardless of the capartty of condensers beink used. The Tun-A-Lump can be used in conjuncilon with any superhoterodyne, neutrodyne, btraight radio fremenes, or Reftex rectiver. No portable loop receiver is truls portiable or efficient without this instrument. It is math of genuine Bakelite, and the wires are spliter with wound-only genuine phosphor branze slik covered wire employed. It is as attractive as it is effluient.

No. 9655
\$13.38


The radically differemt lount. Onty it in inthes in diameter caweighs but obe phound. due to compound progressive from of ufiding. As efirient as lapger latops. and center taps provided.

No. 9089
$\$ 6.59$

## Aero Loop $\$ 10.49$

The advantages derlved with an outside adrial over any loop are extreme long distance reception, and, inereascal volume on all stations. The advantages of a loop and those of an antenta system are combined in the AFilo l.00I, when it is used in conjunction with all antenna. acting as a very etfective "booster"" with added inductanee, and thus. Increased selectivity. The inskle loop can be rotated, too, resulting in a marked decrease in static reception, thus further greatly alding selectivty. Its many Uses are listed in a spectal pamphlet furnished with every loon. The strands are wound on Bakclite scrips, and the binding posts are also brought out to a Hakelite strip. The wood worlt is beautifully mahogany tinished. and in keep ing with the furniture of any tincly app


No. 9649
© 10.40

## $\$ 10.23$ postraio

## Aalco Loop



The virtues of a larg slize loon are some times disiegirded dut to thelr eumberwame appearance when not in use. Loglcally, a larger luop will col lert more of the fertble badio wast than a smailer ons. The Aalco lowif) stande iso inches high when oprened, and inly it it Incheri whell ifisert. In the risht-hame cratien of the armombranying inlustration is to the noted the comparther of the satt same loop
 with fit strands of very low resistane wire on a genuine "almut frame, ('an loe supplied for use with elther a if or est-blate variable condenser. The hanging frame ir or ez-miate variable comienser. The hanging frante iltustratedt, varyimg resull, twing obtained from such ;angular nomajifors,
No. 9047.
$\$ 10.23$

## Signal Encased Loop


$\$ 8.15$
"I'lwte ati two objections to a loop on which the turns of wire are ixposed. These are first, they may hosien due to frejuent contact with siul hatids, furbiture, etc., and, wromb. they never ADD to the ingseatranere of sing roum. In thin twin) all of the turns are encased in
walmat frame, very httractively Hinture tinished. As the frame plugn finto a jath in the base, there are no wires wible even at that potnt. iif wires th berune wisted from con--tallt winsing of the loop. Three monncotions are brought out to a bathelite strip. ote of them being the enent renter of the loon. The wires are wound around hakelite stufn-mu losses-very eftrient in every mantuer. 11 -isht 21 incels ${ }^{2}$.
No. 9742 .
$\$ 8.15$

## Steinite "Aerieliminator"

 $\$ 0.85$POSTPAID
Whele at outside aerial cannut the contmenientls installed. sin tin plug this device intu yant hotise curvent socket, and turred the 25 -foot length of duuhle wire, whicls carries the "aelial" and grotund impulses. rontureting the ends thereof to He aterial and ground binding imsts on the recelver. $\boldsymbol{A}$ - pecial condenser self-contained itt this attachntent prevents the house current from entering the receiver-therefore. is absolutely safe. Takes only a few minutes to install-the most prattical aterial substitut? on the market.


No. 9928
\$0.85

## Folding Loop Aerial <br> $\$ 3.50$ <br> POSTPAID



## This is the best

 collapsible loop of its kind. It is $36^{\prime \prime}$ himh and $28^{\prime \prime}$ wide. It is electrically and mechanically correct. It has a heary cast base, nicely finished in black, upon which the loop turns easily. The wire winding consists of succial stranded, flexible, multiple standard super-antenna wire. The loop easily folds to ft into 3 -inch thbe. It is bedutifully finished throughout. Hard rubber insulation only is used. The wires are held in place by polished hard rubber strips. Two hard rubber binding posts are attached. No. Lillo, Collapmible L.onpAerinl
.83 .50

## Knocked Down Loop Aerial

 each stile. Made entircly of wellseasoned wood. C'omes to wou knock. ad down. ('an be put ogether in less than five mJnutes. Fnoumh No. 2, enameled wire is fumbished to make ten rounds.

## No. ©600 Knoeked 13own

Loop Aerial
.$\$ 0.85$

## Aerial Insulators $\$ 0.15$ postraio

The larger ball in-
 stylc, $31 / 2^{\prime \prime} x^{\prime 21 / 8 " ~ T h e ~}$
smalicr is used for lmalicr is work, size $3^{\prime \prime} x$ I \%/2. High gradic Insulation eompound. not affected by the weather. Mechanleally right: will stan! sereral thousand pounds pull.
No. 7914 Nimall
$\$ 0.15$
No. 201: 13all
0.30

## Rasco Ground Clamp

## POSTPAID



Has long been a farorite among amateurs. Is inexpensife, neter comes lonse, and fits any pipe from $1 / 2$ " to $3^{\prime \prime}$. Stral is adjustable and falvanlzed and will not rust. Has binding post to clamn wire.
No. 2236
.$\$ 0.15$

## Rasco Antenna Leadin Connector

Here is the solderless Connector that you can trust. Eighty ner cent of all radio troubles are causcd by a fatulty connection
he'twen the aerial and the lead-in. The plunger and screw holds both aerial and lead-in with a vice-like grif that is never relaxed.
Our illustration of the contrector is full size. Once tried you will never discard ft. Nothing is Wear out. Brass, nirely nickelplated with a gooll plating. Diameter of connector is 89" helight $1 / 2^{\prime \prime}$. (I'at(ints pending.)


## No. 4\%44

$\$ 0.20$

## Universal Lightning

 Arrester

## \$0.87

 POSTPAIDVery fine outdoor. Made of brown glaze porcehain. Fisily attached to window sill or against wall. Gencrous binding posts with lugs for connertions. Passed by Fire Enderwriters. Well made. and when used thsures your house against lightning athel jour instruments agatnst damare. Cuaranted in all respects. siza. over all, $31 / 22^{\prime 2} \times 1 / 2^{\prime \prime}$.
No. 2300
\$0.8\%

Copper Antenna Wire


All the wirc we offer is of the dependable kind, the best grade. The stranded wire is hard drawn copper cable and is preferred generally by those desiring the best results.

No. 922: Solid Copper,
single, No. $14,100 \mathrm{ft} . \$ 0.48$
No. 9228 Stranded, No.
22. 100 ft................. $\$ 0.49$

## Enameled Aerial Wire

Will insure superior recention as the usual increased resistance causca by corrosion of platn wire is previntent by the enamel coating. Made of fine copper stranils., each coated with enamel insulation $\begin{array}{ccc}\text { No. } 6101, & 100-f o o t \\ \text { coil } \ldots . . . . . . .\end{array}$

## Antenna Connector



## $\$ 0.35$ <br> postralo

Made entirely of aluminum. light and will not rust. The only gummertor of its kind. The 4 antenna wires wo to the upper holes; the low(ir bolc takes the lead-in. A good mutat to metal contact as in using this comnector is better than nearly all solder connectors. Dimensions $2^{\prime \prime}$ high. $1 \%$ wide, \%" thick.
No. g!
.$\$ 0.35$

## Aerial Lead-in <br> 

It is a flat strip of metal, entircly insulated with weatherpronf material. Fits under ans window. C'an lie bent inin any shape. Neat and durable. It can be mounted on the window sill or clamped in at the upper bart of the window. The insulation is perfect. Length, $181 /{ }^{2 \prime \prime}$ : wdith. $5 / /^{\prime \prime}$.
No. 8628
$\$ 0.25$

Another Popular Aerial.
No. 9451 Talking Tape, ribbon. per 100 feet.
$\$ 0,89$

## SAVE OVER 10;

[^6]
## Hard Rubser Case Storage E.at:eries



We wate specialtzed in sworage batteries a number of yare fad thas batters, bltiough called a radio haters. i- really an antrimble battery. Mat means that it has 'fen constructed for extra hard work. While used in tle nutiomobile the battery is shaken up all day long and inntersises a terrifle wear and tuar. Only the lishest मrade bitttries can stand this constant jarring, consequently sou know what to sxpect from our batters. We use onlv the very best materials and guarantee not only resuls, but guarantec the batteries for two years. We will remlace any battery that becomes defective within
Cwo datin low priced batteries are made of plates taken from old bettieries and made over. Such batteries eannot last. Our nen plates are extrat meary and guarameed to last. Anothere important noint i that our battery will with. stand salphation, 1 , e. conting of the plates even if the battery has been run down quite low. Solid hard rubber case. We furnish only acis-proof terminals that will outlast thr battery, full Fatonatic rents are provided. Posltive $(+)$ and negative $(-)$ terminals are marked in a distimetjre manner. Inapossible to make a mistake. Acldproof, roo. In addition to all this ont battery is sold at the $10-t$ attractive pree. "" wide, $10^{\prime \prime}$ long. 93 " hlgh.
No. פino 6 Volt. I10 Impere IIour. \&\%. 50 No. $\mathrm{T}_{\mathrm{B}} 6,6$ Volt 60 Ampere IIour $\boldsymbol{g}^{\prime \prime}$ Wide; $\boldsymbol{y}^{\prime \prime}$ long: 83/4" higl

Shipjed tranwoortation eolleqt.

## Tungar Charger

## $\$ 15.30$

The whild famous Tungat Talla type tattery chargers are tor well -nown for further do. taild informallon here. They are noiscless in operation and pratthitlls fool-proof for they do not reguire any chemurals or wirators, whieh must be ren-w d. For 110-wlt A.C. lines only. Tungar bullb in-
 cluced.
No. 9718 go-cyycle, 2 smbere late No. 9124 25-cisele, Ampere Ikate. dattely charger are shipped Express Collect shipping we-ight, 15 pounds.
New Cinume Tungar Bulbs
No. 90262 Ampere 1kat- Bulh
No. 90275 Ampere Rate Bulb.
$\$ 3.88$

## Tuncar Tricsle Charger $\$ 9.95$

This latest product of the diencral Electric Co. will rharge any 4 or $b$-rolt storage battery up to a $1 / 2$ dapere rate. Its construetion and prineiple is similar (1. the higher rate Tungar hattery chargers. Bulb in. luded. 10.95

Shipped Express Colleet.


Our "'is' batteries are made of the finest and best material chualnable, by one of the largest battery manufacturers in the country. We poslitrely guarantee these batceries to be nolseless and the longest lived. We earry only fresh stcek at all times. The output of these batteries is very untform. With fair use they will last a year or more. We only list the tapped styles. as we have found by experlence that they are the best for all experimental sort, and the diqerence in price is so negHgible that our customers will welcome this departure.
No 2250. Smal slze, 15 eell, $221 / 2$ rolt type, tanped each
$\$ 0.85$
No. 2251. Mexlimm Nary size battery, $221 / 2$ volt, tapped
from $161 / 2$ to $221 / 2$ volt, in $-1 / 2$ volt steps, each.... $\$ 1.20$
No. 4500. TDmbination iapped thy volt, 30 cell battery tapperl to tike $15,221 / 2,21.19^{12} .18$. $16 t / 2$ volts. Thls battery is de igned especially for detector and amplifyIng tibes. cach $\qquad$
, .....

No. 4509, TETE Size $45-5014$, 30-cell trattery . 32.3
 an oxira harge size giving 50 p . e. mol'e service than No. 1500 , Made for heavy duts, for 5, $6,7,8$ bulb sets. Slze. $3^{\prime \prime}$ 玉 $8^{\prime \prime} \times 6 \frac{y}{2}^{\prime \prime}$, cach
$\$ 2.75$
No. 4503 Tilped $41 / 2$-volt "C" 13attery, for negative Held biaty on K.F. ath A. F. tubes. Filminates dls totion, nol'nits high "Bi'" battery voltages, and lengthens 11 "e of " $13^{\prime \prime}$ " batteries. Also used as an ". $\mathrm{t}^{\prime \prime}$ hat.ery in portable sets using 199 type tubes. Pratct

## Hipped Expresp Collect.

## Balkite Trickle Battery Charger



## Balkite Model J Two Rate

 Charger

## $\$ 18.85$

Combining a trickle charging inte of ar of an ampere per hutur and the maximutn rate of 2.5 amperes per hour, this nety balklte charser is makling itsiff invaluable to it many users. Thure are times and conditions when efther of theso tha) rates are neressary-and int this one lustrument both are combined. Takes hut a moment to swing over from one rate lor abother. If is so effichent that ewen while wour rereiver is in operation the eharger fan he functionlog, while locals ate heting recelved. The chentrolyte lumel is at all times visibteonls at infretuemt intergals is it surcessimes to idel alltlled water thereto. This is the only upkeep attached to this charger. Furthermore, while in operation it only costs about $1 / 2$ cent per hour. It will aplso charse il isolt battery at a hish ratu os ox of an atmpert per hant, from 110 -whet A.s: purrent, at tio of 50 rite. Operatey from 110 -bolt A.f: current, at 50 of 50 curles. It tath also be suppled to mperate from at 25 to torseld 110 bult A.C, current with a 1.5 ampere hith rato.
No. 9941 Combination Model $J$ Balkite Charger,


## Full Wave Battery Charger \$16.85 <br> 

The radical improve. ments ificorporateil in this charger nermit the complete rhargins of a run down hattery OV'ER NIGIIT for in using the FLEL WHFE of the A.C. cycle IN.
 sTE.AI (on ONE-H.NA OF JJ, a chargily rate of on to 8 . DMPFIREAEFIt HOTR is deliscred. Lintirely fomit finlshed peral case erocloses the entire ingebabism and finlshed betal case encloses the entire iner-hambm and rests ofl lurbble rubber fect. Note the folding handle. Generous length of cord and rlenachatsle platg is inchaded. The rillps that snap on the battery ferminals are lenit cosered, to resist arfal rormosion efferts. for 110-volt. 60-cyule A.C. rumbot. shipperl express collect.

$\$ 16.85$
Scranton Battery Cap Tester andald with its ever rumous effects. To the bulbs, and winhout removing these caps, sou rim glance at the floats as thes rise, denoting the romalion of charge IN EACH OF TIIE, CEIDAS. The solution will then slonty drain back. Sizould no solution arise. then it is proof positive that that partleular rell arise, replenishing of distllled water. The conventional vent for battery gases is provided. The ball and cap are the bext quality rubber, and will withstand the acid for many years. Universal plug fits will batteries.
No. 9865 Set of Three.
$\$ 1.83$















 Ther folmes charger will do the rest, at a 2 ampere Gharkins rate. Can be brimanontly inounted in your Katlis irmsole, due to small slze, and spectal mouning hwices prowided for the purbose, or, picked up and mored aloum! it wlll. "harges both "A" and "IF" |hatterios. of the wet cell twe ulso any automoblle haters. The tranafomel is herthy shielded whth a black japanned iron rase, and is of kenteruus proportions. The Tunkar sucket abd fuse hlork is made of high quality insulating
porcelatin. The commertlon to the Tungr morrelatit. The commerthon to the Tungar element is $a$ specially treated cull soring. sizc orerall: Helght is if inches, width 4 inche's, length 1 inehes. For 60 pyrle. 110 volts A . C. current.
No. 9076 With a Amsere Fungar Ibulh, Cord

and Plug
FOR 25 -čcí
ióvolt A.c. CURREN'
No. 9091 With 2 Ampere IBull. Cord and Ilug. $\$ 15.85$

## Note

All batlory chargers are shlppod Express Collect from factory in (hiragn.


## Chaslyn Sink or Swim Hydrometer $\$ 0.69$

Tuls hydrometer does not (lepend on a fluat therein for determining the condition of charge of the thattery, but instead, three differently colored balls. If all three that. the battery is fully charged. if one ball sinks, the charge is almost full. if two halls sink, the charge is low, and If the three balls sink, then the battery is totally discharged. and should be immediately attended to.
No. 9788. \$0.60

## Storage Battery Clip

## Holmes Tungar

## Bulb Type Battery Charger

 $\$ 9.45$
$\$ 0.14$ POSTPAID

These large size clips are non-corrosive and are warranted to nlake a positive, ever gripping connection. J,ead wire is attached to the clip by twisting it under a screw and then tikhtening same. Iead covered.
No. 9719
\$0.14

## Apco "B" Battery Charger <br> 

Supulled withuut bulb. Charges yt any dusired rate. Use ordinary Iight bulb for charging. F'ull instructicns acompans 1t. The neatest charger using your ordinary 50, 75 or 100 watt electric IIsht bulb. Charges at $1-10$ to $1 / 4$ amperes. According to wattage of bulb.
No. 9375 "B" Battery Charger, without lamp. . . . . . $\$ 3.95$

For Alternating Current Only.

Apco " $A$ " and " $B$ "
Battery Chargers


F'ulls guaranteed by the manufac urer and us. The finest mualits. turer in size. nationally known. A blg bargain at our cut price. Sure to please sou. Complete instructions for operation. Fisi 110 -wilt viU. scle A.C.
No. 9357 "A" Battery Charger, 2 amp. rate. no tuhes required ..............\$11.\$7

Battery Chargers Are Shipped Express Collect.

## Valley Battery Charger $\$ 16.25$

Charges satas t-tult storage battety it (3) amfere rate, or ans 12 -cult batters at a ympere rate. The most efticlent hish rate batters charger made. Entulpped with full length cord to attach to your light ing clrcult, clips and leads to attach to your battery, and a very accurate atm. moter. registerlug rute of charge. Trans. parcnt moulded cover. lieats on rublemr feet. For 110 -volt A.C. current. Nize $6 \pm 63,47$ Inches.
No. 9671 ...................... $\$ 16.25$ No. 9073 For 25-30-40 Cycle.

110-volt A. ©. current . ....... \$19.10 Due to excesslve welght, Valley chargets are shlpped Fixpress Collect. Shlpuing walght 21 pounds.
"B" Storage Battery Hydrometer


Test snur 13 dtorage ivattery with tinis hidrumeter. It wђld suve sou money isy warning sou in time It will fielp gou Ht the best rosults from your get. Priced very list.
ㅊ․ 9ез. \$0.29

## Battery Tester

4) wry line quality instrument for teating situr $A$ dind $D$ sitorage batterles. The proper construction of the flout and bariel assures accuracy of remulurs.
No. 9031
$\$ 0.47$
Battery Tray


We husdly nexd suggest the wis don of blacing sour wet batteries fil this traj so no acid can fiet to the thas tras su tho acia cas het o the
rup. It may safe its cost many times uver allul the women folks will anpreclate your thoushtfilisess. Iull silze fo sour hattery. TIeary black rubber.

$\$ 0.57$

## Sterling 6-Volt

"A" Battery Charge Indicator $\$ 1.63$
To the Radio fan who objects to the use of a Ilydrometer. because of its attendant pos:sibilities of dripping arid athd its rulnous effects, for testing the condition of hils storage battery. thits charge indicutol is indem imaduable. isy applying the two contacts intcluded with this device to both terminals of the storage betters the arrow will advise sou whether 10 start charging the batsely-when it is nearly full charged-and when you should stop charglige it. ILandsomely nickel plated. No. 9741

\$1.63

## Brach Non-Drip Hydrometer

## $\$ 0.95$ <br> \section*{POSTPAID}

Xour first thought upon ex imining thls unique hydruueter is to winder why thi= non-drip feature was nere" thought of before. The moulded rup that patche any drips from the nozale i attanched to two rety plitable. rubber standards blich arr swung out of the was whil.
 the nozzle is Inserted intthe vents of the bittery, and. when the nozzle is removed. this cup swings hack into its oriainal position reads to coltch any drips of acid. Another sery raluable feature is the use of the funous diaslyn system of three colored ball.s of varluus welehts which sink according to condithon of charge in the battary
No. 9696.
\$0.95

RADIO SPECIALTY CO., NEW YORK

## 60 <br> Tobe By-Pass and Filter Condensers <br>  <br> $\$ 0.56$ <br> POSTPAID

In every manufacturing industry there is alsays one outstanding conretn whose proturts are the revognized leaders, and by which rompetitlve products are compared. The Tobe Deutsomann $\$ y^{\prime} \cdot \mathrm{p}^{\prime}$ ass and Filter condensers are conreded to bet the must efticient mate. Their hand. some silvered metal cases will iend grace to any receiver. Although the 1 by-pass type can be used in ' 15 " battery ellminators at low soltages, the Filter type is solely rerommended. The By-pass type are usod in any Rillio repeiter, in the Radio Frequencs or Audio Frequenny circuits. Connertlons may be made by soldering to the tinned lugs provided, in serewed ind bolted thereon.

BY-PASS TYPE
Cat. No.


Irict
$\$ 0.56$
0.60
0.72
0.86
0.86
2.85

Price
$\$ 0.60$
0.65
0.80
1.11
1.58
2.85

ERS
Price
$\$ 1.48$
2.18

| No. 9030 | 5 mfd . | \$1.48 |
| :---: | :---: | :---: |
| No. 9031 | 1. $\quad$. | 2.18 |
| No. 9032 | 2. | 3.48 |

No. 9032.
4.
5.95

## Thordarson Filter Choke Coil



## $\$ 4.48$ <br> POSTPAID

The name of Thordarson on any transformer is an tm= mediate assurance of a quality product. Every " ${ }^{2}$ " eliminator is only as good as its Fllter system, and the choke coll theretn phars the main role. The Thordarsen choke oil will serve these requirewents with $100 \%$ effliency. Indurance 30 Henrics-current carrying rapacity of 70 millianperes-ID.C. resistance of 280 ohms. Can also be used as at fllter rhoke for keeping high voltages off your foud speaker. Measures


## Choke

## $\$ 1.55$

 This excellent choke. espeeially manufaetur ed for "B" battery eliminators. and used in the KONITE NO. ICUM Eliminator. has about 40 -milliampere rapaelty. (10,000 turns of No. 32 wire) and is warranted to do the work right. Will not heat or burn out under normal load.No. 4002 Choke


## Tobe "B" Eliminator Blocks \$7.65 POSTPAID <br> Ans" "B" eliminator is only ats gored as lle Fitlol systemennoluyed. The Toble I Beutsthmann lojiter Blocks offer sou the assurance that <br> 

 sour mombleted eliminator Attartively vealod within will be an absolute surcess. bayheon thil ather wither all are mather suphly circuits where the borhing D.C. voltage dues not exeeed 300 wolts.For use in small "B" eliminators in which there will be no intermediate voltages used-or where separately enased filter condensers would by pass these intermediate voltures, If they were to be used. Contains one 8 Difd. and Tru $\because$ Mrd. comdensers-heary binding posts are on the lop of this madel.
No. 9725.
$\$ 7.65$
Fisperially desigued for llew with the deaytheon Tube Trope Is and rontalns one \& Mfal. two Jifd. ind two 1.1t Mfu. Tobe [Piltu Condensers. Ifeight is only 5.8 inches. Whelth $\frac{4}{}$ inthes and depth $21_{4}$ inches. Binding posts are brought out wh the hothom of the case for safety sake.
No. 9726
$\$ 8.65$
Vers similar in annearatme and size to onir No. 9726 Blark, but contains Thret i Iffi. and two 1.0 Mfd . Tober Filter fondenvers-mperally desighed for use with an 1. C. A. 时 "umnhgham 213 , or two 216 or 316 Thermionic Rectifsimg Tabes.

## No. 9727.

$\$ 8.65$
Name as our No. !i=ib—tenigned esperlally for the new IBH Ravihem Tuls'. ("omath tmo + Mfd. one 6 Mfd . and two 1 Mid. Tobe Filter Condensers. $\$ 10.15$
Tobe Raytheon Buffer Condenser Unit The Raviheon circuit reduires two . 1 Mfd, condensers on the A.d. side of the thise.
No. 9060 .

## High Capacity Condensers

 are of the hest vacutm impregnated puraftin type. The insulation is spe. cially-pretpared paper, and the units are compressent hydrablically before they are sealed in their metal casings.
All of mur condensers are tested for 500 vults breakdemer ; earh condenser comes in an enameled hiack tin casing.
There are two metal terminals to whirh wires or bus har ran be readity soldered. We have developed these comiensers esperifilly for " 13 " eliminator work, and we belleve our prices are the lowest in the coluntry. Try connecting a number of these condemsers togerher. You cin make any caphrity "Filler Blick". for ans Style "IB" or "A" climinator.
No. 4007
No. 4008
No. 4009
2-Mf. Condenser, each.
No. 4011 /a-Mf. Condenser, each.
No. 4012 t/s-Mf. Condenser, earh
$\$ 2.00$
1.65
1.30
0.75
0.60
0.50

## 6emflemea

Recently I ordered a triskle charger. and am very much lenated with same.
S. W. DEARTH.

Deer Creek, HI.

## Rectifier Cells $\$ 0.60$ POSTPAID

These rectificr cells, of which four must be used for the complete fullwave rectification, ure standard with us, huving been specially designed for " 13 " eliminator work. These 4oz. jars, with aeld- and heat-proof rubber screw covers, are furnished with two electrodes, namely. pure aluminum and lead. A vent cap is also prorided. The special connectors listed helow should he used for conneeting the cells together. size $47 /{ }^{7 \prime \prime} \times 21 /{ }^{\prime \prime}$
No. 4003 Rectifier Cell (but
no connectors nor salts)
complete with cover and
electrodes. .........each $\$ 0.60$


## Connectors

## $\$ 0.25$

These special conncetors are used in order to connect four of the rectlficr cells together Set of 4 speelal conneetors sold as one unit. These ronnertors
 snap over the round electrodes. glring a positise hinding eontact at ill times. that stays put. No loose connection possible. Ilistration used for screw and tut binding post.
No. 4004 Set of 4 Electrode Connectors.... $\$ 0.25$

## Resistances

## $\$ 0.50$ postpald



These resistances atc standard for. eliminators and will carry about half a Watt on continuous load. Glass enclosed. cartridge type. Tiwo of these must be 11 ed in standard eliminators. The resistame is $\mathbf{1 0 . 0 0 0}$ Ohas per unit. IResistances come complete with two spilng clip mount ings.
No. 4005 "B" Eliminator Resistance, 10,00 *
Ohms.
each $\$ 0.50$

## Rectifier Salts \$0.20 POSTPAID

Only Iong experience can produce the correct " $13^{* \prime}$ elimithator rectifier salts. Ilorax and similar salts "creen" over the electrodes and usually short elreuit them. Our patent salt combination is Ruaranteed to keen electrodes clean and will not "ereep." sold only in untts for our No. 4003 rectlfier cells. One filling charges one cell.
No. 4006 Rectifier Salts, per box (one com-
plete charge)
each $\$ 0.20$

## Electrodes

For those who wish to make their nun rectiters we supply electrodes. The surcess or failure of a rectifier lies in the purity of the aluminum used. We use otuly 99.5 per cent pure Aluminum ln connertion with our rositfiers, The small electrodes measure $;^{\prime} 1 / 1^{\prime \prime}$ long by $1 /{ }^{\prime \prime}$ diameter. The large electrodes are $43^{\prime \prime}$ long by $1,2 "$ diameter, and are equipped with Fahnestork colips rigidly. serewed into one end thereof. The large electrindes are intended for pint jars.
No. 4015 Small Aluminum Electrode. . . . . .$\$ 0.10$
No. 4016 Small Lead Electrode
0.08

No. 4017 Large Aluminum Electrode......... 0.35
No. 4018 Large Lead Electrode.............. 0.30
PRICES POSTPAID

Konite Filter Block

## $\$ 3.65$ POSTPAID

This is the hgh capacity 500 -volt tested condenser system used in the NO-HUM "B" IBattery Filiminator. Contains 4 condensers. all in one Jousing, as follows: One each 4 -mfd. $3-m f d$. and two $1 / 2$-mfd. Complete as illustrated. with 5 terminals; in tin shell. size $21 /{ }^{\prime \prime}$ widc, $114^{\prime \prime}$ deep. 11/4" hgh.

## No. 4001 Block.



## Large Size Rectifier

## +1. 17 <br> POSTPAID

Commonly termed a "pint" size rectitier jar. it catl be used in cither a Trickle charger rectifier. or in " "Is" battery eliminator. In the former instance, only one jar is required. in the latter. four jars are required. Consists of a heavy jar, with a threaded "neck" upon whirh is screwed the moulded cover, and through which are inserted the $1 / 2$ inch diameter lead and aluminum electrodes (No. 4017-4018) separated by 1 1/2 Inches. A removable vent eap
 completes the unit. Note the
Fahnestork clips whith are screwed into the elestrodes for convenlent and positive connection:-also note the notches on the moulded cap. for gripping same, when unscrewing it from the jar. IBesides thi. unlt, you need a lamp cord and plug. and our No. 8:0 04 resistante to assemble your own trickle charger. Overall dimemsions are $5 \frac{3}{8}$ inches high, $31 / 4$ inches diameter.
No. 8803 As Illustrated..............
$\$ 1.17$
Trickle Charger Resistance \$0.99
POSTPAID
Constructed to our specifleations for use in a trickle ballery charger. you are assured evers satisfaction when used in conjunetion with our No. $880:$ Rectitier. The resistance itself consists of a long "spring," wound around the porcelain standard, in which are moulded the grooves to recolve this resistance. The ends of same are connected to a plug which serews into the porcelain standard base plag furnished. Two mounting holes and two connertion terminals are con-
 senlently provided on the base. The capacity is rated at 75 watts. Orerall length of resistance is $41 / 4$ inches, and including the socket. : inches.

No. 8804...
中0.99

## Gentlomen

I was woll plosed with the " $B$ ". diminator sarts I reveived from you. and the results obrainable tharswith. W. A. SANDERE

2005 12th 8t., Charlester. In.

## Ford Raytheon "B" Battery Eliminator Tran-Choke Unit

## $\$ 8.88$



Hising this instrument, and it few whers lisfed helow,
 battery eliminator to work direct from sour 110 -voli A. $\mathrm{C}^{\text {d }}$ line delivering results as good as only obtaimable on diminators ready buitt and selling for es high as $\$ 50.00$ Mass produrtion. with arrompanying heave sales, enables this combination of transformer and two chokes io be sold at this extremely low prime. considering the $100 \%$ pfticient results obtainable therewith, and hausumbly at tractive manner in which it is finished. In adititios 10 this untt, you need a filter condbatec bloxk, esmstining :ne 8- two 2- and two 1 Mfd. filter combenvers, a "huffer" condenser of two . 1 Mifd. Jilier comblemers. a line switeh, a tube rocket, a liagheon hulb, twa variahle rexintance for infermodiate voltapes and a fixel resistance uf 10.000 ohms. (Also, such incidentals as binding mists. hase bourd, screws, etr.) Note that thr inntitetifons to this unit are all on the bottom, for safety sahe, as woll as ease in assembly. You have a rhmice of wither a lligh' or "Iow" output of "B" battery vallages, the ariual differtnce in voltages betng about $1 / 3$ as sur the fullowing table, showing voltages obtainable according to stmount of eurrent required. (An averfore 5 -thbe receiter draws alout 30 milliamperes.
"B" Eliminator Output at Power Terminal
Voliage Output

| Milli-zmpres | Low | High |
| :---: | :---: | :---: |
| 20 | 135 | 212 |
| 30 | 116 | 194 |
| 40 | 96 | 163 |
| 50 | $\cdots$ | 153 |
| 60 | $\cdots$ | 132 |

Above table was derired whith Rayitheon "-IF' tuthe Measures 9 inches long hy $34 / 4$ Inches wide by $3^{1,}$ high. Ifeautifully finished in a shielded hlack eryatallized metal base. liinding post conncetions mount on on geruine Bakelite strip. and are engraved for referctice therefo. spiendid salue. Detailed and explanatory hook-np and instructions are included with nach Tran-thoke linit. riuaranteed to produce NO Hl`M, even while standing close to the speaker.
No. 9789.
$\$ 8.88$
thipping weight, ahout 10 lhs. Nent Vienress cibllert.

## \$1.93 Clarostat POSTPA1D

In 5 complete turns of the knob. the resistance of this Instrument can be varien frotn practloully zero to 5 . 000.000 ohms-ihus it ean te allopted for practically any purpose where a variable resistor is ralled for. Although the reristance is variable at will. it is positive once set. The Clarostat is extremsely useful in " 13 " eliminators, where it is
 for the Detector and KR . F . tubes. Connerted arross the sweomary of the whd stace addio transfortner, it will eliminate all raspy moises, and eliminate distortion. Comnerted in the R.F. plus "Es" battery lead, it will very atmirathy colltol the oscillations in the K,F, staness. Commertert across a tixed tickler moil. it will matiol the regeneration therein. Can be used in resistance coupted amplifiers. with pronounced sucress, as the resistaner rembired therein ran be varicd for best results. Fincased in a immpart insulated shell, and is eruibped with a bakelite knoh with angrared white arrow thercon.
No. 9983
$\$ 1.93$

## Aerovox "B" Eliminator Filter Blocks

## $\$ 5.95$

 ity lilter black at a marlest price due to the larke viles enjoyed therefrom. The Haswo guaramee' is a furthey atssubamer of the $100 \%$ efficient performance at all times dussibld with these blocks. binth whe sif them is texted at jon wolls b.t. Encased ia ath attractively finished metal case. The ferminals are plainly marked, amal are texible firr alirect connections to nrober instruments. Most cotmbasel how-ks made.
Ne. 9880 Consists of $2-2-\infty \quad$ Nfil. Filter C.on-

No. 9882 Cinsists of $2-8-8-1$-i jifl. Filter con
denters ..................... itfi. Filter con $\$ 7.47$


## Aerovox "B" Eliminator Filter Condensers

Where it is desirable to mount the various capacities of filter compensers in mechanically ronvenlent assembly, rather thatn have them all self-contalned, the following condensers are foleally suitable. Each one tested to $100-$ volt Ih. breakdown. Flexible monmetion leads. Metal rased.


Ry monaprting any iwo like mothenstre ja parallel, the miero-farad catpacity is rhubled. thus two 4 Mfd. (f) connected will be the equal of wh \& Mfic condenser. For I'ower nark filter condensers, the voltage test must withstand 750 volts IV. $\mathbf{F}$. For such condensers. add $50 \mathrm{r} / \mathrm{t}$ to almwe listed prices, specifsing all
delalls in your order.

## Crescent Lavite Resistances



Thes resistances are truly laborators problucts and in fact. ahoost every broabiasting station embluys them for the suerth amplifier gala wintrol. Thes are non-inductive and promote distortionless amplification in Kesistance Coughod Amplifiers. Guarantect to remain mostant and nolvelass.
No. 9610

| No. 9610 | 12001 | chm. |  |
| :---: | :---: | :---: | :---: |
| No. 9611 | $1 \times 000$ | alims |  |
| No. 9612 | 50000 | ohnıs |  |
| No. 9613 | I00080 | uhm: | 1.48 |

## Aerovos Lavite Resistances

 Gan the athy standard grid leak or resistor mount. Can he supplict in the following sizes, Iaboratory testod: $2.060, \quad 5.000,10.000,15000,20.000$, $25,000,31010,50,0010,75,000,100,000,200.000$, 250.000 . 50n, noo nims. Kindly state which type No. 8939 Each.
No.
No. 8939 Each. Any Resistance.
$\$ 0.88$

## Thordarson Power Compacts $\$ 10.88$

The wonelerful and ex tretnely usefol possibilities
of power park amplitication devices, with built in " $13^{\prime \prime}$ battery eliminators. similal to the I'ACENT I'UWEFIK FOItMEIt and the low MKFil deseribed flsebhers in this catalogite. if th donbtless comsinced yom that If shonld be useal in con jumetlon with your Itadio perefyer-but perhaps yent
 would rather assemble yon
 there are anly $1:$ wires to consert!) derisolf thereftrom a valuable fund of knowledge, and the urai. es on whinrow mas lisem to fts berformance. The Tirardarson Iower Compatrts are stimbolic of their high starmards of bectrical ettionancy, nurdanical perfection, and measing

No. 9038 Power Compact R-171 $4=3.9$ Contains a power supply irmbormby for full (adurlity aperation of Jaytheon BSI weetitier, \& filter chale-.- of 80 mllliamperes caburity, a therevolt renter tabped ifinment
 debsers-all in one componmel filled stecl case. Effulpped with i-foot cord and separable phug for attachmest to the 110 -volt, 60 -cycle light cirroit. Nhiphed express collept.


## Maximum Voltage Output

 gutbut of the 1f-supply, using the peater tube I.... 171 (on) the last stage. The arerame current drain of a twrasal cot whth the power tube is approximately 40 millianiners.

The C bias for the power tube is antortatle, varsing moportionatels and direetly with changes in the shite


No. 8924 Power Compact R-210 i 8.45 Contains an fower subly fanhofmer for hat rapacits operation of the UX elti-n rectitier furmisiing 100 volts to the plate of the bower tube UX 210 , $\underline{E}$ filtur clukes, a $\frac{1}{2}$ - wolt eenter tapperl filament supply for one $\mathbf{~} \mathbf{X}: 210$ power tube and all intermediate woltage, -all in one compound filled case. Eiulpued with a 1 .-foot emril and separable plug fur att arhmemt to the 111 volt, fillescele
 high ovetall. shimbet express eollect.
No. 8926 R-198 Power Amplifier

## Supply Transformer

\$10.88

 filathent and 40 vents for the blate. In addition the
 Core clamped and sealed tu trevent hum. limmenstons Core camped and sealed high fische: high. Wight. of/z pounds. shipred express mblert.

## De Jur Power Rheostat

 $\$ 1.78$ POSTPAIDThis rheostat was designed for a large eurrent carrying caparits. It has a tarse Bakelite base, 43 - ind dianeter, and bas a simple-pole mounting. The resistance element ranges from 1 to 2000 ohms, its variation fumishes the required negalive grid bias to powet amplitication tube. No. 9643

$\$ 1.78$

## Tubes for Power Pack "B" Eliminators and Power Amplification Stages

$x$ - Mide by ladio Corp. of Nineriea.
X-Made by General filertrio to. for Cunmingham.
No. 8915 U X 171 or C X 37 I Iower Amplifier. $\$ 5.85$ 5 -volt, 5 anmperes-for uj 10180 volts. No. 8917 I? X 210 or C X 310 P'ower Amplifice. $\$ 8.65$ 6.0 to 7.5 volt $<-1.25$ :imperes (max.)

Can be used up in 450 volts. For Power I'acks, No. 8916 U X 21613 or $\mathbb{C}$ ( 316 B Single Ware

7.5-balt; ".25 amperes. For single wave reeti-
fiom in " battery eliminator circuits heaty
duts ispe
No. 8918 if $x$ 213 or C 313 Full Wave 85.85

rectlllation up to 65 milliamperes, the rectified roltages not to exceed $2: 20$ volts . . (


## Raytheon Tube $\$ 6.00$ POSTPAID

['mill the advent of the Kaythem Tubes, the surcess of " 15 " battery climinators was never a certainty, hut to-day, practically 7 out of uvery 10 eliminators, assembled or home built, use this tube extluslively for the rectification of the alternating current. Thls tuhe gives full double rectlication.
No. 8921 Raytheon to 0 Tube. . . 0 bulluers thont $1 / 3$ more output voltage than No. 9790 llaytheon tube.

No. 8922 Independent Dopble Rectifler Type
Balb ........ 4.85

## Thordarson

 attaching to the lighthy cirmuit. The secondary is tabled at the exaet electrical eenter. There are provited two secondary voltages. to suit the partieular tepuirements of any receiver is to its current consumpap: llon. There roltages are 235 "Law" and 285 "High." The transformer itself is mounted In a compound thlled weel case, and will hot heat un in continuous serclee. conservalively rited. Dimenchoms are $4^{4} 4$ inches by $31 /$ inches lis 3 inclies hish.
No. 9647
$\$ 6.35$

## UX213 Transformer

This transformed supplies moresary waltages for operat-
 full ware rectifying tuhe. Eliminators bult with this transformer uill shtiefactorily furnish 13 voltage up to 180 volts with suffirient rapacity to operate any recelver. Dimensions: 4 la by $31 / 2 \mathrm{by} 3 \mathrm{a}_{4}^{3 / 4} \mathrm{high}$. Weight 6 lbs .
No. 8925 R-197 B-Eliminator
Thordarson Transformer.
$\$ 6.33$

## Heavy Duty Centralab Radiohm

## $\$ 1.89$ <br> POSTPAID

These variahle resistors are recent additions in the family of Centralab products, and hare been evpeclally prombed and offered to the publie to answer a demand for a leavier caris: ing capacity resistor for " 13 " battery eliminator worl: The Raytheon Lit boratorles have placed their stamp of approval on theil.
 and for sood reasots. too. Although they are variable. the vitage is eonstant a the voltage is eonstant at ans, setting, and thats. the panel to whieh they are affied can be calibimted for various moltage readings. Insulatiom is tested to whthstand 1.500 rolts.
No. 96780 to 50.000 ohms. l'rintipally used as
the detector vollage control. No. 9679 or to 10,000 ohnis. ivsed as the intermediate voltage control. No. 9029 2.0n0 olum potentiometer. fur providing " 1 " hias from any eliminator.
$\$ 1.89$

## Centralab Radiohm



## $\$ 1.79$

The enntralab lhedtohms are cortstructed in the same manner as our No. 9029 Mrelulator, but has only two comnections. This instrument has lately sprung into moptalar fivor due to its efthelemy when used as an os-illation control in any tunted radio frepuenty eirruit. ('mmerted in the " 13 '" hattery circuit ferding the 12. $\mathfrak{r}^{*}$. tuhes, it effertively and noiselessly diminishes the voltage to a point setting just before the tubes begin owrillating. Our No. 9683 is recommended for this surpose. It ran also be used to control the regeneration in a tixed tiekler cireuit. Single hole mounting. lial has an attractive white arrow engraved thereon.


## $\$ 1.79$ POSTPAID

Centralab Modulator

For a volume control it any audio frequeney ansplifier, there is now exual te the 500.000 ohm Ciatltralah Modulator for it is a non-induetive Nolste LESA variable resistame. smoothly variable from zero. affording the only satisfactory means of regulating the output of the ampliffer. with improved quallty of reproduction. from a whisper to maximum louduess, The outer shell is Hakelite, encasing the element in a novel dust-proof transparent case. Ningle hole mounting. Same size as a potentiometer or rheostat.
No. 9686 .
41.70

## Centralab Potentioneter

This potentionteter is of the same construction and principle as Gur No. 9686 Modulator.
No. $9684 \quad 400$ Ohms
No. 9685 2,000 Ohus
$\$ 1.59$

## Bradleyohm Type E

 $\$ 2.21$ POSTPAIDThis heavy duty variable resistance is ldeal for varying the output of any " ${ }^{15}$ " battery eliminator, so as to obialn a lower reading voltage for the detertor tube. or any intermediate voltage, using one Bradles ohm for each tap desired. It will suceessfully dissipatc up to 4 watts, but must
 not be used where the full voltage exceeds 250 . Fiuted hath provided. Top and fottom is hearily nickel nlated brass, with white porrelain walls. Terminal serew connections, Dimenkions: 2 Inches long, 1 inch wide and extends alout $1 \frac{1}{2}$ indthes froht rear of panel. Onie hole mounting on panel or No. Type

| No. | Type | Range |  | ch |
| :---: | :---: | :---: | :---: | :---: |
| 9922 | E | 1 to 100 | Ohms | \$2.21 |
| 9923 | 1E | 100 to 5.000 | , | \$2.21 |
| 9924 | 5 F | 1.000 to 50,0010 | $\cdots$ | \$2.21 |
| 9925 | 10H: | 10.000 to 500.000 | * | \$2.21 |
| 9926 | 25E | $25.5,000$ to 1.500 .000 | ** | \$2.21 |


froms 2 to Will never change in value, and will dissionto from 2 to 8 watts continuously, thus can be successfully used with voltages as high as 500 volts kurging through thetr, down fo ! 10 and $1 \$ 0$ wolts. The 5000 , ohm resistor measures only $\because$, inohes long. stoldering lugs provided. betailed instruction sheet with diagrams show use to sugply intermediate voltages in climinators, ete. The \& Vitrohna Ikesistors in the Kit have the following values:


750 Ohm 1500 Ohm 3000 Ohm 5000 Ohm
No. 9935 Complete, with 8 Resistors
$\$ 7.95$

## Audiohm

## $\$ 1.38$

Rasps or nasal reproduction in sour lowd speaker can frequently be traced to the secondary of viuur and stage a udio transformer, Hy shunting the drid and Filament terminals thereof with

this variable resistance, you can adjust the output in your speaker to your own satisfartion, A eleserly arranged mounting brapket and flexible eoil spring permits the immediate installation of this device on the secondary of any transformer, without any drilling, special tools or solkering.
No. 9899
$\$ 1.38$
Gentlemen :
I have already recelved a supply of Rasco parts from you which I found to be very satisfactory.
F. A. LEITH.

92 Avenus A. Bayonne. N. 1

## Gould Unipower "A" Battery

 from Your House Current $\$ 33.85$13, simply plugeing in to your house rurrent ant worlnecting the positive athi negative " $A$ " battery leads on your Itadio to this ine strument, you have a perpetual source of "A" bat* tery current. This is aecomplivhed by the use of a Gould storage Battery (and there is no finer storage batters made), a genuine tsalkite Trickle charger
 with variablo charging rates (on the No. 9861) and an Automatic Relay suitch, all encased in a handsome black rublel' fase plat mument your receiver switeh is turned oft, the relay switch is actuated, causing the Trickle charger to charge back into the battery the current you may have consumed. Thus, at all times your storave battery supply is up to full capacity, very essential for clear reception-extreme volume and long distance results. The moment sour receiver switch is turned on, the relay discometts the charger. eliminating every trace of any hum. llas gia. fight cover, with spectal vent tube. Cian be set in battery compartment of console cabinet, or left on the floor-its appearance will not mar the room. The No. $9816 i$ also mpnearance "Itr" batters a climinator, if one is to be used. enntrols a "B" butters climinator,
Shipped express collect. Acld-proof heaty flesible rubber mored wire and nlug inuluded. Instaliation takes only a few minutes. Detailed instruct hons furnished.
No. 9861 Model A6 6 . For 6 -volt tuhes. 11 7/8
inches long, 7 5/16 inches wide and 10 inehes
high. Fror 110 -volt, 60 -cycle lines.
$\$ 39.45$
No. 9862 Model AC 4 . For 4 -volt 1 ba tubes.
$81 / 3$ inches long, 5 inches wide, 8 \% inches high.
Fior 110 -rolt. 60 -cscle lines.
$\$ 33.85$ No. 9863 Model AC 6A. Sane as No. 9861 ,
but for 110 -volt $25-50$ cycle $A$. C. lines......
No. 9864 Model AC 4A. Name No. 9862
Hut for 110-volt : $55-50$ çcle A. $:$. Ines. . . . . . $\$ 36.85$

## Brach Controllit



## $\$ 4.95$ POSTPAID

If you employ a trickle or regular rate charger and wish to automatically disconnect same while your recelver is in operation, and then, to automatioully witeh it back to lts charging pusition, the Brach Controllit will solve the problem. switch, or rheostat, when turned on, automatically r-auses this relay to sWITCll OFF, and vice rersa, Can allso he used with Is eliminators. No alterations to your set requircd-a few minutes to connert. supply direct from made house current, in conjunction with a trickle clarger and storage hatters.
$\$ 4.95$

## No. 9697

## Automatic Control Switch

## $\$ 1.79$

Connect this switell to sour receiver Trichte charger and "is" climichatger Turning on the re enures nator. Turning on the will sutomaticalls entuse this
bults in your recelver will switeh to dismonnect the trickie charier, and vire vorsawill also eontrol them independently. Or. ""1s" chminators wan be controlled in same fashion-in fact, it is vers ean be controiled in whith every" $15^{\circ *}$ eliminator. Instructions cover varled uses. All parts scaled in durable black porcelain base-vers altractive. $\$$ inches in diameter.

No. 9005


Abox Filter for "A" Battery Eliminator


## \$18.83

The Abox filter is not a storage battery-it is nut a trickle rharger and it is not an "A" licttery eliminator in itsclf. It is used in conjunction with a $21 / 2$ ampere rate Balkite charger, with which it will deliver steady 6 -volt current with no trace of an audible hum. even while listening close to the loud speaker. It will not deteriorate while being used-or while not in useand is always at sour sersice. no matter how long it may have stood idle. The monient your current is turned off from your Radio tubes. the Abox filter stops drawing current from the house line. Only about half the size and weight of a 100 ampere twatu storage batters. In theors, the house current flows to the $21 / 2$ ampere Balkite charger, within which it is reduced in voltage to about 6 volts, and conserted into direct current. through the electrolytle aotion within. But, at this noint, this surrent has every trace of the $A$. C. hum present, and it is the soLF PIRPOSE OF THE ABOX FILTER TO TIIOROLGHLL FHIMLNATE TIIE A.C. HIS, WVIICH IT IOFS MOST FFFECTIVELY, passing on to sour radio receiver a pure supply of 6solt current, for up to $6201 .{ }^{1}$ ampere tubes. Only requires DISTILLED WATEH-*O CHLMICALS-NO SHLTS-NO T"FEEI' COST. It can also be used With a 2 ampere Tungar bulb ty'pe charger, following sperial lnstruetlons furnished. but is not recommended with any vibrator twpe charger. Very ruggedly con. structed. Black metal ease. Binding post connections. Takes a few minutes to install. shipped express collect
$\$ 18.83$

## No. 9615

$\qquad$

## Majestic "B" Battery

## Eliminators

## $\$ 30.95$



A sers whely adrertised and highly recommended "'13" lattery eliminator The Majestio Super B (No. 9039) will deliver a maximum roltage of between 150 and 180 volts to receivers using as high as 10 tubes. Is provided wlth a separate switch to control the current from the light socket. Four terminals are motisled, reading: Negative, I)ctector (adjustable), Intermediate (idjustable) and Amplifier. A special switch controls the "law' or "High" output, offering at wide range of witakes. The Majestle Master $B$ will deliver Jetween 150 and 180 volts at 60 milliamperes. assuring more than ample output voltage to operate i 171 or 371 fower tube. This model has an additional adjustable resistance, for controlling all the soltages. lioth eliminators are supplied complete with Raytheon tuhe, plug, cord, directions, etc. Shipped express collect. shipping weight ahout 25 pounds.
No. 9939 Super IS
$\$ 30.95$
No. 9940 Master B
$\$ 35.75$


Wi．offer to the radio fraternity the Race line of plugs and jacks． After having studied all the other plugs on the market，we have ellmi． mated all the disacirantages of the pori ones and have incorporated in ours all of the pood points of the best plugs，and have addled several improvements of our own．By have． Ing our own metal factory，which has for twelve years made plugs and jacks for the Postal Telegraph Com－ pang，we are in a position to sell these plugs and jack a at a lower price than those of high quality of feed by other reputable concerns． Pasco jacks are made of tire best material that money can buy，and the construction is correct，behind it biog the soundest engineering prat－ tire．The springs are res hears and the tension is right．The jacks are ragged，have positive action at all thanes，while the pure sliver contacts are very large，insuring absolute electrical contact．The construction of the bracket is hrass，heavily nice－ kel－plated and buffed．
No． 1000 \＆springe，double
circuit．I＇riere．．．．．．．．Si． $3 \pi$
No． 10013 Springs．I？rice 0.35
No．100：Automatic，雷
Springer ．．．．．．．．．．．． 0,40
No． 10041 spring，olsen
circuit ．．．．．．．．．．．．．．．．．．．．．．2．2s
No．100\％ 2 spring，slowed？
rirenit ．．．．．．．．．．． 0.34

## Jack Nameplates

Set of 13．Maybe inminted behind the hex nut of a jack to indicate the purpose of of the jack．Sill－ var or gold，fin－ tithed brass with black lettering，
 most attractive and useful．

Thirteen tithes：Wetrobry Jack， 1 kt Gage Jack．Ind Stage Jack．Bud Stage Jack，External Jack，Input lack，Output．Jack，Iomud Speaker lines，Loop Aerial，Antenna Ground．Voltmeter，and＂On anil off．
No，936\％silver finish ea．\＄0．05 No． 9399 （fold finish ex． 0.05

## ＂Pasco＂Cord Tip Jack

## 010

This specialty has bert develobict by us as we have realized for a fum： time that expethineters refatire some－ thing better that bithling prose for atheling telephone cord tins to in－ strinnents．It takes the loss room than a biblime most，and whom attached to a panel does nom extenil mure than
 connection with fisiruments where neat appearance is desired．all al mot much rem on can he shared．lisutht me－ chanirally as well ins rererically．The novel feature of this jack is phat the connecting wire is allaclied to the eccentric hexagon nut by meat：of a small serest．shill favus on the nut．No soldering is necessary，anil there ate bo comblientions．Simply drift a twi c in four panel，insert the jack．then by means of pliers serpent un the horagen nut on the threaded shank．Thu compering wite is then attach id to the serow in the lea．



The four slots of the jack give enough spring tension to Erin the cord til tightly，but at the same． time do not give timon much fictions 60 the cord will he pulled nut from the cord tip．as is the case with many other similar ilcriees．The con－ structien is such that almost the en－ tire Bart of the large shank of the cord til extends from the panel 80 the fingers bul on thin cord tip it self，not on the cord．Once som have adopted the RAsCO Cord Tin Jack you will always use ft．Will take any standard cord tip．
No．Inc，Cord Tip Jink（pot pent applied for）$\underset{\sim}{2}$ for．so．jor

## Yaxley Battery Switch and Pilot Light

## \＄1．09 <br> POSTPAID

With the use of this combination switch and pilotlight there is muslanger of your listing the current on when sou cease using the receiver．
 it ines not take long to save ils cost in current Gated．The light from the tams shines through the red jewel set in a bole in the panel．Switch is shat－aft two c．Conulete with switch ti－bolt lamp and jewel．
No． $70 \% 1$ Complete
$\$ 1.09$
No．Fore Pilot light only． including Jewel and lanny

30．6\％

## Pacent Battery Switch $\$ 0.36$ <br> postpaid <br> 

＇roulucid mater highest standards of workinamshis．Its action 18 I osllive． scinderice contact screws use f
№．
\＄11．34：

## Pilot Switch

## \＄0．40

POSTPAID


Compact，well designed，well con－ trusted．Only lakolite and metal used．One hole mounting．Makes ur breaks contact with a quarter turn．lifinding post connections thane mo soldering．Dial plate fur－ in $=11++1$ ．
No． 9464
$\$ 0.40$

t．enirthens life of tubes and batteries by reducing climes of accidentally leaving we tubes lit or tampering．A quarter turn of the key lights the tuber．When key is not in，the att cannot be operated，Neat small anil durable．
No． 9378
$\$ 0.63$

## Throw Switch



Nountril on composition elects． solid composition handle．Spring hinting posts which gite quirk mil better contact than the ordinary kind and tiny stay tight．
No． 4100 ，Single pole，single
throw switch ．．．．．．．． 80.25 No．410f，single pole，double
throw switch ．．．．．．．． 0.35

## "Rasco" Lubricated Panel Switch



After fusting armmal with switches that came loose. and otherwise did not stay put, had hoose contucts. ete. we devigned the "Etasco" switch which we elatm is be superiot to anything offered herctofore.

Our natent spring fork tholds the switch hundle atways under a uniform tenkjun, at the same fime it insures the best eontare powsible. The double-leaf sprloks are nickel plated ami polished and in addition we are now using the new wiping condact which enserz every phint of the switeh noint

The rifted ribled bushisk. fored Into the wool or liakelitic. stays there porever-camnut robule louse. Vastly better constritition all the way through.
The lark fork assumes three differ-
ent masitlons to accommodate the switch in viarious thicknesser of Hunels. No screw threads used in bearing. Our bearing is a true mechanical machine bearing: no threads to bear and wear. Then comes the hest improsement the frooze foll lasellne or heavs lubrl. cating oll. This nakes it the only lubricated switeh un the market. Fou will be surprised at tho silent stacotls aretion. You have never exberlenead inything like it. The wrice is so lom it must appeal to anyone. Made radius 11/2".
No. 1921
$\$ 0.29$

## Panel Switch Lever



Neys style swiud lever with lock fork. Iansossible not to make posither contart at all, times, The blate radius is $1 \frac{1}{4}$ ". Whade is nickel malded and folished. Fork is phosphor foronza. Thee leck fork hold. the srew (in whleh It ro. tates) securely.
Nu, 200 (inmulete,

rmals is the jumily celebrated Weeston plus. On the market for years thd always clving perfect satisfactlon. Cord tips held firm. Cannot bull out unless released by pressure in spring which releaser the grlp.
No. 9\% 35
30.54

## Bakelite Piug



Bloutded plus, eflicient operation, ood apparanct, perfect electrical contact. Cord ths easlly Inserted in this connector. Falue high, price low
No. 943 \%
.30 .28

## Wood Base Switch $\$ 0.10$ postpaid

Law price set well made and ellufpped with spring bindIng posts in the bank for uuick coninortions. WIII do anything any other wood base swisch will do.
No. 707 Single Point
$\$ 0.10$


## Battery Switch \$0.15 POSTPAID

Same an No. 70 it er cept equippet with double point. It is a well made switch and well wurth the money. No. $\alpha$ ss Double Point ...... $\$ 11.15$

## Nickel Pointer



## Switch Lever



Rraci nickel plated and pollshere. It is
 switch. The new theng about it is that it has a central elongated slot which makes it pussible to tise it on at radius from I $1 / /^{\prime \prime}$ to $z^{\prime \prime}$. Therefore adjustable. Fintitely nickel plated and polished. No. $7 \boldsymbol{7}$

## Pacent Auto Plug

## $\$ 0.51_{\text {postrall }}$

rimetrety thock-prumf. tips is incased by phtien
she Il and jut hetal parts expuseri. Cord thps are tuirkly connetted and held With a tritimg sribs. C'anmut pull out unless butums are pressaxi. l'olarity Indicated by red and blue push-buttons, lakstite. Soll is genuine -i No. 9363 Nickel-platud metul purts. . . . 80.51 No. Bint fobld-phatal mertint purts 1.(M)


I sulid composition shell phug which usually sells frotr. $55^{\circ}$ cents in \$1.01. Nirely finished. Mechanically and chontrically right. patented cord tip holder which holds tifus tight. size over all ":"xy".
vi1. 11830
40.23

## Switch Blade



Mate af Hhase micke! plated and hikhls polished. Radius 1\%"。
V1ヶ. 8:


For the Famous Oscillating Crystal Circuits
The invention of the oscillating crystal by Mr. 0 . $V$. l.nesev has created a sensation in radio circles. The folluwing is an abstract from Radio News. Mr. Jugo Gerns baek, Elitor: has this to say abocut it:
"We are happy to present to our readers this month an epoch-making radio invention that will be of the very greatest imoortance within the next few years. It is the invention of a young Russian inventor, Mr, 0 . $V$. Lossev. It is now possible to do anything and every. thing with a crystal that can be done with a vacuum tube. The crystal now not only detects but oscillates and can, therefore, be used for amplifying purposes in both radio and audio frequency circuits. It has already been used to transmit C. W. While we do not look forward to having the crystal displace the vacuum tube, nevertheless it will become a very powerful competitor of the tube. We predict great things for the new invention."

Here is a detector which has been especianly developed hy us for the new Crsstodyne cirulits. Thls detector While lising the natural mincral zincite can he used with any other ersstal dis well. Several unique features are embodied in this detector. To begin with it is the only Hetector that has a sliding erystal cup with perfect contaet arrangement and whieh cup not only slidles but rotates with an eccentric notion. Iy means of the small knob the cup slieles easily so that any point of the crystal can be hrourht into contact. A new crystal ean be inserted immediately by unscrewing the small knob. The contact boint which at the same lime forms the eatWhisker is made of spring steel. The combination of Steet-zincite is the only one that was found practleal by Mr. Losset for the oscillating crystal. Note the micrometric adjusiment that can be made by the large knob bearing against the steel sprinf. This raises and lowers the steel binit in the tinest possible degree. The base is of mounded bakerte, afl paris nickel plated and polished.
No. 6900 (rystudyne Zincite Detector
with Mounted Zincite. Crystal
No. 6901 Naliral Zincite Mounted Cri.. \$0.0K
especially tested for (ristudy Cristal



Illustration is full size. Rase is solfo. bayek eomposition, Mounted on same is a nirket holder and hinding post which holds a fluted hard rubleer knob with its stiding rod inember.
This rod turns in slotted holder, and can be pushed from one side to the other to move the cat-whisker wire. Catwhisker is attached by a screw so it can bo taken off when desimd and roplaced. The outstanding part of the lopector is the patented nickel detectur cup and binding post. The knurted cab unserews and you place the galena erystal in the cup, then replaey the knorled cap and the galena erystal is held seeure. The crystal can be renewerl in two spronds. Wire combetions can be mate finickly. Metal hichly nickel nlated and polished. Complete in all detalls. Furnished complete with eat-whisket and one ga lena crystal. Sizes overall: $11 / 2^{\prime \prime} \times 1$ 18/8".
No. 1898 Detector
$\$ 0.40$
No. 1899 With Ginlena and tidilocite
Crostals


The one which we offer is perhans the hest cat-whisker that money can buy. Jintirely nickel plated, all brass barts. It tabes the swivel adjustment, of the ball-socket tyue. It is possiblo to move the arm in every direction.


Pacent Detector Stand


Dust-proof and easily adjusted. The ervstal. is alwass rearlly accessible. Top and base are high-grade moulded insulation. Metal parts are highly njekeled. Ideal for reficx circuits, for when once adjusted it does not easily jar loose to
No. $93 \% 4 . . . . . .40$

Permanent Carborundum Detector $\$ 1.29$ POSTPAID


Ileary fire-ponund contact pressure makes this deleetor permanently senstive. Carborundum manufactured y the ('arborundum c'o. in the great clectric furnaces at Niafaria Falls, is the only rectifying substanee that ean be used with a heavy pressure contaet; consequently. it is the only material sulted for nermanent detertors. Ifuilt solfdly and holits its adjustment indefinitcly. Guarantcerl not to "burn out". When used with the controlling unit, (arborundum Detertors exeel all other crystals in permanency, efficiency, selece tirity. sensitivity volume and perfect adaptability to any set. No. 9340
$\$ 1.20$

## Radiocite Crystal

We recomment Radiocite as the best afl fromnd Fitlio crysia! in existence. The size of this mounted cry"ctal $151 / 2 " \times 1 / 4$
 It contains a piece tested ralinelte. The cisstal will tit
ans standind cup. No. 31\%
\$0.25


This erystal eup is well macle and has a knurlad set sertw. Nieke] slated and polished; complete with serew and nut. Fits all standard momnted crystials.
No. 318
.80 .95

## Minerals and Crystals

## Bornite

Very popular abroad. Can be used with a phosphor bronze contact wire, or with zfncite. Marrelously sensitive.
No. Z000 I'er oz.
$\$ 0.45$

## Copper Pyrites

Very sensitive and very stable. Even sensitiveness along whole surface. Not caslly jarred out.
I'so plosphor lironze ontact wire, Guaranteed 100 Per Cent. Pure.
Nu. N00? fer uz.
\$0.45

## Zincite

The aristocrat of all wireless minerals. Too well known and ton far finmed to nerd to praise it fiere. Undoubtedly the most sensitive of all crystals. Guaranteed 100 Per Cent Pure.
No. abot mer az.
\$1.75
추. 2001 $1 / 4$ 0z.
0.45

## Silicon

There are two kinds: Silicon crystals and fusel Silicon. The former, manufactused in this country. is ab-solut-ly untit to usc; the latter imp ported liy us. is the oniy kind that should be tised. It comes in chunks and somesulat resembles graphite. It is rery hard and extremely brlttie.
Nis. 200\% l'er az.
$\$ 0.45$
No. 2006 1/4 oz.
0.20

## Iron Pyrites (Ferron)

Our iron joyrites are all importen! Shanish stock that may be used for years without deterioration. Very sensitive.
No. 2007 IPer oz. . . . . . $\$ 0.10$

## Mineral Sets

No. 2010 Zincite and Copper I'yrites (l'erikon), ner set
$\$ 0.95$

## Mineral Assortment

Consisting of generous pieces of cach of the six minerals and erystals Nown on this page. An excellent assortment for the wireless experimenter. Each mineral in a separate box. No Hadiocite supplied. No. 2025
$\$ 1.00$

## Galena Mounted Crystal

RASCO Galena Mounted ('rystals are all tested. Each spot is sensitive. We use only striated (argenti(crous) "steel" galena. No. 327
\$0.15

## "Rasco" Cat Whisker 1 Cmmun $\$ 0.05$ postpaio <br> Made accurately of phosphor

 bronze spring wire, and specially recommended for use with our mounted crystals. So cheap that you will not wish to nake your own after you have seen them. Can be elther soldered to the adjusting serew or the conical wire can be slipped over the screw itself without soldering. No. 1420$\$ 0.05$

Selenium


This metalloid is used for a variety of purposes, particularly to make selenium cells, etc. W'y carry only the chemically pure kind. Sold only in one ounce lots.
No. 5571 ounce
$\$ 0.50$

Gentlemen:
I have sent you several orders in the last few months and have been pleased with the quallty of the goods.

FRED COUSINS.
Moravia. Iowa.

Tested Radiocite


The most fumous crystal in existence. Used by U. S. Navy and all up-to-date Radio compantes. The only crystal that does not wear out or burn out as do others; as sensitive as galena and more stable. Sold only by the biece: packed in tin foll in a wooden box.

No. 900 Per piece
$\$ 0.30$

## 

At the bead wf wur business are mbin of wirle experience and gotur reputation fur kmowl*hge and skill in the ridlin tiolil. The brement management insued the firnt radio mail order

 perb qualitv of our wroshbets-whioh aro kiw fowl that they ean be sold on an unconditional Fuarantee of satimfacotion or money lisok. The larop roblume of hisiness per year reduces our
 the wobderfill villos wr irive alul why you sove money in doing husinegs with us.

## Magnet Wire

The rery best irade, scld
nlly by the spoot as offered 40 bere.
No. 2500, Duuble Cotton eovered, 18 B. d N., 3-0z., spool No. 2501 covered, 20 13. \& 8-oz., spool No. 2502, Double Ciotton covered, 2\% B. \& S., 8-uz. spuol . . .... $\$ 0.46$ No. 2503, Double Cotton covered. 24 13. \& S., 8-0z. Epool \$0.5 No. 2504, D.C.C. 26 13. \& S., 8-(oz... opool . . . . . \$0.78 Nio. 2505, D.C.C. 28 B. \& S., 8-0z., tyool ...... \$1.03 No. 2506, D.C.(: 30 15. \& S., 8-0z., spooi ...... \$1.13


Ningle fireen Silk

| Nu. | Spool | Spoui | Gallye | Nis. | SuOM1 | S!owl |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2507 | 4-0z. | \$0.50 | 30 | 2.514 | - -0z. | 50.45 |
| 2508 | 4-0z. | \$0.55 | 2\% | 0515 | S-0z. | \$0.55 |
| 2509 | 4-0z. | \$0.60 | 24 | 9516 | 8-0z. | 20.63) |
| 2510 | 4-0z. | \$0.65 | 26 | 2517 | 8-oz. | 80.65 |
| 2511 | 4-0z. | \$1.05 | 30 | 5518 | 8-0z. | \$0.70 |
| 2512 | 4-02. | \$1.30 | 34 | 3515 | $8-02$. | 80.80 |
| \$513 | 1-02. | \$1.85 | 34 | 25? | 8 -0z. | \$1.00 |
|  |  |  | 38 | $\rightarrow 5 \pm 1$ | 1-0z. | 80.85 |
|  |  |  | 40) | $0 \times 53$ | 4-oz. | \$1.15 |

## Rheostat Wire



## \$0.01

POSTPAID

Desinnud especialiy fur rheostats. A special grabe that will not crgstallize in use and will always keep clean and bright. The only wire for Rheostats. IResistarce is I ohm. per foot. Not less than 25 feet sold

No. 1650, per fuot. . . . $\$ 0.01$

## Tinsel Cord



Two tinsel conductors, each of 3 strands of tinsel, insulated by two cotion wrappings. The two ronductore surrounded by cotton wrapping. One of the black wrappings has a tracer in color. for polarity. This cord is useful for extension purposes. to connect the loud spealer with instruments. etc. etc.
No. 6450, per foot
.80 .10

## Litz Wire

## $\$ 0.02$ <br> POSTPAID

Litucndicht Figh Frequency Cable Is u-ed mure and more for winding coils, and for radio instruments. Made of many thin maneled wires twisted into of thin rable. The difference in result. between solid conductor and Litz cable is tremendous. and can no he alsprerlated till is trial has been made. No. 893 is used particularly for ( ${ }^{\circ}$. W. transmissim. No. $32{ }^{3}$ and 890 are used in connection with varlocoupler rotors. Fariocouplers, bank windings, ete. The 13 \& $s$ size giren is the size of the cable.
No. $3 t 3,20$ No. 38 wires stranded. Nouble white silk insulation. Kquivalent to No. -25 IBd N, per foot $.80 .0 \%$ Per 100 feet 1.15

No. 890, Litz Wire; 10 No. 38 wires strandpl. Double white silk insulation. Lquivsilent to No. 28 B\&S, per foot......... 80.01 ler 100 feet
0.75

No. 891 , Litz Wire; 48 No. 38 wires braided.
Iouble white wilk insulation. Fquivalent
to No. $\geqslant 1$ Thas, per foot. . . . . . . . . . . . . . . $\$ 0.03$
Per 100 feet
2.25
 into 3 strands of 20 wires euch; all cabled together. Wouble white silk inmulation. Equivalent to No, 20 IS\&S, ber foot 0.11
$\qquad$
Per 100 feet
3.50

No. 893, Litz Wire; 24 No. 28 wires cabled 6 strands of 4 wires twisted and separately silk insulated. Double silk insulated outwide. Equivalent to No, 14 IB\&s, per font
$.80 .1^{\circ}$
Per 100 feet
.10 .50

## Flexible Silk-Covered Rubber Insulated Wire


W. List three styles, two of which are rubber insulated. These are liot to be used for telephone receiver work. Thes are used to make tomporary connections on instru ments, and cin also be used for carrying sinall amounts of current such as for lighting battery lanips, to connect the leads to the filament of Vacuum Tubes. etc. The Tinsel Cord can only be used for telephone work.
No. 4400 , 1 conduetor rubber insulated;
14 No. 34 copper wires, green silk cover,
per foot . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\$ 0.0 \%$
No. 4401, 2 conductore rubber insulated:
14 No. 34 copper wires, gilk braid cover
in green, per foot
30.05

No. 4402, 2 conductorn Tinsel Curi. Each conductor Insulated with cotton braid, the whole outside corered with green Silk Braid. Csed on telephones, per
foot

## Extension Cord



To emable sou to place your loud sjeraker or phones at a distance from the recelver. F'ine quality. Connecting plugs included.

| No. 9491 | 20 | feet . . . . . . . . $\$ 0.89$ |
| :--- | :--- | :--- |
| No. 8818 | 30 | feet . . . . . . . $\mathbf{\$ 0 . 9 9}$ |
| No. 8819 | $\mathbf{4 0}$ | feet . . . . . . $\$ 1.09$ |
| No. 8820 | 50 | feet . . . . . . . $\$ 1.19$ |



Consists of Ave wiree of different colors of insulation for convenience and accuracy in connecting your set to the fatteries. Rubber Inpulation covered wilh woven thread. Highest grade. 2 large storage battery clips furnished.
No. 9003
\$0.79

5-6-7-8-9 Wire Cable


Idas ior momerting receiver to buttery nlaced it a Atstance as in basement. Insulation of each wire marted so you can distinguish instantly. Comes in any length up to 100 teet.

No. 9494 Perft. (5 wires). $\$ 0.09$
No. 8806 Perft. (6 wires) . \$0.12
No. 8807 Per ft. ( 7 wires) , $\$ 0.15$
No. 8808 Per ft. ( 8 wires) $\$ 0.18$
No. 8809 Perft. (9 wires) . $\$ 0.19$
No. 8814 (6 wires) . . . . $\$ 0.85$
No. 8015 (7 wires) . . . . $\$ 0.91$
No. 8016 ( 8 wires) . . . . $\$ 0.97$
No. 8017 (9 wires) ..... $\$ 1.03$

## Bus Bar Wire

Thit copper, In-plated and pollished bus bar wire is square and measurea $1 / 16^{\prime \prime} \times 1 / 16^{\prime \prime}$. Very easy to solder, because the wiro is tinned already. Comes only in $24^{\prime \prime}$ length
No. $6400 \quad 10$ lengths . . . . $\$ 0.20$
No. 6402 Round, 10 lengths
.$\$ 0.20$

## Rubber Covered Hook-up Wire

Extensively used for wiring sets (ionsists of a stranded copper wire size 18 , covered with layor of gray black rubber. Smooth, neat appearance. Flexible and easily handled.

No. 4426, 25 ft.. . . . .
$\$ 0.44$

## When Comparing

Prices - Remember we prepay transportation on practically all items-a saving of more than $10 \%$

## Battery Wire Assembly



Make your A and $\bar{B}$ battery connections duickly and casily. Made of different colored rubher and cotton covpred insulated whes woven together. Filminates unsafe and unsighty wirlay as when using the old style wires with their ragged appearance. Five feet long. Reaches from table to floor. Cian be used with ang tsper of cabinet. Lugs on one end.


## 10-Foot Length Cable

Very indispensable if sou intend to install sour batteries in a closet, or in the pellatr, another romm. Utr. Langth 10 fect.



We carry (wo styles of telephone cords, as illustrated, one 5 ft . long, the other 3 ft . Made of best tusel throughout. We do inot carry the cheaper and worthless kind of onrd where stramed wire is used for the reaton that concord, where stran' iphome cords destroys and breaks these stant bending of phome cords lestrogs and breamsunt of wires in short order, fiving rise to terrinc amount of [mone noises. Illack only, mercerized cotton. The threefrot corl comes with 2 loops and 2 tips. The loops can be used on 'phones that are made for the tld cord. All that it is necessary to do is to flatten the metal loons by thit it is necessary ollers, which make a tip out of the means of a pair of pllers, which make a Hp out of the
loop.
Niv. 5500
5 $\qquad$ .$\$ 0.31$
No. 5501 5ft with 2 tijes nmol 4 loops. ea. 0.31
No. 3300 3 ft . with 2 tipn wind 2 loops, ea. 0.16


With this Ingenfous and inexpensive device attached to the positive and negative phone binding posts you can use from one to five palrs of phones on any radlo receiv. er. The spring sockets grip any phone tip. Loose contact is imposithle Works while loud speaker is in operation. Licensed under Gernsback Patent No. 1,557.248.

No. 7117, Pair

## Yaxley Cable Connector Plug



## $\$ 3.27$ <br> POSTPAID

This battery cable operates on the same princlple as any blug and jack-sou simply insert the nlug. and There are 7 riri-edinted strands of insulated stomet copper wire, each one of them plainly designated with an engraved metal tag, corresponding with prong to whieh it makes contact. The connerting plate is mounted, as a rule, on the rear of the base board, sub pancl, etc. The pligg can be inserted or removed at will. As plus can only be insertw one was, there is no chance of making an error. The ends of the cuble and prongs are tinned, to facilitats sobdering thereto. The plag proper is made of genuine balielle, richly polished. Contacts therein are phosphor hronze, and the contate prongs are brass. Tathgith of cable 5 fect. Your first thought on adapting this deviee to your Ratio is law sum mald have eber dane withotit it.
$\$ 3.27$

## Yaxley Multiplug

## $\$ 2.19$ <br> postpaio

This devire fits into tlu spare oceunied by any standard house current nutlet bus or it was be separately attached to tie baseboard, lear the lloor, or, even is the flonr ltsclf. The batteries to which thls recentable are attadhed. may be placed in an itljateent closet., or even in the rellatr, the lead wires running to the proper terminals of the outlot. then through the plug to their resper. tive terminals in the liadio receiver. You simply nlug in the sperial attarhment furnished-there is only ONF way it can lin done, as a safeguard. When you hate shut oft sour Radio, the plag can remain in the reamtacle, or can lie remowed. Complete direrelon, for wiring furnished Hambome hriass finish.
No. 9088 Complete, with Plug
\$2.19

## Battery Lead Tags



These Jittle tags are indis: pensable to any Radio settime and again their use has prevented short circuiting of batteries and blowing out of costly tulres. Illustration is full size. Made of polished aluminum. Jrongs will clasp any size battery lead or cable. Full set ronsists of $\mathrm{A}+\mathrm{A}, \mathrm{A}, \mathrm{B}-\mathrm{B}, \mathrm{B}$ Hetector, $13+\mathrm{Amp}$.90 . $13+\mathrm{I}+5$, No. 9780 Set of 8.

## Screw Eye Insulator


$\$ 0.09$
POSTPAID
A very handy type of insulator for keeping the lead-in away from walts or any foreign object. Galvanzed iron screw. lorcelain insulator. I.ength of screw $21 / 2$ inclies


Wire

## $\$ 0.39$

POSTPAID
No aerial installition Is truly complete and efficient unless this rubber covered lead-in wire is attached thereto, for it is a positive means of properly insulatIng against any losses in the intennid system should the lead-in wire rub against any object, whether it bo the leases or limb of a tree, a roof. it gutter, etc. This wire ean also be used to rery phod advintage as the ground lead to an outside ground, or through the llooring to the cellar, ete.
No. 9743 25-frot holl
$\$ 0.39$
No. 9744 50-fuot Jkoll
$\$ 0.73$
No. 9745 100=foot lisoll..
$\$ 0.95$

## Flexibus Hook-up Wire

## $\$ 0.72$

POSTPAID
In the carly days of Itadio receiver rotsistruction, smare wire connertiuas of bus bar were universally used-and at a great hass in effermers. due to the Junger Jeads: inwolved. its well as neeessi
 tating a tedlous task. Point poiml wirtige is now pussible for greatest efficiemy. Besides, there are no Varnishod cambre ont." Flexibus wire is corvered with a farnished cambrice tameproof insulation finished in the following colurs: Iked, ('reen, Yellow, Brown, Black. The wire itself is flexilfle timed stranded eonper.

No. 9747 Per 25 ft . Roll
\$0.72
Brach Arrester \$1.98 POSTPAID
The price of this very efficient lightulnin arrester is more than rompensated for ith the ahsolute faith you ram plame in it as a 100 r/m CERTAIN arrester. You enjos that feeling of complute safcety no matter how severe an elertriral stortn may bo raging. It is intencled for out-door use, and attarhes dirertly to the lead-in wiri just outshie the window. The gromed wire
 is bolted to the lower seetion. Findosed vacuun antridge fan be replaced and thus can be reatily examined. l'rotecting hoobl is of baliolite. .bporoved lys I'nderwriters.
No. 8999
$\$ 1.98$

## De Jur Lightning Arrester


$\$ 0.46$

## POSTPAID

Moulded of a high heat dielertric material. The accented commeriainly used air gap is treotporated in this arrester. It is weather proof and is intended for both outdoor and indoor use under any climatic weather condition. Transparent casing dovers the air gats, Connedtons are made to large Fiblnestock rlips. Approved by' I'nderwiters Laboratories.

No. 9640
40.46

## "Rasco" Cliz Leads



This is a ficxtble silk-covered conductor to the ends of make a sate experimental connertion. Two colors, green which are soldered nowerful brass spring elips. Instead of using wires to make your connections-screwing and unserewing binding posts-a clij, lead hooks in a jiffy arrek red, tor distinguish ronneetions. Length of elip lead. (trif fint.
No, 788\% "Kasco" Clip Leads, each ....\$0.12
lozen lots ......................................... 1.35 onso any wire. and binding post or cther ronductar to

## Lock Binding Posts



## $\$ 0.25^{\text {Postralo }}$

 -…0.05


Full Size


Numething new. The top scirus down and elamps the filust wire. A clamping ac(ion and not shearing action. Pigure 325 shows post open Figure $\hat{6} 26$ shows post closed

No, 32: Jarge. ph. \$0.e.
No. 3el; small. ea. so.15

$3 * 25$

All Cuts
Binding
Posts

No, 202

> Iozen, either sityle, \$0.50
> . . . . . . . . . . . . Each $\$ 0.0 .1$

Well made of composition will give soad service.
No. 650 has $k$ /ite michine strexy and No. 651 has a weor screw; both have a hesagonal brass nut in renter. No. 202 is nickel blated at botura and has a machine screm. No. 6 N
No. 6 an
doz. $\$ 0.41$


650


## Binding

 PostsOur binding nosts are all accurately made, of brass only; IItustraticins are full size. We have specialized for years in bind ing posts and yon will find them right in every resmect. Euch post comes with serew and Whasher, not shown in illustration. We fumish all style nosts, either nickel plated or brass lacquered. State which style you desire.


Instrument Posts


## "Rasco" Slant Binding Posts

 $\int$ PAID tom part shaped botposts a very classy appearance, something not seen elsewhere. Top of compositton, the bottom brass nickel plated polEsh.
No. 301 8/32 thread each ...... \$0.04 cioz, (90.50
No. $600 \mathrm{k} / 3 \mathrm{~B}$ thread ench ...... 50.08 (105. 50.80

 Batters-1- $126^{\circ}$ "A" ISattery-; 127, Ground: 128 Telehhone; each style. $\$ 0.01$.
 pearance of your set. No. Wb: Vinch

Derperl
0.80

## Spring Binding Posts

A favorite with all experimenters. Absolute rontact at all times-simply press down prong, insert witr and the connection is made. Too well known in refuire much description. All finished in phospher bronze nickeled. No. 1010 Takes No.
 length *": screw hole clears $6 / \bar{\sigma}^{2}$ serew. Fiearh, so.05; lozen \$0.50 No. 1515 Takes No 16 B. \& S. wire: has lug to whicil wire can be sol-


1010
length $3 z^{*}$. Each, \$0.03; per dozen


1515
........ . $\$ 0.30$
No, 33 Takes No 12 B. \& 8 , wire. Length over all. " ${ }^{\circ}$; widh, "** clpars 6/32 screw. Same as No. 44, ercept without screw. Wach, \$0.06; Der dozen......... $\$ 0.60$


## $\$ 0.03$ <br> POSTPAIO

No. 44 Takes No. 10 wira Length over all, $1^{\prime \prime}$ width "/8"; screw hole threaded for $8 / 32$ ferewn. Each 50.03: per dineth. $\$ 0.25$

Double Connector PRESS
DOWN
HERE,


## Post $\$ 0.04$ POSTPAID

Can be mounted on panels. Atands upripht. One of the handiest connectors $m$ ade Has tapped hole which takea an 8-32 8 c Few. Furnished with post.

No. 48
Pach . . $\$ 0.04$
Dnzen . $\$ 0.40$

## Engraved Character Binding Posts

## \$0.16

If you want the beest binding past, here it is. Nnt only are these Bakelite tops non-removable, but they are beallffully engraved in white pnamel, with any of the following charactery:
ANT. GND. A- A $+\mathrm{B}-\mathrm{B}+\mathrm{DET}$. $\mathrm{B}+\mathrm{C}=\mathrm{C} \mp \mathrm{Ilan}$.
 The non-removabic benal prevents short cirrilting of batteries and hurnt out tubes. if heads were itwerrectly spun hack on to the thread at any time.

| No. 8914. |  |
| :---: | :--- |
| wish). State which posts you | Each...................$~$ |



A most madern knob, uscd entrely by some of the largpat set manufacturers. Has an arrow cograved as shown. Made of black hard rubber composition. of generous slze. Total diameter is $1 \%$ ". Hetant over all, $1 / 8{ }^{\prime \prime}$. There is also moliled info it a brass insert to tako standard guar-ter-inch shaft.
No. 5321
$\$ 0.15$

## Twirler Knobs

Fevorles with all experimenters. The sizo of hoth 18: dia. $1^{11 / 6^{\prime \prime}}$. helght $8 /{ }^{\prime \prime \prime}$. No. 4451 comes with 8-32 and 10-\%2 hushins. The No. 199 is furnished with our Nis. 1200 gerew to fit No. 1250 fork, length of screw "\%".

$\$ 0.06$
Nin. 1451 (at left)
.80 .10
Bushing

## $\${ }_{\text {Postpalo }} \mathbf{0 . 0 3}$

No. 791 Hushing for use with our No. 650 peats is b" dia. x "解" hifli: clears 8/32
 screv.
No. 701 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\$ 0.03$

## Shank Knob

## $\$ 0.15$ <br> POSTPAID

Thes beautiful knob is a special favurite with all temutcurs． It has a nicleyl sh．nik \％＂，long wita a crn－ tral zole of ${ }^{2}$＂；widse hole is tappee 8 －
 ithictiness $9.16^{\prime \prime}$ ．
No．2401．．．．$\$ 0.15$


## Switch Handles

## $\$ 0.10$ POSTPA10

limese hamiles are used for switches and other slmblar pur－ Doses，No．．0\％measures $13 / 1 \mathrm{f}^{\prime \prime}$ high：＂\％dia．：turnlshed wlin N／os D．Dushing anly．No．sil

 S／oy servw imbedded．
No．0．s（Ifft）．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．$\$ 0.10$
No．ss（right）．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 0.04

Flutad Knobs


人0．305t

## $\$ 0.15$ <br> POSTPAIO

Our latest Hutal knotes with in－ serts．The insert is proviled with 8－ib＂bushing．1sluck composition． No．soos．Without shonlaler．
 No．＊055，With whoulder， $1^{\prime \prime}$ ligel．11／4＂alia．．estheh．\＄0．15


3：5 361
No．301， º $^{\prime \prime} \times 1 / 4^{\prime \prime}$
＂6－3s thread． $\qquad$
1）ロz

$\$ 0.15$
No．303，：＂－16＂$\times 3-16^{\prime \prime \prime} ; 4-36$ threndl．
\＄0．15


No． 306 ． $3-10^{\prime \prime}$ diat． $3-16^{\prime \prime}$（Jilek；ntern $4-360.15$
No．30\％，3－16＂lia．， $1 \mathrm{~K}^{\prime \prime}$ think：wiem 4－iti 0．1：\％
No． 375 ，switelı sitoly，cun be uned with all


No．205s
＂Rasco＂＂Jiffy＂Jacks and ＂Jify＂Plugs


TIFFY Jtikis ure the simplest，and most efficient Cord Tip Jucks ever assigned．sitmped tron a single plece of metal they grip ans stule tord tip from any tnake phone or loud speaker．The JIEFS JAi：Ks take mlntmuin ruma， Drill two small holes in yuur panel and mount the JIEFY JACK with screq－and nut fumlined．No soldering neces－
sary the the wile moes ripht on the secew．X－ray view shows how two of the jacks are used in conjurgetion with our Jiffy cord plug．The jucks go on in back of panel，only sureves show in front．Made of best surfing torass that will not wear out．Humbreds of other tises mor our JIFFY \＄Al：KN．We will pay $\$ 1.00$ for every new ase for JIfFy IACKS that is accepted by us．
IfF＇s llar＇sis are male of semi－hard rubber into which the tips of your phones or loud speaker are pushed．The cheabest and stmplest plus ever deslgned．Ita small size and neatness made it famcas overnight．stze $1^{\prime \prime}$ long， $3 / 2^{\prime \prime}$ whie and＂＊＊thirk．No tools retuired．Jus wet the metal rorid Lins and push through openings．I＇lar can be used with any standarit cord tip jark，but best with RASCO NFFY JACK．
No．48\％゙す Two Jiffy Jankw with nats and serewn and one jiffy Cord Plug．．．．．．．．\＄0． 15 Nin．487 Ont Jifiy Jark romplete with nut and merew ．．．．．．．．．．．．．．．．．．．．．．． 0.05 No． 4871 ，Jiffy Jacke without nuts of serewh，two for ．．．．．．．．．．．．．．．．．．．．．． 0.0 ． No， 4800 Kaneo Jifry Pinge（semi－hard rubber part onigy）．．．．．．．．．．．．．．．．．．．．． 0.10

Gen tleraen：
RASC）Service is sure all it is cracked up to be．I have received three different orders from am still welting for an order from another company，which was sent in before the first RASCO order
GEO．B．INGRAMAM．

41 Rodney Street，West $\mathbf{S}^{-}$Johi．N．B．

## "Rasco" Name Plates

Our name plates are of brass with a blark background. Letters are polished nickel, standing out stroncly against black background. Each name plate has two screw holes. They are well made and will outlast your outfit. Order by name and number. Name plates measure $1^{\prime \prime} x^{31} /{ }^{\prime \prime}$. No. 839 "Increase Current" No. 840 "Increase Current" (Right)
(I.eft)

No. 806 "Phones-Hom Orr"
Facli Style $\$ 0.08$


SERIES



DETECTOR


JVACUMTUBE © ANTENNAC


| GRID |
| :---: |
| PARIOMETER |


 PRIMARY 5 AUDION LOADG COIE DONG OFFF 0 PHONES-HORN-OFF

No. 6050 Condenser No. 834 Series No. 821 3rd Step No. 827 Tickler No. 823 ssecondary Condenser No. 817 Output No. 829 Telephone No. $837 \frac{1}{\text { No. }} 807$ Phones No. 807 Phones No. 811 secondary No. 814 Detector No. 813 Vacuum Tube No. 831 Transmit No. 820 2nd Stej, No. 826 Gria Variometer No. 835 Is l3attery - + No. 835 IB l3at
No. 818 Input

No. 828 l'arallel
No. 822 Coupling
No. 809 Aerial
Ne. 812 Jrimary No, 808 Lcading Coll No. 6051 Antenna No. 830 Recelve No. 819 ist Step
No. 825 Plate Variometer No. 836 A liattery $\cdots+$ No. 824 Primary Condenser No. 833 Detector Tuhe
No. 841 "Islank"
No. 810 Ground
No. 813 Auraunu
No. $86 \hat{i}$ on 865 off

## EACH STYLE, \$0.021/2

Price of all our name plates, in dozen lots 250 , with he excention of the two "Increase Current" Plates, and "Phones, Horm, Off." the price of these is $\$ 0.75$ per doz.

## "Rasco" Binding Post Name Plates



Fere is a name plate that goes under your binding post. that fits any binding post, and loaks roorl no matter Name plates post you use. The R.tsco binding Post Name Plates can be mounted on all instruments, and on account of their small sl\%e freatly enhance the appearance of your sct. Each denomination is repeated twice on each Name inate. It is thus possible to read the dersignation on a panel abowa ath below the binding post. Illustration is full size.

No. 6000. "Phones,"
No. 6001 . "Ground.".
No. $6002, \quad \because$ - $\because$
No. 6003. "'Output:"
No. $6005 . \cdots$ is' Jattery-
No. 6006, "Louldspeaker"
No. 6007. "Nrid,"
No. 6008. "Load"
No. 6009. "." "" liatterv-"
No. 6020 New "A" Jattery+
All situles
Dozen I.ots


## "Rasco" Vacuum Tube Sockettes

Substitute for Vacuum Tube Sockets


A distinct novelty, originated by us. Four make a complete Varuum Tube Socket for panel mounting. The Sockettes are used on panels and bases where there is a scareity of room, as when many tubes are to be mounted in a small space. Positively the best means for making contact, and holding tuhes, The reason is clear. In all other sockets contact is made only by the tower tips of the Vacuum Tube touching the flat surface. Not so in the Rasco sockettes. Here the tube pins actually engage with a $3 /{ }^{\circ}$ p contact and this contact surrounds the entire surface of the pin. If you have erer been eragperated by tube noises due to poor contacts. you will welcome the IRASCO Sorkettes. Each Sockette has a shank which is split into four parts, which gives enough springiness to allesy suffelent varlation for the varying thickness of the tuhe contact pins. To mount. take your tube and press it down hard on a plece of paper. This gives the exact location of the four pins. Secure the exact center of each pin, by means of a pin prick punching right through the paper. Then transfer the plece of paper, on the panel, and rluplicate the location of the holes by another pin or sharn instrument. Then drill sour holes, insert the Sockettes, and the job is done. Two brass nuts are furnished with each Sockette, and when connections are made to these bruss screws underneath the panel, no better contact is possible. Once you have used the Sockettes you will nerer do without thom. They hold the
tube with a Fise grip. One set of 4 Socktube with a Fise grip. One set of 4 SockTube. No. 1550 made to take the Stand-
 ard U.X. base, long prong (or TV.V. base), tube.
No. 1550, Brass Sockettes, nickel-plated, per set of 4


Panel Light

## \$0.48 <br> STPAID

 vety liallo werente for can be placed in aths part of the rootm, indepentent of fle lighting wletin, as this found Lixdt illuminates the lials with a jleasing eftect. Consists of at handonne reflector athd metal arket. One lole montuting. basily winedNo. 9707 Less Lulb
$\$ 0.48$
No. 9776

## $\$ 0.73$ <br> POSTPAID

Bruno Light Switch

1his instrument cumbines buth a battery switch and a rubs pilot light which glows in an attractive manner when the switelh is furned on. This is atraly one hole mount device. for the glow is visible throligh the eenter of the switch hutton. Its cost is insignificant in the saving of batterles it efferts, warning you that your switch is ON, and shotth be turned off. Red ruby jewel


## Pilot Light



## $\$ 0.35$ <br> POSTPAID

The pilot Liglit is practically int dispensable ort any set. Tells at a Hiance when lubes are lit from the front panel. thus preventing thaste of hattery eurrent, when sour Itadio is not in operation, Single thole mounting. Sttractive as well as useful.
No. 9775 Without bulb, . . $\$ 0.35$ No. 9776 fi-wolt luils for
aliove
$\$ 0.30$


Model 4

## \$22.85 POSTPAID

In arter to own a hatsmitter either for phone or Erey (rode). you must be able to transmit and recelve fode messages. And there is a new world awating your as soon as vou start trans-mitting-for you soon list your friends in every corner of the fonlon, esplecially on the ever increasing popular short wate hand. The New Omnigrapin ronsists of a clementable elork motot' which rebolves a turn tuble upon whirh are nested removable plates. oll the edge of which raised dhararters catuse the marhine to "transmit" to you its message whikh you decipher. The spced of this turntable is governabie fiom 5 words to 50 words a minute at will. The spring runs metor for 45 minutes. Bomplete with 5 Dials. size 8 inches by 6 inches by $51 / 2$ inches. In a short time, sout can apply for a license (no (harge), this machine having quickly taught you the rode.
No. 9638.
\$22.85

## Miniature Bakelite Base Knife Switches

## $\$ 0.47$ <br> POSTPAID

These knife switches can be adapted for many purposes. They are the most compact switches made. yet their insulating qualities are as de. petulable as switches twice their size. Mechanically and
 electrically perfect. Base is मenuine lbakelite-all metal balts are buns, heavily nilkel plated. IBnding post comneretions provided. A -mmparative suggestion of their compartness catl be wiven loy mentioning the size of the Su. 4604 switils. $\because 1 / 2$ inches long thy 1 管 indes wide.
No. 9061 single Pole. single throu. . . . . . . . . . $\$ 0.47$
No. 9062 Ningle I'ole, Double Throw.............. 0.56
No. 9063 I)ouble Pole, single Throw............. 0.65
No, 9064 Double Pole. गouble Throw . . . . . . . . . . . . 0.82
No. 9065 Trinte Pole, single Throw. . . . . . . . . . 0.99
No. 9066 triple Pole Wouble Throw............. 1.19
No. 9066 Triple Pole siale Thruw 41
No. 9067 lrour Pole, Ningle Throw . . . . . . . . . . . . . . . 1.58
No, 9068 lour Pole, bunhle Thmos ................ 1.58
No. 9069 Five Pole, Ningle Throw. . ........................ 1.98
Porcelain Base Throw Switches


No. 9856


No. 9859


No. 9858

No eaperimenter can afford tu be without a full supply of These most necessary switches-for many purposes. (iemuine high insulating quality porcelain bases. Copper contacts. Wood knobs. Fibre insulation eross bar rerminal screw connections. No 9858 measures $2 \%$ inches wide by 4 imbes long.
No, 9855 single bole-single Throw. . . . . . . . . . . $\$ 0.23$
No. 9856 bouble Pofe-Single Throw $\$ 0.33$
No. 9857 Ningle Yole-Double Throw.
Nn. 9858 Buuble Dole-Iouhle Throw ............... 50.49
No. 9859 "Iriple Pole-1)ouble Thatow............... $\$ 0.97$

## "Time-Lite Radio Clock Switch 47.48 <br> POSTPAID Mereln is contained not

 only a very efficient and highly ornamental clock. but an automatie, condetcrnifing the exact moment you wish your Radlo recelver to be turned on ar off. Irevents the oversight of allowing your tubes to burn all night. Does not requrre ithy current to actuate its own mechanism. Takes one moment to install-adaptable (1) iny and all receivers. Keens perfect time. An attrartive onnament for any mantelplece-the case is hand rubbed, and hand polished mahogany finish.

No. 9860
$\$ 7.48$


## Pandora Crystal

 Receiving Set $\$ 1.73$ POSTPAIDThis is not a tos，but a scientifically correct ersstal detector recelver．simplest opetation－no batterles ever required．Complete．Pair of head phomes and aerisi only required．Can only be used where lucal broadcast－ ing stations are no furthor thun 25 mile＇s．Mandsomely finished in rich IEusset Ibronze．binding posts and trimnings ale bright Juvtru nickel plated．Uweral！si\％ \％inches in dameter by 5 1／4 inclies high．

No． 9982
\＄1．73

## Radio Tools

No． 8792 SIDE CUTTING PLIERS．． 1.19


Hdispensable for cutting wires in cramped quarters－for stripping insulation，etc．lourged it at tempred．



The hundy all arsund tool．supulit be in overy exporimentors tool kit． Fof e e from crucible steel． Kumbed gun barrel handles．

Ňo． 8794 HEXAGONAI，NUT WRENCH


For tightening lexusonal nuto－ the projerting soldw fits into hol－ Low of handle．For 4／32，6／：32， $x /: 22$ and $10 / 32$ huts．State whill whe sum ate ordering．

## No． 8795 RATCHET SCIREW

DRIVER
$\$ 0.99$
The adrantages of an automatic
 batchet srrew driver are well inown．Ifatclset merdanisim is per－ fert．A qually product．Fsperialls acsiphed for Hadio experimenters．


Ground Clamp

## $\$ 0.23$ <br> POSTPAID

Son more laburious scraping oft the paint or rust on your ground pipe，for proper con－ tact thereto！The hardened steel points on the sercy and frame bite into the metal，as－ suring perfect contact．In a few moments，the job is over．Will tit any pipe． $1 / 4$ inch to $11 / 4$ inch ith dia． meter．Terminal screw con－ nection on frame．
No． 9929
\＄0．23

## ＂No－Sod－er＂Wires

（1）
The use of the up－to－date＂No－Sod－er＂wire connectors makes easy what until now has been difficult and annoying in tnany cases．Besides it gives 3 out a better connection than neariy all cabes where solder is used．Made of highly insulated flexible strandud copper wire，with brass eyelets．Order the fuantits of rach length you desire．
No． 9571 Length，2， 3 or 4 inches，cach．．$\$ 0.04$
No， 9532 Length， 5,6 or 7 inches，each．．$\$ 0.05$
No． 9573 Length．8， 9 or 10 inches，each．$\$ 0.06$
No． 9574 Length， 11,12 or 13 in．，each．$\$ 0.07$
No． 9575 Length． 14,15 or 16 in．，each．．$\$ 0.08$
No． 9576 Length．17，18， 19 or 20 in．．ea．．$\$ 0.10$


## Nail－It Knobs $\$ 0.09$

This insulator is inade of rood quality porcelain，and has a nail through its center for driving Into uood，stone，etc．The wire $i$ set into the recess shown and the upper aection of the insulator is then rlosex tightly upon it．Very useful．
No． 9795
\＄0．09

## Brach Totem Pole Antenna

## $\$ 5.68$

Where conclitions will mot bermit the erection of an acrinl．the Bruch Totem pole can be in－ stalled in it few minutes，with superior reaults．sitands about 44 inches high，and very stibstantially huilt．It consists of a non－ indutive wound coil of enameled wire，sclef－ tifically and theoretically designed to serve as the most suitable subsititute for un antemna． Can be mounted at ans angle．or erected like a flag pole．An adjustable iron base，ciamp． screw eses and 25 feet of gux wire are ln－ cluded whth this instrument．shipped express collect，due to excessive weight involred．
$\$ 5.68$
No． 9698.

## Sponge Rubber

## \＄0．10

POSTPAID
some tubes are motorious for the ringing sotuds they five out due to jarring．The use of our swonge rubber rushion will elimin－ ate the noises．Vea one piece for each tuhe．
S＇ize 2＂色＂x刀＂x品＂thick．
No． 8989 ．．．$\$ 0.10$

## Antenna Spring Tightener

## 国 $\$ 0.45$

## PER PAIR．POSTPAID．

Consists of two，foncelain high Itsulating qualtty insula－ tors，rigidy attached to both ends of a coil spring，which takes up all slack．or vields，if either end of your antemm is attached to a swaying tree Limb or clothes pole．Over all length about 9 tinches．
No．9796．Per Pair
\＄0．45

## ＂Rasco＂Radio Cement \＄0．36 <br> POSTPA10

For ull radiu work．It is hight． by insulating，water－resisting，and gulck－drying．Used particulardy for emmenting covered wire togeth－ er．A cutton or silk，wound coll is wound upon any furm，white the form Is thrit covered with a piece of thin puper．Then the wire la wound on top of this．Apoly the Cemont by means of a brust that comes with the hotile．The Ce－ ment drles quickly and tho wire form can be removed in twents minutes．The paper is then re－ woured from the insirle of the coll and another mat of（ement is ap－ nlted to the instide．You now have a wire form that holds tonether without any vistble support．Fia－ rlocouplers．loose couplers，etc． can thus be made without using the usual tube or mandrel．The two－ounce foctle will furnish enough（ement for mang windings．
No．1754
$\$ 3.36$

## Spring Clips


favorite．Three sizes．No．2exiz is provided with new handy lug to slip under bind Ing post．The others are plain． $\$ 0.12$
$0.0 \%$
No．229\％． $11 \%$ uvier all
No． $4411.11 /{ }^{\prime \prime}$ over all 0.05

Nis． $7 \%$ i $1 / 4^{\prime \prime}$ orer all（light type）
＂UX＂Tube Bases

## $\$ 0.15$

for the serbous canerimentor whe wishas to assemble bis whe plug－iti culls，these bakelite＂plugs＂are indispensable．After the coll is mounted withith the hollow of the base，the＂plus＂＂all be incerted intu tube sockel ar into our No． 1550 tube sorkel，at into our $90^{\prime \prime}$ low Sockettes．Contad pins ate ${ }^{\text {Phe plug measures } 1 \text { is in diameter ly }}$ I＂8＂high．

No． 8790

40.15

## Sliders

## ©0． 18 POSTPAID

Of this patented sllder probably mare have been ：old than of ati others combined．It is furnished with ball and spring．flolder tits
 $x_{4}$＂square roll．the size over all is $3 /^{\prime \prime} \times 7 /^{\prime \prime} \times 1 / \%^{\prime \prime}$ ．Somes in red and black rubber eomposition unly No． 875 Hlack ． 80.18
No． 876
.$\$ 0.18$

## ＂Rasco＂16－in－1 Radio Tool <br> 

Here it is！Here is a tuol that hloes 16 different hings and does them uell．A tool that does practicalls eversthing reajulred in lulluling sour radio set．The tool is built of hardened steal，exactly as per hlustra－ tion，itghly finishent．Here are sume of the usen： 1. Whrewdrlver．2．（lenter punch．3．（Juthtersink．4．Hus hat and wire hender 5．lhas bar aml wite hender for 8．：32 screw．6．J3us bar and wire bender for 6－32 ecrexp． 7．socket wrench for jacks．8．Sorket wrench for $4-36$ nut． 9．Socket wrench for $6 \cdot 3: 3$ nuts． 10 ．socket wrench for 8－32 juts． 11 ．Wrench for knurted huts．i2．Sherew gauke for 4－3s screw．13．Screw gauge for 6－32 screw．14．Screw kauge for $8-32$ screw．15．screw gauge for 10－39 screw． 16．Knife for wire $\mathbf{~ k i m i n g . ~}$

These are onls the important uses of the tool，but many other uses wilt readily susseat thomselves to every radjo experimenter．You will wonder how you have gotten along before without the 16 in 1 radio tool．Sicu $4 \% \times 1 \frac{1}{6}$ in． No， 4800 सин＂о 16 in 1 Radio Tool © 27 each

## Radio Dial Button



Fur sou abul every ratlo enthuslast the new radio dial button has hgen created．It Identifies you immediately and will help you to become aeguainted．3y＂in diameter． Aft exact repllea of a standard movern radto dial．Raised knoh．dial fradnations are like the best radlo dial． ＂IRADIO＂is set ln gold．The dial is best black en－ ankl．Iettering．fikires and graduation marks are In－ lakd gola on enamel．The knob part is also in gold． 13est gold plate is used．lispulphed with a serow baek

Na．7799
$\$ 0.25$

## Set of Drills

## $\$ 0.59$ <br> POSTPAID

These Carbon steel drills are for use in our or any standard hand drill，being the most widely used sizes． This set of four drifls consists of one each：4／36，6／32． 8／32 and $14 / 20$ screw，for rearance thereot．

No． 9046 Set of four drills．．．．．．
$\$ 0.59$


Bearings designed by us to fill a distinet ned. We hare often felt that it was necessary to have a bearing and bushing combined whell we mounted certain apparatus directly on the panel. Useful with rotors, rheostats, in connection with honeycontb coils, for varlous other rcupling purposes, and dozens of other uses. A few of these Bearings will quickly pay for themselves. Nade of brass, and comes in fire parts, inner shank, bushing that holds whole derlice in panel. large washer, which screws against inside of panel, and two hexagon nuts to seeure the wark to the center of shaft. The illustrition of the Bearing is full size. The outside of the shaft is $1 / 3^{\prime \prime}$; the length of the thread is 1 : the total length of bearing is $21 /{ }^{\prime \prime}$ : the , length of the threaded sleeve is $\%_{6} "$ over all. Made heavily of brass throughout. So strong it will hold up a heavy rotor without sagging.
No. 1375
$\$ 0.25$

## "Rasco" Cardboard Tubing $\mathbf{\$ 0 . 2 0}$ postpaid

I'sed to wind inductances, to make tuning coils, hoose couplers, variocouplers, etc. This is the only kind that will stand up. It is not tho ordinary spiral-wound tubing such as is used in mailing tubes. which is worse than useless. No strawboard used. Ours is miade of grey pulp, well seasoned and is the only seamless tubing tuade in the linited states. Wire wound upon our tub-
 ing will nerer come loose. Tubing dors not shrink: very beary. The wall thickness is $1 / 80$. This gives a tremendous strength to the tube and it is almost impossible to crush it.

| N0. | Inside dia. | Outside dia. | Length |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 3 | $31 / 4$ | \% | \$7.80 |
| No. 6601 | $31 / 2$ | 36 | \% | 0.45 |
| No. $660 \%$ | $31 / 4$ | $31 / 2$ | 5 | D. 18 |
| No. 6603 | 36/9 | 4 | 5 | 0.70 |
| No. 6604 | 4 | 41/4 | 5 | 0,33 |
| No. 6605 | 23/4 | 3 | 23:3\% | 0.15 |

No. 6600 its into No. 6601 for loone conplers.
No. 660\% fits into No. 6603 for lowse coubyler. No. 6605 is used as a varioenupler rofor and can be used with No. (3604.


We carry the best grade of electrical mica only. Sheets can be split readily into any thickness.

No. $8601 / 1 \times 3^{\prime \prime}$
1'er sheet
Nu. $86111 / 2^{\prime \prime} \times{ }^{\prime}$ $\$ 0.01$

No. $86{ }^{2}{ }^{\prime \prime} \times 3^{\prime \prime}$ $\$ 0.01$
N1. 863 2 $21 / 4^{\prime \prime} \times 3^{\prime \prime}$ $\$ 0.0 \%$

N10. $8643^{\prime \prime} \times 5^{\prime \prime}$ $\$ 0.04$

No. $8654^{\prime \prime} \times 5^{\prime \prime}$ $\$ 0.07$

## Zinc Spark Gap End

These are used on spark gaps. The plugs measure $/ / 8 " x$ :/8". tap. ped 8/32 thread. They are ma chined accurately and well worth at. tention.

## 

## Dial Marker $\$ 0.05_{\text {postralo }}$



I'sing our patent dial maker you do not need to spoll your panel by srratcling a mark. Illustration full size. Made of a single piece of hrass with shank to take a nat. Just cirill a single hole, mount the marker point. tightell up nut on back of nanel and that is all. Heary milled-in line takes place of the old scratch line. Point is nickel plated. It improves appearance of set. Thickness $1 / 16^{\prime \prime}$. Mont with tip nearly touching dial. Nir. 7788

```
3 firr 10e
```


## Metal Panel Scale



Heary brase stampims. large black flcthes, readily djstinguishable. Total dinm. 3 湦". Whith $1 / 2 "$. 3 holes for attaeling.
No. 725
40.10

## Micanite Tubing \$0.86 <br> POSTPAID

Necded wherever a very
hlgh mrade material is rehuired. This Tubing is especially suitable for $C$
W. work, on account of its exceedingly ligh: in sulation quallity. Nothing
better on the market at any price.
The color is natural, a very dark brown. It is seamless ind snmoth inslde and outside. It can be readily mathtned. drilled. ptc. The thickness is $3 / 32^{\circ \prime \prime}$.
No. 250. $4^{\prime \prime}$ lia. lys $6^{\prime \prime}$ long.
Eacli
No. 451, $6^{\prime \prime}$ dia. by $6^{\prime \prime}$ lonst.

## Fact

$\$ 1.10$
We recommend for C. $w$. transmission pither of these two tabes and our No. 80n Lits wire.

Metal Panel Scale


A very buat goo meanl seale made entirely in brass, Silser backeromd. black letters. size es"

No. $\quad 215$
$\mathbf{\$ 0 . 1 0}$

## Genslemen

To my satisfaction and happiness I forgot of write you that I received the merchandise in excellens packins. I wish to thank you for your service in handling my order for radio parts. They are still befter thar, l expected and also the big, elear blueprint you sent. I am recommending your serviee to my triends. Have also given away your eafalog. Wish you would send me another one of teup Radio set catalogs, and some order blanks.

DELFIN PIDPONGCD.
Pasig RiEat, P. I.

## "Rasco" Set Builder's Assortments

This Lug Assortment includes fifty of the most important lugs for the man who "Builds His Own' as follows: 10 Digs for 8-î2; 10 for 6-32; to prong lugs (solderless) 6-32 and 10 8-32; 10 flat 6-32. 111 lugs are tinned.
No. 4995 $\qquad$ $\$ 0.22$ Thls assortment includes 108 pleces as follows: 36 "T' Wire Bus-liar ('onnectors: 4 Idapter lisushings (to fit $1 / 4^{\prime \prime}$ dial to $3 / 16^{\prime \prime}$ shaft) ; 4 Seprable Phone Tips; $\ddagger$ Angle Brackets: 21 Lock' Washers; 36 Assorted Lugs. already rinned for easy soldering.
Mo. 4996 $\qquad$ . . . . . . . . . 80.48 Here is an assortment that versone bulding a radio set ueeds. Includes the following: 12 Assorted "Perfect" Lugs. ${ }_{6}$ Grld Leak Mountings: 4 Dial Markers; 6-1475; 61470; 3-1490; 2-1505 Rrack--ts. Price of all separately. 81.32.

צ. 4997
.\$0.68


## Adapter Bushing

Designed so that a dial or other attachment normally equipped with a $1 / 4^{\prime \prime}$ bushing can be fitted to A $3-16^{\prime \prime}$ rod. Slotted so that it will take up sllght unerenness of rods. Perfect fit assured. ('omes only $1 / 2$ " Iong.
No. R8GG

## Phone Tips

No. 315, Standard Telephone Cord Tip, nickel plated and polishet.

Per Dozen

## Separable Cord Tips

 necessary to make connections with flexible ronductors. Requires no solder. The fiexible wires are bared and inserted in one end of the ferrule. then the chank is screwed in. Wires can't pull out. No. 290 Mozen


Replaces the usual cord tip, or when it is
 to hold un panels. to attach various instruments to baseboards and in many difrerent ways. Stamped from heavg metal, nickel-plated and carefully finished. Illustrations
arc halfsize. Thickness varies. Where 8 Decial strength is required we recommend Nos. $1505,1506$. $150 \bar{i}$ and 1508 . Ali of these are heary $1 / 2^{\prime \prime} .3 / 4^{\prime \prime}$ and $1^{\prime \prime}$.

## "Rasco" Radio Brackets

 hold tuning coite $\begin{aligned} & \text { tubes, inductances; } \\ & \text { snider webs, etc. }\end{aligned}$ IN STOCK
 brackets made for the best outfits to hold heavy panels or heavy sub panels. Thickness of all of these is a full 1-16". Brackets Nos. 1175. 1176 and 1490 are tighter and are not for such heavy duts work. Bracket No. 1509 is really not. a bracket but is used in connection with all our grid leaks. Two of these are mounted opposite each other and go directly on the panei or sub panel instcad of using separate insulating pieces. It is the cheancst and most practical grid leak mounting. Made of spring phospher bronze. No. 1475 is used to attach all cardboard or bakclite tubes (inductances) to panels. No. 1476 is used for the same purnose. Bracket No. 1508 is used for speclal work and can be bent by the buddier into any form. Note particularly that all brackets are nicely nickel plated.
No. $14 \%$ Brass Angle Piece, 5/16" wide by
7/10" high. Each ....................... $\$ 0.03$
No. 1476 Brass Bracket, $3 / 4$ " high by 2 lugs
3/2" long. Fach . . . . . . . . . . . . . . . . . . . . . 0.05 No. 1490 Hrass Angle Piece, size $3 / 4^{\prime \prime}$ by 3/4". Vach . . . . . . . . . . . . . . . . . . . . . . . . . . . 0.04
No. 1505 Brass Angle Piece, size $11 / 2^{\prime \prime}$ high
 No. 1506 Size $3 / 4^{\prime \prime}$ high, $3 / 4^{\prime \prime}$ long and $1 / 2^{\prime \prime}$ Wide. Each i...................................0t No. 1507 size $1^{\prime \prime}$ long by $1^{\prime \prime}$ liigh by $1 / 2^{\prime \prime}$ wide. Fach .................................. 0.03 No. 1508 Size $3^{\prime \prime}$ long by $1 / 2^{\prime \prime}$ wide, Ea.. 0.06 No. 1509 Size $7 / s^{\prime \prime}$ high by $1 / 2^{\prime \prime}$ long by $3 / 8^{\prime \prime}$
$\left.\begin{array}{l}\text { Wide. Each } \\ \text { Dozen } \\ \text { lots, each style } \\ 20 \% \\ 0\end{array}\right)$ discount.

## Brass Nickel Plated Screws

Machine Serews. We carry the following gizes of ma. chine screws: $4-36.0 / 32,8 / 32$ and $10 / 32$ in flat head and round head styles, in the following lengths: $1 / 4^{\prime \prime}$. $8 / /^{\prime \prime}$.

No. 1401 Price, all size threads, $1 / 4^{\prime \prime}, 3 / /^{\prime \prime}, 1 / 2^{\prime \prime}$.
per dozen, nickel plated ................s日. 15
No. 1402 Price, sizes $3 / 4^{\prime \prime}$ and 1 ", dozen, . 0.18


13001300
No. 1300 . Screw, $8 / 32$ top, wood screw bottom, each No 1200 , Screw, \&/32 thread, 1" long. Fits
 No. 1400, washer head iron machine screw 8/aiz. $8 / 4$ iong, each . . . ............. . . . . . . . . . . . 80.01

NICHELS PTATTHIN

$6-3: \quad 8-3: 1400$ ach

# Threaded Brass Rod $\$ 0.06$ <br> PO8TPAID 

We carry tero styles. 6.3; and 8-32 thread longths sold. No ethers
No. 8032 8/32 thread, per $6^{\circ}$ length No. 6032 6.32 thread, per 6" length
$\$ 0.06$
$\$ 0.08$

## Brass Strip

This strip is nartleularls hundy for the experimenter. and is a size for whirh we have had mueh demandl. Whalth 1/2"; 1-10" thirk: conte's in sizes are furnishec.
No). 1.430


## Brass Tubing

To satixfy an insiatent mand we are listin; thi* hia, tubine, favored by ath ranti


 furnished.
No. 1431
\$0.15

## Round Brass Rod

We earty rily the sin's of plaim zound brase leal; 3-14"
 tors. as each can be thad with varlomonfers, varifmeters. 2* shafts, bearinge, etr. Futhished only in f-ineh iengeths. No other sizes furnisher. Find: rarefulls srpuared.
No. $14251 / 4$
$\$ 0.10$
No. 3616 3/16"
.$\$ 10.06$
"T" Wire Connector

"llos: big litte artiole will soin "ab problom when makins" "T" uiwn (rmnections. Niokel plated brass. ("at he need without colder but yon rat -ohder over the combecton it soun will llusthatbas show how ponnecto
 for take "irc 1-10"" whate of bsumb wire $1 / 16^{\prime \prime}$ diameter. A palte of pliers is all wour ncol. This "TV" wit commertor will wite sour set it work manlike alpmatamer. Nou used by nearly all the laneret set mamberthera. No. My号, dacill
$\$ 0.05$

## Switch Handle <br> 

This switcin hamolio is of a well kimult deslen and has hard rubber kuch metal parts are nickrl plated. center from knob to renter of serew is $1 \%^{\prime \prime}$. I'sed oll nanels in mnnerefen with ete N1\%. 300

## Hexagon Nuts <br> $\$ 0.05$ POSTPAID <br> 

Wie spmelatize in Ifesagon Nuts. We fumish the best kind only, in six mizek. 1-ith, h-i2, 8.32, 10-32, 10-24 and 1:-21
Nos, 4-36 and 6-32, per dozen
$\$ 0.05$
Nom. N-3\% andl 10-3\%, per dozen. . . . . . . . . . . 0.06
Yan. 10-*4 and 1*-24. per dozen 0.15

## "Rasco" Brass Washers $\$ 0.05$ postralio



These washers are stand, ard and are accurately stammed and as flat as it is bosihle to make them The experimenter recosnizes that for many pur




## "Rasco" Lock Washers <br> 


 "pree ot algout $t-1 t^{\prime \prime}$. When the himitnig nost or gerew is arition in foght agatust the lork "asher, the latter is al-



.80 .05
 0.05


## Lock Nuts

## \$0.04

POSTPAID
sumbething new. Serowed down, will neter lonsell. Nimmerous uses
 ramtily found for this msefol ar thele. lifitsi, nidekel phated. For
No. 31~, Lock Nint, sull
S11.10!
buyen
0.10

No. 31及, Wing Nint, fuclt
1)ngen
0.411

## Lock Fork



Thate of phosphor bronze. I'sed on switoll No. 200 and sotrew No, 120n. The maly device to keen screw from com-i-rg lonse, No 1250, Jock Fork, eaeh............... $\$ 0.10$


Made of bass tabing that thatermers ht ise chats. To attach hean wire hond the lug by the tlat end with a mas of pllers and beat ruer in alemon, gas or mated flame and when sumeiently hot, insert a litile solder in the tube part with a little flux. Then insert the bare wire. When cool you have the most perfect connection. Shown lull bize and will take up to 10-32 screw, Fully nickel plated ant will improve the looks of your set very greatly. Very popular.
No. 3110 , Open . . . . . . . $\$ 0.02$ No. 3080, Cloned . . ... . . 80.02 Dozen $\$ 0.20$

## \$0.06 <br> POSTPAID

Brass, nickel plated, used for mak ing connections. Only for $6-32$ serew. ©o. 308, dozell
 No. 30\%. ('0pper L.tag, mide in 3 tylen for No. 4, 6 and 8 hrrewh ....dioz. \$0.10) No. 310, IBrask
ink, mide only (or No. S Narew

$\$ 0.10$ dozen fing foblles for Nin. 6 and No. $x$ Machine tirrew

## "Rasco" Nosolder Lugs <br> 

This small lug. shown fuls size, Lrips elther round or souare bus bar "ith a vise-like grib. Bus bar can now be connceted or disconnected in a jiffy dircet from the lug. it saven at least :5 per cent of time and when it comes to dicminatle your set you dr, not have to throw away your bus bar wire for it can be userd all overagain. Soldering is positively done away with. Pelfert rontart. The tension shways powertut, yot it is easy to alip the has bar wire into the fitethon grif. I'se Xo. 15 equare or va 11 round bus bar for best rewulte. Finally, if you insist on soldering. yeu'lt the pleased to gen that the lug is fully tinned.
No. 3-8\%, Ten onlve? 0

## Cap Nuts <br> $\mathbf{\$ 0 . 0 3}$ Postpaio

No. 314 , Nickel plated brass cap nut, $8-32$ or 6-32, pach, .... $\$ 0.63$ Dozen . . . . . . . . . . . . . . . . . . . . . $\$ 0.25$

Thick Brass Washers \$0.04
All washers are brasi nickel plated and polished.
 No. 340, $7 / 16^{\prime \prime}$ dia.; $1 / \mathbf{y}^{\prime \prime}$ tliek; 3/16" hole, earli. . . . . . . $\mathbf{5 0 . 0 4}$ No. 341. 7/16 " dia.; $1 / 16^{\prime \prime}$ thick; liole for No. 10 serew, euch
.$\$ 0.02$
No. $342,7 / 16^{\prime \prime}$ dia.; $1 / w^{\prime \prime}$ thiek: lule tapped $8 / 3 * "$, euch $\$ 0.04$


Contains I 00 pleces, all handy, in useful ytandard sizes. Includes a goorl
asportment of all standard serews. copper lugs, ma chine screws, wocd Rerews. All screws phated. Cheapest
buy you mould think of. Raves time, troutbe and money.
No. 9.18
.80 .39

## Copper Foil


liscful for many experiments, such as, for instance, condenser work, where it is often necessary to have a material that is better than tinfoll. which latter has not a high conductivity, whereas copper, belng the second best eonductor, is much superior. Vety flexible, and the best made. Annmaled, and can be flatened out perfectly. and ran be flatength, but only 4 in. Whle. Thickness . 001 inch. No. $\overline{0} 0 \%$ Per rinning foest
$\$ 0.10$
10-ft. length
0.80

## Copper Ribbon

## $\$ 0.01$

POSTPAID

This ribluon $1 s$ used for counecting and other purposes and is $005^{\prime \prime}$ thick. Not less than 10 feet sold. No. 700 "//8' wide, per ft. $\mathbf{\$ 0 . 0 1}$ No. 701 $1 / 4^{\prime \prime}$ wide, per ft. . 01 No. $70 * 3 / 16^{\prime \prime}$ wide, perft .01

## Silicon Steel

## $\$ 0.08$

This is an article for which we have had much demand. Silicon stee! is specially used for transformer purposes, and is now used in all audio Irequency transformers, It is a much better material than soft fron sheeting, as it will not give rise to edily currents as much as fron. Exceedingly soft. ('an be cut with pair of old seisgnia. One size. which is standard-a**" wide and on the foot only.
No. 4000 Per running foot


Sold by
$\$ 0.08$

Tin Foil


Standard for all electric purposes. We earry two grades. The thin trpe running $1,5008 \%$ ins. to the ib is suitable for all ratio receiving condengers, and heavy type, 700 sq. Ins., for transmitting condensers, Per pount:
No. 850, Thin
No, 851, Heavy
$\$ 0.45$ 0.47

## VACUUM TUBE HOOK-t'PS

La the following pages will be found 75 of the most ieporitant $V$. T. Hool-ups. Only the best and most popular hook ups have been tilus thated and desoribed. Special book-ups furnished at $\$ 0.50$ each.


Fif It Thie is the eimplest VT took-up, $K$ is the arid condenver and $L$ the gidd leak Por a Radintron U Y 200. the capacity and leak ured are .00025 mids. and $1 / 2$ mids and $1 / 5$ mepohras, raspectively. Ple. 2 thows how a VT detector is connected in a reociving e:reut using a loose coupler and also how a cryathi detector is connected By opening switch $A$ audion may be used.


Pits 3 is a simple circuit for a crystal detector and a one-step a mpli. fier. T2 is an amplufying transfosmier. The secondary is conanectel so grid and metative side of the filament.
Fig. is the typical regenerative errcuit; $a$ coil having about 23 or 3/ the value of the secondary is connectori in the piato ciscunt. The coupling is critical and gives a high amplufication. With tught coupling. undampt weves may be received.


Fie. 5 is a circuit in which the primary of a loose coupler is used as plate inductance: by means of a switch it can be connected between the B battery and the plate, alrowng the reception oundampt wayes The. 6 shoms the trpicil hook-up for three honeycomb coils and a VT detector. The functioning of this circuit is explained in Fig. 4 ..


Fig. 7 is a hook-up for long waves using a short.wave coupler. In this case, the prumary is loaded writh a cuil and the secondpry. In length also increased with an additional inductance couplet to a piste coil for the reception of undampt waves, as explaned in Fies. 4 . post Pig. 8 is a recerver uaing a sodion tube detector Our No. 3150 Vario coupld have Littlo resjutance. R2 is 100 ohms and $R 3200$ ohmary
 1tictance is used with a Deil hor orn De Forest ult raudion. A single in: This carcuit is partwularly suitable for portable sets where little space is had and where sumplecity is required.
Fis 10 is the ultraudion circuit to a loose sospler. This circuit oscilta tec on any wave-leneth and allows undampt waves to be received with a loose coupler whinst anv external inductence.


FId. 11 is a single circuit regenerative receiver in which our No. 8350 variometer is employed to obtann nugeneration. This circuit is very umple to assemble and may be bullin a compact form for portable seth. Pls. 12 is another simple honk-up for a honse coupler to receive un. dampt waves and spark sicmals. The coupling bet ween the coil T and the primary shoulit be veriable.


Fig. 13 is anothrs simpic rereriefative recenver in which our No. $\$ 350$ variometer acts as the taming and the feed back conl. A connection is taken at the contacts between the fived and the movable coile Fit. 14 is the hook-up for a loup ang mid with a y'T detector especially adapted for lone waves. By, connecting the posibve side of the. Gila ment to the center of the loop, the set is made to oscallate for the recepe tuon of undampt waves.


Fid. 15 When a loop is used fur the reception of short waves, it should consist of ewouor three turns only and the tuning made by.variometers or variable inductances an order to have a regencrative effect. Pig 16 is the Armstrong circuir used in conjunction fith a hoop aerial. By trsing inductances of suxtable size. this circuit is equally efficieat on short or long waves.

Geartiemen:
Enclesed find the serm of seventy oents ( $\$ .70$ ) for which plase send men ons $30-0$ ohm Rheostat Mo. 4311 at 44e, as adverticod il Radle News. Aise, one C-299 bpe Bakellto mocket. No. 6511, for 26e as advertlsod th yoer Ne. 12 catalog. Would like to say that the No. 3100 vario-conglor, whish 1 recelved a short timo ago. is cae of the apot wonderful instruments I have ever hac. I wras almot afraid to buy ft, it was go cheap, but apm
 WALKER TOMPKINS.

Turloek. Calif.


Fie. 17 show the conacctions of a two-ntep amplifiet and how it it -onnected to a detectot tube. A swo-point switch is uned to connect the forst to the firt or second step of smplification.


Fig. 18 is a practical complete receiving circuit with detector and tru-jkage amplitite. The detector atid amplitier may to used with another set. such as a regenerative une, by means of a series parat.: switch. This circuit is designed sspecielly for use of honeycont conte.


Fig. 19. Complete circuit of a detectur and three-stage andio frequency amplifier. The proper nerative arid protential is obtained by inserting a one-ohm resistunce between the fitament and secondary of the itunsformers. Hy means of jarks and plugs, the fune nayy be connected to any number of step of amplufiestion.

14. 20 is an unusual hook-up for short waves. using on!y one varioa.cr and tern steds of amplification


Fig. 21 shows a one-step Radio frequency amplifier and detector. The value of the coil L3 depends upon the wave to be tuned in; it should have aloout the same vaiue as the secondary of the couplar. It a honeycomb cuil is uged, tune with variatle condenter (Dotted Limes) Fig- 22 In this circuit two of onr No. 3350 variometers are used to tuate and to cause regeneration. As may the seen. the lower variometer has
 ot the feed back coil. If a short antenge is used, the .00025 , waf. fized conderett is not necessary.

(4)

Fid 21 is the same circuit at that shown in Fig. 11, but with looe couptins between the intenne and the mecondery circuit. Thit circui provides reater melectivity and is recommenuled fot bong antenma Fif 31 this circuit ts well known atnong mmateure as the thort-wnve semenerative one, If uses two variometerl and a variocoupler. A an to advanture in eries with the mimery of the couplene could b used to advantuge in geries with the grimary of the couplot.


FIf. 25 is the came circuit, but with the fone connected outaide the os cilfating circuit. thus suppressint the use of a condenser to ehunt them and which is used as a pass-by in the former huok-up.
FIf. 16 By the use of a. 1 PDT telefone or antl-caplity terith th name VI detectop thuy be connected to a thort-wave tecencive circuit or a lon-wave tuner teind bonetromb or other inductanoen


Fing. 27 shows a standard rezencrative recciver similar to the one shown, amplifation The one stake of choke coll couphod audio frequency; fairly latke size. This type of audio should have an iron core and be of good qualits:


FIf. 2 is a four-atage Radio frequency amplifier utiog resistance coupling. The four wbes act es amplifier and detector at the same time. A small condenier having two fired and one movable plate is used as a coupling capacity betwren the plate of the last tube fand the grid of the first one to make the tubes oscillate and produce beate fre the reception of usdampt waves. Fot weves over 800 meters.

## Gentlenten:

You erb te bo congratulated on year moiek service for swall orders such is was sent mete eose time ago. so mim enclosing another small order en the reverse tide of this sheet which I feed sem will recoive the same quick atcurate attention. JAMES WAY, Lowell. Ohie.

## Gentlomen:

In reference to your advertisement im the Manch Radio New 1 an writing for your new Rasco eataloa Ne. 12. I have used several Rree parts and found thea of very geod quality indecd. Hoging to hear from ven soet. femain
M. J. WARD.

Christchureh. New Zowlawl


Fig. 24 shows a one-lube refex receiver using a crystal for deteccion. Sy maliog connections to the delector and from the secondary of the wdit irequency transtormer to the eenter of the conls, a nredt amount of tiabinty is obtained and the eircuit does not howl or whistle. This Errangement our No, 1809 Crysta) Deteetor in this circuit oube is to be used, trengformer will be forud excellent hert.



11 30 Another regenerative sircuit using the tuned plate eircuit sys tem. This circuit is expctly the same as that of Pig. 33 encept tha instead of a variometer a coil and vatiabie condenser are used in the plate circuit.
FII. A1 is the wellonown Reinartz circuit. The tuning unit consists of spucial $\begin{gathered}\text { spider web con, Nos. } 2650 \text { or 2600, whth taps and two variabl }\end{gathered}$ condeniert. If audio frequency amplification is to be added the primary of She firt transformer is connected in place of the telephones.


Pit. 32 shawa the hookstup of an inductively coupled amplifier. In. sted of transformers or resistances, tuned circuits are used. Fo undampt wraves, a locel oscillator is used to producs the "heats.


Tle. 33 This circuit is the Armstrope Superautodyme eystem for the reception of short waves with resistance omplifiers which are espe-


Fis. 34 shows a Radio frequency amplifier for long waves ugng' a erystal detecios. If DC is available. it is a simp'e matier to use it diftecty on the plate and throurh a 50 w. carbon lemp to the filarment. Fit. 35 is modiried Reinartz crrcuit. The tuner is our atondard vario coupler, No. 3130, the tecondary of which is connected in series with the primary. The lower pert of the primary is tapped every two iums


Fly. 36 Herc is a combination circuit of a vacuum tube detector and ceiver so thinplificr. A crystal detector is also connected to the re. the eurrent of the vacuum tube detector and by closing the switch, S1.


FIg. 37 This is the hook-up for a two-stage radio frequency amplifer and detector whin feed-bacz coupline to obian regcneration. By means of the $s$ witches connected to the grids of the tubes, any aumbet of stages may be used.


Fig 38 This is a standari onc-tube reflex arrangement using a crystal ceteetor as a rectifiez, The potentionieter $R$, controls the grid gotena tal to prevent oschiations.
Flig- 41 The owner of a two-slide tuning coil need not incus extra expense to make a regeneratave receiver. The above dagram ahowe how to conncct it to a vacuum tube to obtain a ieod-backefoct.


F1g, 34 Thus is the famous Armstrong suger-regenertive circuit. The constants afe as follows: L1. L2-Short-wave Variocouplet. Cecondary BOTurns; C1-.0005 M.F. L-3-D.L. 1.250 C2-.001 M. C3- 002 M.F.; C4-.001 M.F. LA-D.L. 250 ; Ls-b.L. 1000 Cs $005 \mathrm{~A}_{4} . \mathrm{F}_{+}$; R1. R2-12.000 Ohns each; C6-.005 M.P.; K1- 1 Henry Iron-Core Choke: C7-.002 M.E. Tr-A.P. Transformer; C8=

On page 89 there is ficted the mast advanced Radis Recriver Blue Prints. which have been compiled by the Laboratary Eneineers of the "Radio News." Any receiver built from these Blue Prints will represent the most up.to.date and emcient Radio set.

Gentlemen:
I have received my order sooner than I expected, and i was not sure that it was my order until I epenad the parkape. The tine was two days befere a tetter that 1 sent the same day 1 sent the order. ifecaived then in goed condition with the RASCO Catalog. In my vacation, Just after the examinations, it will order other parts. and I hope to receive them with the quish mttention and prompt delivery zeeorded my frat ander.


Fit. 40 This diagram shows a standard regenerative circuil with ono stage of auduc frequency amplificatwn in which artornatic stament controi jacks are used so the tuber inght automaticat., "hea the wes ohone plug is inserted in one or another of the jacks


Ple. 42 Here is a circuit of a two-stage audio frequency amplifier It may be used with any form of detector, either a "iacuum tube or a crystal, In the tatter case, the input is connected is place of the telephone ta the receivep.


Hil. 43 This circuit is very tensitive and may be used with Myer detector and choike coils. It consists of one stape of radio frequerizy. tetector and kwo stages of audio frequency whith a feed-back coupling


F1. 4 When it is desired to operate a loud-speaker and obtain kreat Toume of sound. a power ampliner is necessary. A two-stare amplifies of this type ta shown in the circuit above with the constants. The o- Heary choke coils, KI and K2, may consist of the primary of a Warae bell-ringing transformer, the secondary of which is left open. RI. R 2 and leaks. $\mathrm{Cl} \mathrm{C}-.05 \mathrm{M} . \mathrm{P}$ condensert.


Fig. 45 This hook-up of a Pegenerative reciver and one-stage ampli* fier is vepy etficent for atl-around use, as well as for DX work. The Yariometers and variucoupler should be chomen, wound with large wre wire, mot smaller than No. 22.


Fig. 46 This diagram shows how to cannect a onc-stage radio fre* guency emplifier between any tume ant the detector mnit. The radio frequency brunsiormer. if of the aif core tspe, shoul i be preferably shunte it by a small vanable cundence. Use this hook-up with out R. P transtormer.

Ple. 47 This diawa ti shows how the tuner and smplifite units may be moant in in sumtectrasts. In the turier, either a variwble condenser or a Visio.sicter may be usad for lunug in the secentery circuit.


PIg 48 This circuit is arother'one-sube reflex, in which the detecto and audio irequency amplifier are connected in parallel with the secon dary circuit. In this diggram coll L 3 is top the purpose of causing regen eration to take place.


Fig. 49 Hook-up for a two-stage radio trequency amplifier and detecor. The dotted lines show where the connections from the tuner to the detector should be cut to insert the amplifier. The correct hook-us of our Nu. 2500 R. F. transformers.


FIg. 59 When only one tube is available, it is sometimes preferable to use it as a padio frequency amplifer, as shown here, a cry being used for rectification. The transformer may be our standard radio frequency transformer No. 2800 or a veriocoupler tuned to the ncoming waves.
Fig. 52 In this reffer circuit a euned radio trequency transformet is mployed in the plate circuit of the tube. This provides sharper tuning and should be used when interference from other stations is experienced.

Gentionen:
Congratulatiens en your aulek service. Every. thing arrived ©. $k$. Am sending you another order which I hope you will nll just as guickly. I remain. a boester for Rasco

ROBERT W. ACKER. MMlsboro, N. Dal.

## Bentiemen:

l have found your JIFFY JACK one of the most useful parts of my radio iets. I experiment with heok. Mas, and so like to change connections easily, I fastened a JIFFY JACK to each binding post on my variable cendenser and $\|$ uced round bus bar wire to connect the cendenser to the other instruments. I did the same on my tube soekets. I alse soldered two clips en my aerial and iround and I use JiFFY JACKs for the biadian posts.


Fit. 51. This three-atage radio frequency amplificr and detector is very sensitive and permits reception on a small houn acrial op with an moor antennt. The dotice lines mark the separation between the


Pid. 53 Thia trap circuit composed of an iron core choke coil, is useful to eliminate low frequercy induction from nearty priwer dines. The aize of the choke conl depernds upon the frequency of the interieting basa, but hed condensers may be adried to the varable one in paralle

poeible to eliminate a station causing intertere sprepna circuit, it in poenbe to eliminate a turion causing intererence by tuning this trap othe perticular wave-length of the interiernag bignals. This misy


F1. 34 This is a diagram of the one tube supep-regenerative receiver. The conmants ore as gollows: 1 swriceoupler with econdary rewound with 80 turns of No. 22 D.C.C.; $2-\operatorname{loop}$ argul $3^{4}$ apuare. 12 turns of
 o- 005 M . Fo 3 to 6 volts; 8 - i 12.50 honeycomb coil; $Q-L i 500$ hondycomb coil: 10-00 to 120 volt " B " battery.


Fif. 56 Here in a very sensitive receiver using two tubes and honey. point coils for the reception of any wave-length. The coil connected in the aerial ciscuit ahould be at fight angles or away from the two othere.


Fig. 57 This is a circuit of a capacity-couplad euner. This circuit is very sclective and gaves sharp tuning, the coild may be hogey cnmb partakc or spider web and should the at right engle.
Ple. 58 This diagram showis how to buikd a short-wave regenerative recciver with spo vafiocouplers. L and Ll constitute the eerial and aconjary circuit, while $L 2$ is the primensy of the sccond coupler acting as a load in the scondary; L3, rotating inside of L2 ecta as ticider coil.


P1g. 39 is snother type of single-citcuit tegenerarive rectiver in which regeneration can be vety finely controlled by meane of two spider-web couplers:
Fuphest is a refle reircuit which is seabilized by prounding the enoondary circuit. Thes form of retex circuit give日 eood tesult a


Fif of This circuit shows a opre-stage radio frequency amplifer and detector in which the glate circuit of the first tube is tuned by mean of variometer. This circuit is very sensitive and is recommended whe the reception of distant stations is desired.


Fig. 62 This regencrative ciscuit in tuned by means of two No. 8350 varmetcris and uses two small coils of 5 turns ench to couple the tuner to the feed bark Vartometer. All the coils shown horivonteby ate wound on the same tul ing
Fig. 63 is the Cockaday four-cirtuit tuner which is another lom of pernerature circuit, in this tuner only one turn of wire couples th noin mas circutt to the secmanafy and monvides grat arlectivity.

## Notice

The regenerative or feed-back circuit is covered by Armstrong Patent $1,113,149$, and the superheterodyne circuit by Fessenden Patents, $1,050,441$ and $1,050,728$ and Armstrong Patent $1,342,885$. The parts listed in this catalogue were not designed or intended to be used in these circuits.


Fis. 64 This circuit has one-stage radio frequency amplification and defrctor. The latter is made segenerative by a special coupler. This if recommended as it prevents rediation of energy in the untenna circuit ever when the detector tube oscillates.


Phe is a Radiophme using the plate and grid systern of modula. eion. A specie modulation tritisformer having a split mecondary thould be used. Circuit gives fair reauta with any number of tules.


P1e. 67 shows a simple experimiental Rediophonc that the expotionenter may buill. ubmk an ordinary short wave coupler and a $V$. T. A range of a few miles may be obtineal with this eet using a hard tube
Th the circuit dor oncilla eing circuit which is suitable for C. W. or phons It the circuit does mot oncillaste seadily intert a .001 pariable condermed fis the croued levd and cround the negtive of the-fiement battery.


PIt, A very efficient one-tube Radiophone is shown in this sketch. The modulation transformer may lue a gad-spurk conl, and the 1 L . T. tupply a seneratur of three or nume "B" batteries.
ip fo Another simple Radioplione asing a honcycomb coil tor inductance. This hook-up is almo very efficient and simpie to operate.



P1. 71 This Radiophone uses the Colpit oscillator circuit. Three of more tubes may be used in parallel and a long rapge is obtsined whep uting transmitting fubes with in 350 V . motor gemerstor.


Fhe_ 72 In this circurt one qube is used at an osciltstor and the other wh an mmplifer. The grodulated current is aptlied upon the gird of the amplifier tube. This tives yery good modulacen snd greater ouk rut thas the coaveetional circuit.


Fif. 73 is well brlapted for grester power. One tube it uned at owcio Litor, one as modulator and ore or morte as amplifier. Bxcelient result ard a very long runge may be abtained with this circuit. The game numier of tubes should be used as amplifier and modulator


Fig. 74 This is ene of the letst hook-ups for tho subes. The output is uniform witt the entite fonge of wave-tenght of the set. Li man consizt of 10 turns of heavy wise on a tube 44 in dismeter: L2 and coupling condenter betwern the two coils may be of 00075 lf F Ct of 0001 B M. P. The coil on the right of thes condenset is a heney comble 220.

Fig. 75 This circuit uses ope tube as modulator and one at oncillator and is moplied with A. C. The H. T.-D. C. is obtaised through two rectifier tubea connected to the H. T. Wipdint of the trapaformer. ${ }^{A}$ low voltage winding with a Erounded eentef epp may alco be provided it tuyply the fisment current to the two V, TB.

## Seattemen:

Enoloest you will ind an order ior a mumber of your small parts, seme of whith I have found to be entirely tatifaotory. If the order is oivea the same prompt atteation as ay frot, it will aflord me the vient matisfestion.

## RASCO "B" ELIMINATOR KIT

## USES LESS THAN \$1.00 PER YEAR OF YOUR HOUSE CURRENT


$\$ 10.25$ COMPLETE NO TUBES NO ACIDS TO BUY

Perfect reception in your toud speaker is alwass limited by th:e madition of wur "B" hatteries in series therwwith. A 45 solt "B" battery, is only considered "good" if it registers ABO"E 38 volts chen thes register less than that. thes cause "Prying" and every conceivable form of noisy background in your speaker. The solution oo this problem is the instaliation of this "B" eliminator. drawing its current from spur light socket-ussuring you an ever constant "B" batters suppls of befiween 90 to 100 volts, with twa intermediate roltages of $22 y / 2$ to 45 (or any soltage if a rariable resistance is Inserted in the prositive outjut leads. Should your recelver require 135 volts in the last stage for a power tube, the addition of a 45 polt " $\mathrm{B}^{\text {" }}$ bittery in gerles with this eliminator (the positive lead of the latter being connected to the minus of the "B" battery) will solve the problem. And. as the power tube will be the only tube to draw current from this added ' $\mathrm{B}^{\prime}$ battery, it shorld last you from 6 to 9 months. The electrolytic principle of rectification has long since been ascepted As THE MOST SATISFACTORY SYSTEA.

The electrolyte lasts about one year, and perhaps only twice in year need distilled water he added thereto. Can be assembled in less than one half hour-nothing further to huy. The kit contists of 4 Rectifier Jars, comple: with Electrodes-Connectors-Filter Condenser Block-Choke Coil- 2 Resistances with mounts-full charge of Salzs -special base board furnished with 4 hollows cut therein to recelve the jars ohiniling vosts-lamp cord with detachable plug-fibre disc and threaded rod-hook-up wire-mierellaneorls harilwate-Miue print and instructions. shipped Express Collect.
No. 4000-Unassembled "Rasco" "B" Eliminator as described.
$\$ 10.25$

## "RASCO" 2-STAGE AMPLIFIER

"NO-SOD-ER" CONNECTORS


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IMPORTANT: Note that in this set, too, we use our famous "No-Sod-er" connectors, making it possible for any one to put the amplifier together within less than an hour's time. Only tools required are a pair of pliers, a screw driver, and vour hands.




## THE RASCO SONATA RECEIVER

No. 9658 Complete, Receiver, Adjustable unit, Built-in LoudSpeaker and Cabinet \$35.95

## No. 8923 CABINET ONLY

Only HANCO could otter wht whe on reasonable a price. Wo guarantee you $100 \%$ satis. faction with this receiver! And by satisfaction we mean it will be capable of very selective tuning, maximum sensitivity to the most distant stations, volume and clarity as you would desire it. In fact, it is very cowparathle to our Hasco LEADER No. 9056 , to which you may refer for a general description. The panel is genuine bakelite, with very pleasing decoration. The dial numbers are etched directly upon the pamel. An oversized knob. attached to the condenser tuning shafts, is used for the tuning. Two jaeks on the panel allow in optional ave of an external loud speaker or bead phones. Twa rheostats and a battery switch romplete the panel lasout. You will note the very cxclusive feature on this Radio receiver-when it is not is operation. the hinging front ower completely conceals the panel; this tuakes a very striking and pleasing appearance-for, once you have tuned in a station, and wish to "stant bs" to enjoy its program, you can close the rover, incidentally preventing anshody' from disturbing the dial settings. When this rover is down. It makes a very ronvenient arm rest, while tuning the receiver. The ton cover also hinges. to proride for immediate arcess to the "ubes for adjusting the loud speaker unit, or, for invpertimen of the actual interior of the Radio receicer. The loud speaker furnished is composed of an unusuallys well designed metal throat and wood tone chamber covered lis a vers attractise serolled grill. The unit is vely poverful, for to meet the requirements of this receiver, it MI'sT BF; onre aldusted, it need never again lic touched. The tubes fit into the latest type of U.X. surlicts. which are huilt into the sub-base panel-and which provide for the use of either ('X 199 dry cell tubes ( $\%$ volls). of the 201.1 storage battery type. The varlable (madensels are the latest straight line corrected frectuency models; the audio transformers are equal in performane to the same type used in very much more expensive tereivers- in fact, we have made No sichation in the EIECTRICAL (ADALITY or MECHASNICA, DI'RADILITE Of any of the component parts wed in this terelver. We fully renlipe that you as a pleased customer will be our very bust advertisement. for you will recommend all our products to your many friends-extensive newspaper and magazine advertising would make this self-same receiver sell for 5 times its modest cost. To ulalke you ever hoastful to show this receiser 10 your frienis and to warrant its entry into your liting roum. we hase enclosed it in a very attractive two-toned Minhomisy cidbinet. with a finish thereon wiualty foumd onty on high priceit furniture. The overall dimansions of this receiver are es lifches long by 11 ineles dees by 8 inches high. No. 9658 Rasco Sonata Radio Receiver, Complete with Built-in Loud Speaker
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No. 8923 Cabinet Only. Without Receiver. Builtin Loud Speaker and Adjustable Unit Included. Panel size: 7 inchez high by 18 inches long. Overall dimensions: 28 inches long, 11 inches deep. 8 inches

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No. 9056

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 of these Radios, the wolld find himself still "listening In'" to stations located in every nook and corner at the United Statts till the very small hours of the morning. The vrey fact that this rectiver is so ultra sensitise also assures you that if your homb. town is locatrit a frw hundred miles from thr noarest troadeasting station, you will enjoy their proqrams with surprising tolume and clarity. whins why


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There are many receivers whild chat lip forced to modue mothe at the mastly matras of clarity-and after all your sense of enjoymunt of the Radio Programs is solely If lindrat on the clarity with which you may receive lime programs. Sur effori- (0) pmallow clarity with

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 quality of farts used, and the method employed to liminate self-oscillations. If this is to be the first Radso rervibrr you will have onned, let us assurt you that $k$ w have strive! to gite you the very best possible



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 Witcerable, dur)





No. $90: 5$ s-tube Reriver as illus
$\$ 25.55$
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    Color
    Flgure Code $\qquad$
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    Violet
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    Redinge
    Orange
    Grange
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